MIDWESTERN UNIVERSITY

MIDWESTERN UNIVERSITY
Glendale, AZ

CATALOG 2009-2010

MIDWESTERN UNIVERSITY CATALOG 2009-2010

GLendale Campus
Arizona College of Osteopathic Medicine
College of Pharmacy-Glendale
College of Health Sciences
- Physician Assistant Program
- Occupational Therapy Program
- Biomedical Sciences Program
- Cardiovascular Science Program
- Podiatric Medicine Program
- Nurse Anesthesia Program
- Clinical Psychology Program

College of Dental Medicine
Arizona College of Optometry

DOWNERS GROVE Campus
Chicago College of Osteopathic Medicine
Chicago College of Pharmacy
College of Health Sciences
- Physician Assistant Program
- Physical Therapy Program
- Occupational Therapy Program
- Biomedical Sciences Program
- Clinical Psychology Program
- Doctor of Health Science Degree

Office of Admissions
www.midwestern.edu

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This catalog is published for the convenience of students at Midwestern University (MWU). It is intended to be effective as of June 1, 2009. Midwestern University reserves the right to make changes in any or all specifications contained herein and to apply such revision to registered and accepted students as well as to new admissions. No contractual rights between Midwestern University and any student are intended and none may be deemed to be created by issuance of this catalog.

Midwestern University provides equality of opportunity in its educational programs for all persons, maintains nondiscriminatory admission policies, and considers for admission all qualified students regardless of race, color, sex, sexual orientation, religion, national or ethnic origin, citizenship status, disability, status as a veteran, age, or marital status.

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I welcome you to our Glendale Campus and your new academic community. The students of Midwestern University represent a dynamic group of individuals who share a passion for learning, a personal drive that prepares them for a long and successful professional health care career, and a commitment to excellence. Midwestern University is a special place and our students are active participants within the campus and external community.

It is our philosophy that students learn within our team environment by studying and sharing experiences with their peers while being mentored and coached by our faculty and staff. At Midwestern University, the commitment to excellence in education is the ultimate goal of mine and the entire University Administration, which takes a personal interest in the quality of education while providing a safe and secure environment in which to live and learn.

What makes us special? Our foundation is the dedicated faculty and staff who work diligently to provide you with outstanding educational opportunities. We believe in a continuum of education that begins as you enter Midwestern and never ends. It is our mission to provide you with the best education to prepare you to serve in your chosen career.

Midwestern University makes a commitment to its students that they will be intellectually prepared to serve your community as a health care professional who has the skills, ability, and leadership to meet the changing demands of health care. I am proud to say that our students and alumni reflect the positive human values we believe are essential within the changing health care environment in order to make a significant contribution to society. Our students care about their patients as well as their colleagues and families.

Midwestern University provides you with dedicated faculty who excel in teaching, research, and service within their professions. The University exists to preserve, extend, and transmit knowledge and deepen understanding of the health and well being of the human person. Our tradition of excellence is based on a long legacy of dedicated teachers and professionals who have demanded academic excellence and respect for the dignity of the whole person.

Our colleges are known for their innovation and excellence in education. As a student within the Arizona College of Osteopathic Medicine, the College of Pharmacy-Glendale, the College of Health Sciences, the College of Dental Medicine, or the Arizona College of Optometry, I know you will find our values and beliefs to be consistent. We are one academic community working together to provide you with an outstanding education.

I welcome you to this dynamic academic community. I hope you will find your days on the Glendale Campus of Midwestern University to be intellectually challenging and personally rewarding.

Kathleen H. Goeppinger, Ph.D.
President & Chief Executive Officer

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Dean, College of Health Sciences

MISSION
Midwestern University’s historical and sustaining philosophy dedicates the institution and its resources to the highest standards of academic excellence to meet the educational needs of the health care community.

VISION
Midwestern University will provide a safe and healthy environment that challenges its faculty, staff, and students to:
- Promote and maintain the osteopathic philosophy
- Nourish intellectual creativity and foster the critical thinking and communication skills that stimulate personal growth and engender professional development
- Support the teaching, scholarly activity, and service capabilities of the University
- Respect, appreciate, and acknowledge the achievements of all members of the academic community
- Embrace cultural and social diversity in the academic community and the community-at-large

HISTORY
Midwestern University: A Legacy of Growth and Development

Midwestern University has a proud and impressive history. Founded in 1900 as the American College of Osteopathic Medicine and Surgery by J. Martin Littlejohn, Ph.D., D.O., M.D. (1865-1947), the organization was incorporated in Chicago, Illinois, to train physicians in a not-for-profit environment.

Dr. Littlejohn hired talented faculty that enabled the College to establish a reputation as a leader in medical education, research, and clinical practice. The early faculty mentored their students in the art and science of osteopathic medicine while teaching surgery, principles and practices of osteopathy, anatomy, and basic science. The growth of our osteopathic college is intertwined with that of the osteopathic medical profession itself. Ever since 1874 when a country doctor, Andrew Taylor Still, announced his new theory of osteopathy and began the first college in 1892, the profession has grown in reputation and acceptance around the country and many international settings.

Today Midwestern University is still governed by the strong principles of the founding administration and faculty. We are an independent, not-for-profit corporation organized primarily to provide undergraduate, graduate, and postgraduate education in the health sciences. We are dedicated to the education and development of our students, faculty, and staff in an environment that encourages learning and personal development.

From the earliest days of our founding college, the development of the University has been impressive. The vision of the University leadership is to serve the needs of society by developing the health care team of tomorrow, while students learn the art and science of their professions within a safe and secure campus environment.

The Downers Grove, Illinois, Campus was purchased in 1986, and the Chicago College of Osteopathic Medicine (CCOM) moved from its prior home in Hyde Park, Illinois, to this western suburb. Following the relocation of the College, the Board of Trustees voted to begin the development of new academic programs within the health sciences. The Chicago College of Pharmacy (CCP) began in 1991 and the College of Health Sciences (CHS) began in 1992. In 1993, the Board of Trustees unanimously approved a single, educational mission for the institution, and Midwestern University emerged. Today the Downers Grove Campus, located on 105 acres, has 20 buildings that include academic classrooms, laboratories, a state-of-the art library and auditorium building, student commons, recreation center, and student housing.
The Glendale, Arizona, Campus was founded in 1995 when the Board of Trustees approved the purchase of land and the building of this new campus. The Arizona College of Osteopathic Medicine (AZCOM) began in 1995, the College of Health Sciences in 1996, the College of Pharmacy-Glendale (CPG) in 1998, the College of Dental Medicine (CDM) in 2006, and the Arizona College of Optometry (AZCOpt) in 2008. The campus has seen rapid growth in the number of buildings, academic programs, faculty, staff, and students. Today the Glendale Campus, located on 145 acres, has 32 buildings that provide for academic classrooms, state-of-the-art laboratories, student commons, student housing, and an on-campus multidisciplinary clinic.

Midwestern University has developed strong partnerships with health care providers and facilities around the country to aid in the education of students in all of its academic programs. The history of the institution is reflected in the many alumni who have successful careers and a deep affection for their college and University. The Administration and the Board of Trustees are dedicated to fulfilling our mission of excellence and service. We remain committed to our tradition of providing quality health care education. We are tomorrow’s health care team, learning together today.

**ACCREDITATION**

Midwestern University is accredited by The Higher Learning Commission, A Commission of the North Central Association of Colleges and Schools (30 N. LaSalle Street, Suite 2400, Chicago, IL 60602-2504; 312/263-0456; <www.ncacihe.org>). Please refer to the specific college sections of this catalog for further information on program and professional accreditation.

**CONFERRAL OF DEGREES**

The State of Arizona Board of Private Postsecondary Education has approved all current degree programs at Midwestern University’s Glendale campus. All degrees are conferred by the authority granted by this Board.

**FACILITIES**

The 145-acre Glendale Campus boasts a scenic location situated 15 miles outside of downtown Phoenix. The new and attractive facilities on the campus include:

- The 64,000-square-foot Sahuaro Hall houses the library, computer rooms, and lecture halls.
- Cholla Hall has two lecture auditoria, modern laboratories, multiuse classrooms, a computer workshop, and faculty offices.
- The Barrel Student Center includes three buildings that feature the Stagecoach Dining Hall, a weight room, a big screen TV with theater seating, pool and ping pong tables, and administrative offices.
- The Midwestern University Clinic, includes family medicine, osteopathic manipulative medicine, podiatry, optometry, clinical psychology, and pharmacy services.
- The Foothills Science Center houses research laboratories for faculty and students, an animal facility, and shared equipment rooms.
- Ocotillo Hall provides classrooms, laboratories, and a large auditorium.
- Agave Hall features classrooms, the OMM laboratory, the gross laboratory, and faculty offices.
- Cactus Club House is for on-campus housing students and for special events, offering a large meeting area with amenities such as a kitchen; big-screen TV; pool, ping pong, and foosball tables; smaller group study areas; as well as separate patio areas.
- A Recreation and Wellness Hall featuring gymnasium, music and craft rooms, yoga/pilates room, handball courts, exercise equipment and showers/locker rooms.
- A large classroom/auditorium.
- An interfaith chapel.

**HOUSING**

**Student Apartment Complex**

The apartment complex consists of studios and one- and two-bedroom apartments that feature ample study and living space; kitchen with range, oven, and refrigerator; Internet wiring; and cable television. The complex also has a swimming pool, volleyball court, sand play area, picnic and barbecue areas for residents and their guests.

For further information regarding on campus housing on the Glendale Campus, students may contact the Director of Residence Life at 623/572-3848 or the Department of Student Services at 623/572-3210.

**AMERICANS WITH DISABILITIES ACT POLICY**

Midwestern University makes reasonable accommodations to the physical and mental limitations of students, faculty and staff to the extent that such accommodation does not impose an undue hardship on the conduct of its business. The University’s planning includes reasonable physical accommodation to the special needs of disabled individuals and disabled veterans, including access to the buildings, utilization of the restroom facilities, and mobility requirements within building and parking locations.
 Disabled students’ rights are protected under Section 504 of the Rehabilitation Act of 1973 and the Americans With Disabilities Act of 1990 (ADA). It is the policy of Midwestern University to ensure that no qualified student with a disability is excluded from participation in or subjected to discrimination in any University program, activity, or event.

**CRIMINAL BACKGROUND CHECKS**

Due to growing nationwide concerns regarding the suitability of today’s health care providers, many hospitals, health care systems, clinics, physician offices, or pharmacies providing health care services require disclosure of an individual’s criminal history. In addition, many state statutes also require disclosure of an individual’s criminal history in order to apply for certain health professional certificates, registrations, and licenses. Existence of a criminal history may subject an individual to denial of an initial application for a certificate, registration, or license to practice in a clinical setting or result in the revocation or suspension of an existing certificate, registration, or license. In response to this growing trend, Midwestern University requires students to submit to criminal background checks.

It is the policy of Midwestern University that all accepted students must submit to a criminal background check prior to matriculation. In addition, students who remain enrolled must submit to a criminal background check as needed to remain eligible for continued participation. In accordance with the laws of the State of Illinois or State of Arizona, some students are required to undergo fingerprinting as part of the criminal background check process prior to clinical rotations.

The criminal background check involves obtaining an authorization from a matriculating or current student that allows the University to obtain the student’s individual criminal history. The results of the background check are reviewed by the Dean of Students to determine whether or not there is a record of misdemeanor and/or felony convictions. If there is a positive record, the Dean of Students will inform the appropriate Academic Dean and the Director of University Risk Management so the University can make a determination whether the criminal history will negatively impact the student’s admission status or ability to complete the practical training/rotation requirements of the degree program.

Criminal background checks are conducted through Student Services as part of the initial student matriculation process and on an as-needed basis thereafter while a student is actively enrolled at Midwestern University.

1. All matriculating students must complete the criminal background release and consent form to allow the University to conduct the criminal background check. All newly admitted students who have submitted a matriculation deposit are provided with access to a copy of the University policy and the criminal background release and consent form. By going to the Midwestern University website (http://www.midwestern.edu) and selecting MWUNET, the student can find the Student Handbook and consent form.

2. The Department of Student Services will contract with a professional service to conduct the criminal background check.

3. The Dean of Students will review all criminal background reports and determine whether or not a misdemeanor or felony conviction record exists. If a felony or misdemeanor conviction exists, the Dean of Students will conduct a criminal background investigation. The investigation may include any of the following components:
   a. Request for additional detailed information about the positive criminal background check report. This may entail one or more meetings with the student.
   b. Consultation with the state licensing agency about the impact of the misdemeanor or felony conviction on the student’s ability to undertake/resume practical training/rotations. Such consultation may be conducted by the Academic Dean (or their designees), Director of University Risk Management, and/or the Dean of Students with representatives from the state licensing agency.
   c. Collection of additional data, e.g., Federal Bureau of Investigation fingerprints and report, concerning the positive criminal background check report.

Following the criminal background investigation, the Dean of Students, in consultation with the Academic Dean (or their designees), will determine whether or not the student should be disqualified from matriculation or continued enrollment. Criminal convictions will not automatically disqualify a student from enrollment or continued enrollment. The University will consider such factors as (but not limited to) the nature of the crime, the age of the individual at the time the crime was committed, length of time since the conviction, the nature of the clinical program and the relatedness of the conviction, and whether the University will be able to provide appropriate professional clinical training to the student.

4. Failure to disclose a conviction or material misrepresentation of information by an incoming or enrolled student is deemed to be falsification of the application and may result in denial of matriculation and/or dismissal from the program and University. Students must disclose any felony charge/conviction, regardless of whether or not the felony charge/conviction was subsequently reduced to a misdemeanor.

5. Failure of the student to present appropriate forms to the Department of Student Services for the purpose of conducting criminal background checks when requested
will bar the student from initial matriculation and/or continued enrollment.

6. Students with a positive criminal background check are individually responsible for checking the licensing and certification requirements in any state other than the home state of their college where the student is interested in participating in a preceptorship, internship, clinic or other rotation to determine whether or not their conviction may be a barrier to participation.

7. Students are required to disclose to the Dean of Students and appropriate Academic Dean any arrests, criminal charges, or convictions against them during their entire period of enrollment as a student at Midwestern University. Such arrests, criminal charges, or convictions may negatively impact a student’s ability to obtain and/or complete clinical rotations or preceptorships.

8. Midwestern University does not guarantee clinical rotations for students who have a history of felony or misdemeanor convictions. In such cases, the University confidentially shares information about the student’s positive criminal background history with potential preceptors and practice site representatives as necessary and on a need-to-know basis. This may include releasing a copy of the original criminal background check report for their review. This gives the preceptor and site representatives an opportunity to decide whether the student is acceptable to the site. For this reason, scheduling and completion of practical training/rotations and graduation may be delayed. In some instances, it will not be possible to arrange for practical training/rotations at specific sites.
   a. If this information is known by the University prior to the student’s matriculation, the Dean of Students and/or Academic Dean (or their designee) will meet with the potential student to discuss the consequences of the positive criminal background investigation on the student’s ability to complete degree requirements so that appropriate action can be taken.
   b. If this information is known by the University after the student’s matriculation, the Dean of Students and/or Academic Dean (or their designee) will meet with the student to discuss the consequences of the positive criminal background investigation on the student’s ability to start/resume practical training/rotations and the student’s ability to graduate so that appropriate action can be taken.

9. Records concerning a student’s positive criminal background check are stored in a confidential file in the Student Services Department and Office of the Academic Dean.

10. In the event that a student is assigned to a practical training/rotation site that requires a copy of the original criminal background check report prior to a student’s placement at the site, the University will release a copy of the report for the site’s review.

**Harassment/Hostile Working Environment**

Midwestern University believes in the dignity and worth of its students, faculty, staff, interns, and residents and will not tolerate unacceptable conduct or behavior that has the effect of substantially interfering with the individual’s performance or creates an intimidating, hostile, or offensive learning/working environment. Members of the MWU community have a right to be free from harassment. This policy/procedure establishes a protocol whereby those who believe they have been harassed may obtain redress promptly and equitably through formal and informal procedures of the University.

It is the policy of MWU to provide an environment that is free from harassment because such conduct seriously undermines the atmosphere of trust and respect that is essential to a healthy work and academic environment. The conduct prohibited by this policy includes all unwelcome conduct (whether verbal, physical, visual or written) based on an individual’s protected status, such as gender, color, race, ancestry, religion, national origin, age, physical or mental disability, marital status, veteran status, citizenship status, sexual orientation, or other protected group status as defined by law. Among the types of conduct prohibited by this policy are teasing, jokes, slurs, epithets, and negative stereotyping based on another person’s protected status. Even where the conduct is not sufficiently severe or pervasive to rise to the level of a legal violation, MWU discourages any such conduct in the workplace and/or any of our related educational settings and reserves the right to take remedial action for all conduct it deems inappropriate.

This policy applies to all members of the University community, each of whom is encouraged to report promptly complaints about harassment. Anyone found to be in violation of this harassment policy shall be subject to disciplinary action, which may include, but is not limited to, disciplinary warning, disciplinary probation, demotion, transfer, suspension, or dismissal.

No action shall be taken against anyone who submits a complaint that he or she believes to be valid—regardless of the outcome of the investigation; however, any person found to be intentionally dishonest in making the allegations or to have made them maliciously is subject to University discipline.

**Sexual Harassment**

**Definition**

Sexual harassment may involve the behavior of a person of either sex against a person of the opposite or same sex, and occurs when such behavior constitutes unwelcome sexual advances, unwelcome requests for sexual favors, and other unwelcome verbal or physical behavior of a sexual nature where:
1. Submission to such conduct is made either explicitly or implicitly a term or condition of an individual's education or employment;

2. Submission to or rejection of such conduct by an individual is used as the basis for academic or employment decisions affecting the individual’s welfare; or

3. Such conduct has the purpose or effect of substantially interfering with an individual’s welfare, academic or work performance, or creates an intimidating, hostile, offensive, or demeaning education or work environment.

A third party may also file a complaint under this policy if the sexual conduct of others in the educational or work environment has the purpose or effect of substantially interfering with the third party’s welfare, academic or work performance.

Additional information on the policies and procedures relating to Harassment/Hostile Working Environment is available in the Student Handbook.

ADMISSIONS
Prospective students interested in enrolling in any college of Midwestern University should contact the Office of Admissions at either the Glendale Campus or the Downers Grove Campus to request application forms and/or application instructions for both admission and university housing. All applicants must submit formal applications, official transcripts, test scores, and other required supporting material. For specific admission standards of the respective colleges, refer to the appropriate collegiate sections of the catalog.

Office of Admissions
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19555 North 59th Avenue
Glendale, AZ 85308
623/572-3215
888/247-9277
AdmissAZ@midwestern.edu

Office of Admissions
Midwestern University
555 31st Street
Downers Grove, IL 60515
630/515-6171
800/458-6253
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STUDENT SERVICES
The mission of the Department of Student Services is to offer a broad range of services in the arena outside the formal boundaries of the classroom that support, enhance, nurture, and promote the growth and development of Midwestern University students by contributing to their professional, cultural, social, intellectual, physical, and emotional well being. It is within the mission of Student Services to promote awareness, understanding, and acceptance of all individuals in a diverse world society and to promote a sense of respect, appreciation, and community between the colleges that can be carried on throughout students' professional lives.

The Department of Student Services is located in the Barrel Student Center on the Glendale campus and is composed of the Offices of the Dean, Assistant Dean for Student Academics, Assistant Dean for Student Governance, Student Activities, Counseling and Residence Life. The Department coordinates a variety of student support service functions within the University. The Department of Student Services supports all colleges and interacts with students to develop and offer support programs and services that enrich students’ experiences on campus. Examples of these programs include: MWU Student Government, MWU Student Tutoring Program, student social and recreational activities, orientation, career guidance and academic counseling, stress and time management seminars, multicultural and diversity programming, crisis intervention and interpersonal counseling, MWU Student Recycling Program, intramural sports, and other developmental activities. The Department of Student Services has an open door policy and is available to students on a continuing basis offering support, advice, and encouragement needed to meet student concerns and challenges.

New Student Orientation
Orientation programs are planned each year to welcome and facilitate the integration of new students into each of the colleges of the University. In addition, students are provided with opportunities to interact socially with peers, meet faculty, administrative, and staff members, learn about University services available on campus, and develop a sense of belonging to the University community and individual college communities.

Student Government
Student government provides a forum for discussing and resolving student concerns, initiating recognition of new student organizations, and conducting reviews of existing student organizations. Student government functions at two levels: (1) the University and (2) the College. The following is a brief description of how student government functions at both levels.

University Level
All students at each campus are represented through a campus-wide Student Senate. Each Student Senate is composed of 15 members. Four members represent each college within the campus. The remaining 3 members are the Speaker of the Student Senate, Vice Speaker, and the Secretary. Meeting every other month, the Student Senate provides a mechanism for governance of campus-wide activities and functions. It also provides a vehicle for the exchange of ideas and perceptions concerning student issues that cross college lines.

The Student Senate is required to develop and publish bylaws that describe: (1) the name of the senate; (2) purpose; (3) objectives of the senate; (4) operation and relationship with
the college student councils; (5) membership and procedures for the election of officers/liaisons and their terms of office; (6) duties of senate members; (7) meeting schedules; (8) parliamentary procedure; (9) procedural considerations (quorums, role of individual class officers, etc.); and (10) adoption and amendment procedures.

**College Level**

Individual college student councils (Student Government Associations-SGAs) function to provide governance for student issues related to the individual colleges, as well as conducting all class and college-wide elections. Adoption of bylaws governing the individual college student councils is at the discretion of the elected/appointed officers of these councils. SGAs are encouraged to adopt bylaws that are consistent with the bylaws of the other college student councils.

Individual SGAs are required to develop and publish bylaws that describe: (1) the name of the SGA; (2) purpose; (3) objectives of the council; (4) operation and relationship with other SGAs; (5) membership and procedures for the election of officers/representatives and their terms of offices; (6) duties of student council members; (7) meeting schedules; (8) parliamentary procedure; (9) procedural considerations (quorums, role of individual class officers, etc.); and (10) adoption and amendment procedures.

**Student Counseling**

The Glendale campus has full-time and part-time student counselors. The Student Counselors are available to help students effectively deal with many issues through individual, couples, and family counseling.

Counseling by the on-campus Student Counselor is subsidized through student activity fees and is provided free of charge to all students of Midwestern University. Based on an assessment by the counselor, at times it may be necessary to utilize alternate resources for specialized interventions. Referrals will be made to an appropriate specialist; however, these referrals may or may not be covered under the student’s health plan. Under these circumstances the student is required to meet expenses not covered under their health plan.

**MWU Student Tutor Program**

Midwestern University offers peer-tutoring services through the Department of Student Services to those students having academic problems through the Department of Student Services. Tutoring is designed to enhance test-taking skills, modify study habits, and/or focus on critical material and content.

**Student Health**

As deemed appropriate for the protection of students and patients and in accordance with our clinical affiliation agreements, Midwestern University requires that all students possess health insurance and submit documented proof of immunity against certain diseases during their enrollment.

**Recreational Activities**

Committed to the concept of “wellness,” Midwestern University encourages students to utilize the Recreation and Wellness Center. This facility contains rooms for dance/aerobics, weight training, music, crafts, racquet ball, as well as volleyball and basketball in a full sized gymnasium. There are also outdoor basketball courts and sand volleyball courts.

Additionally, student may participate in many intramural sporting activities that are sponsored by the University, including volleyball, soccer, basketball, softball, and ping-pong tournaments. Group activities such as cycling, running, hiking, martial arts, and yoga also occur on a regular basis.

**STUDENT FINANCIAL SERVICES**

The Office of Student Financial Services provides students with information about federal, state, and private sources of financial assistance; helps students coordinate the financial aid application and renewal processes; and assists students in making informed decisions about the financing of their education. The Office of Student Financial Services is also responsible for the billing and collection of all tuition, fees and institutional housing owed for each quarter.

Students may contact the Glendale Office by calling 623/572-3321 Monday through Friday between the hours of 8:00 AM and 4:30 PM (Mountain Time) or by email at az_fin_aid@midwestern.edu.

Midwestern University provides equality of opportunity in its educational programs for all persons, maintains nondiscriminatory admission policies, and considers for admission all qualified students regardless of race, color, sex, sexual orientation, religion, national or ethnic origin, citizenship status, disability, status as a veteran, age, or marital status.

**General Eligibility Requirements**

All students seeking financial aid must meet general eligibility requirements regarding citizenship, selective services, financial need, and satisfactory academic progress. Students must also complete several certification statements.

Students who are currently in default and have not made satisfactory loan repayments or owe a refund on a Title IV program do NOT qualify for any form of financial aid. In addition, students who have been convicted of the possession or sale of illegal drugs for an offense that occurred while receiving federal Title IV aid may not be considered eligible for future, additional federal aid. Students who have an established history of debt nonpayment may qualify for federal loan programs but do NOT qualify for campus-based aid.
Veterans’ Educational Benefits
Midwestern University is approved for Veterans’ Educational Benefits by the Arizona Department of Veterans’ Services for most Glendale MWU programs. For further information and eligibility requirements, students may contact the Registrar’s Office.

Financial Aid On-Line Application
On-line application instructions for the upcoming financial aid award year are made available on an annual basis in January to each continuing class of students. All accepted students who have paid their matriculation deposit will receive on-line application instructions for the upcoming academic year. Accepted applicants will also have electronic access to other relevant financial aid resources provided on the University website.

Financial Aid Programs
The Office of Student Financial Services helps coordinate three types of financial aid: scholarships and grants, employment programs, and loans.

Scholarships and Grants
All Programs
MWU Unmet Need Scholarship: Awarded to students who demonstrate the most significant financial need as determined by their Free Application for Federal Student Aid. Students must meet MWU’s priority financial aid deadline date in order to be considered eligible. Historically MWU has been able to award between $750,000 and $1,750,000 each year in non-renewable institutional scholarships to incoming and returning students from each of the University’s three colleges with funding provided by the University’s School-As-Lender program. Future amounts and availability of funding will depend upon market conditions and Federal legislative actions regarding the School-As-Lender program.

Medical, Podiatry, and Pharmacy Programs
WICHE: Arizona College of Osteopathic Medicine, Arizona Podiatric Medicine Program, and College of Pharmacy-Glendale participates in the Professional Student Exchange Program administered by the Western Interstate Commission for Higher Education (WICHE), under which legal residents of Western states without a public professional school in this field may receive preference in admission and reduced tuition at MWU. To be certified as eligible for this program, the student must contact the WICHE Certifying Officer in his/her state of legal residence for the program application form. The number of students to be supported in each state in this field depends upon state appropriations. For addresses of state certifying officers consult the MWU Financial Services Office, WICHE Professional Student Exchange Program, 3035 Center Green Drive, Boulder, CO 80301-2204 (303/541-0210), or the WICHE Web site at http://www.wiche.edu.

Health Science Programs
1. Leveraging Educational Assistance Partnership (LEAP) Program: This state grant program awards up to $250 per academic year to needy students enrolled at least half-time who are permanent residents of the State of Arizona. Monies must be applied to tuition and do not have to be repaid.
2. WICHE: The physician assistant program and the occupational therapy program, Glendale Campus, participates in the Professional Student Exchange Program administered by the Western Interstate Commission for Higher Education (WICHE), under which legal residents of Western states without a public professional school in this field may receive preference in admission and reduced tuition at MWU. To be certified as eligible for this program, the student must contact the WICHE Certifying Officer in his/her state of legal residence for the program application form. The number of students to be supported in each state in this field depends upon state appropriations. For addresses of state certifying officers consult the MWU Student Financial Services Office, WICHE Professional Student Exchange Program, 3035 Center Green Drive, Boulder, CO 80301-2204 (303/541-0210), or the WICHE Web site at <http://www.wiche.edu>.

Employment Programs
Federal Work Study: Student employment is open to all students who apply by the deadline date and demonstrate financial need. Students who qualify for this program may work on campus or off campus if performing community service activities. The Office of Student Financial Services determines the total amount students may earn. This is NOT a loan program. Students who obtain Federal Work Study employment will be paid biweekly at the rate of $9.00 per hour for regular work study and $11.00 per hour for community service work study, effective July 5, 2009 through June 30, 2010.

Student Loans
Medical Programs
1. Primary Care Loan: Priority consideration is given to certain third- or fourth-year students with exceptional financial need who are committed to practicing primary care medicine. Such students may borrow this campus-based loan that offers a one-year grace period and a residency deferment of up to four years. The interest rate is 5%. Students must agree to enter and complete a residency training program in primary care medicine not later than four years after the date on which they graduate from AZCOM. Students must also agree to practice primary care medicine through the date on which the loan is repaid in full. Per federal regulations,
all applicants are required to submit parental financial information for this program regardless of dependency status.

2. Arizona Medical Student Loan Program: A program that provides educational loans to medical students sponsored by the state of Arizona. In order to be considered eligible for the loan program a student must be a legal resident of the state of Arizona and must be willing to commit to full-time practice in a medically underserved area in Arizona in family practice, general practice, general pediatrics, combine medicine and pediatrics, obstetrics and gynecology, or general internal medicine. A student’s loan will be forgiven if a full commitment is made. A minimum two-year service commitment is required. The maximum loan, which may vary yearly, is set by Arizona law, and is subject to the availability of funds. For the 2008-2009 academic year the amount was $63,304 per student.

All Programs

1. Federal Perkins Loan: Qualified graduate students with exceptional financial need may borrow from this campus-based loan at the current 5% interest rate. Loan amounts and availability of funding are dependent on annual Federal allocations. Awards typically range from $1000 to $2000 per academic year. A student may borrow an aggregate maximum of $60,000 for undergraduate and graduate study. The student borrower will also receive a nine-month grace period and may defer or have the loan forgiven in certain circumstances.

2. Subsidized Federal Stafford Loan: Qualified graduate students may borrow up to $8,500 per academic year, with an aggregate maximum of $65,500 for undergraduate and graduate study. Students borrowing the Stafford loan must repay their loan at a fixed interest rate of 6.8%. The federal government pays this interest while students attend school, as well as during a six-month grace period.

3. Unsubsidized Federal Stafford Loan: Qualified graduate students may borrow up to $20,500 per academic year with an aggregate maximum of $138,500 for undergraduate and graduate study. (includes amounts borrowed under the subsidized Stafford program). Students enrolled in the osteopathic medicine, dental medicine, podiatric medicine, pharmacy, and optometry programs are eligible to apply for higher annual loan limits based on their program of study and year in school and may borrow up to an increased aggregate loan maximum of $224,000 (includes amounts borrowed under the Subsidized Stafford program). Students borrowing the Stafford loan must repay their loan at a fixed interest rate of 6.8%. The student is responsible for payment of the interest but may elect to have the interest accumulate and capitalize while enrolled.

4. Federal Graduate PLUS loan: Qualified graduate students may borrow up to the budgeted cost of attendance less other aid. Students borrowing the Graduate PLUS must repay their loan at a fixed interest rate of 8.5%. Repayment of the loan begins 6 months after graduation, withdrawal, or upon enrolling on a less than half-time basis. Students should check with the lender for deferment eligibility.

5. Private Educational Loans: Qualifying students enrolled at least half time in a degree-seeking program may be eligible to borrow up to the total cost of attendance less other aid. The loan is not based on financial need. Rather, eligibility is based on subtracting other financial aid assistance from a student’s total cost of attendance. Loan eligibility is also based on the student borrower’s and/or co-borrower’s credit history and ability to repay the loan. The in-school or grace period interest rate is variable and is usually based on the Prime, LIBOR or T-Bill rate plus a 1-9% margin (which is determined by the borrower and/or co-borrower’s credit history). The student is responsible for payment of interest but may elect to have the interest accumulate and capitalize while enrolled at MWU. Repayment may begin immediately upon enrolling on a less than half-time basis or upon graduation. Students will need to check with the lender for further details on postponement or deferment of loan payments.

Additional information regarding scholarship and loan programs can be found in the Midwestern University Student Handbook or on the MWU website. Students are encouraged to check with local churches, clubs, professional associations, civic groups, and corporations concerning community scholarships provided to students. Students are also encouraged to check on the Internet, with local public and/or college libraries (in the general reference department), and on the MWU Web site to find information on specific state, professional, and/or general interest scholarships.

Satisfactory Academic Progress for Financial Aid Eligibility

As required by Federal law, reasonable standards of satisfactory academic progress for maintaining financial aid eligibility have been established by MWU for all degree granting programs. These standards apply to all students. The policy/procedure for "Assessing Financial Aid Status” is as follows:

Purpose

To establish, publish and apply reasonable standards of satisfactory academic progress for financial aid eligibility as required by federal law for all students including those applying for or currently receiving federal, state, or institutional assistance and veterans’ educational benefits administered by MWU.

Policy

1. All full-time students must complete their academic program in the maximum time frame allowed for their specific program and must maintain academic standards as specified by their program in order to be considered as
progressing satisfactorily toward their degree (refer to the charts that follow and the detailed descriptions under each college). Students enrolled on less than a full-time basis will have their standard time frames for program completion pro-rated, and expected program completion per academic year (% of coursework completed in terms of credit hours per quarter) pro-rated.

2. All students are required to accumulate credits toward graduation and are expected to successfully complete a minimum percentage of their academic program each year as specified by their academic program (refer to the charts that follow), not including those courses in which grades of incomplete were received, course withdrawal occurred, or remedial coursework was performed. Audited courses are also not included. All periods of enrollment will be included regardless of whether or not a student receives financial aid.

3. Students who are not maintaining the academic standards specified by their program at the end of an academic year will be placed on academic probation. The Director of Student Financial Services will subsequently place those students on financial aid probation for the following academic year. While on financial aid probation, students will be eligible to receive financial aid funds.

4. If a student’s academic progress remains unsatisfactory after the completion of the academic year in which he/she is on financial aid probation and/or he/she enters a second subsequent academic year on academic probation, the student will be placed on financial aid suspension and no financial aid funds will be awarded until satisfactory academic progress, as determined by the student’s program, has been attained. If a student achieves satisfactory academic progress in the academic year during which he/she is on financial aid probation, and is removed from academic probation, the student will be removed from financial aid probation. Financial aid eligibility will not be retroactive (backdated to the beginning of the academic year). Eligibility will resume and commence only for the subsequent quarter(s) in which satisfactory academic progress was attained. The financial aid probationary period will remain on the student’s record.

5. Students who are denied financial assistance on the basis of unsatisfactory academic progress may regain financial aid eligibility by satisfactorily completing, at their own expense, those courses required to attain the minimum academic standards specified by their program. This statement does not imply that continuation in any academic program is the prerogative of the student.

6. A student will be allowed a maximum of two nonconsecutive financial aid probationary periods while enrolled at MWU. A student who does not attain satisfactory academic progress at the conclusion of his/her second nonconsecutive period of financial aid probation will be placed on financial aid suspension permanently and will not regain financial aid eligibility for the remainder of his/her enrollment period at MWU. Permanent suspension can be waived at the discretion of the dean of the respective college.

7. A student placed on financial aid probation or financial aid suspension may appeal a decision by the Director of Student Financial Services to discontinue his/her financial aid. (See Procedure, #5).

8. Satisfactory academic progress standards may be appealed if a student has personal mitigating circumstances that will not allow him/her to maintain a full-time academic load. An appeal will be considered if these personal mitigating circumstances will not allow the student to meet the expected program completion per academic year or the maximum timeframe for program completion. Examples of personal mitigating circumstances may include: (1) a severe injury or extended illness, (2) illness or death of a family member, (3) disability (See Procedure, #8).

**Procedure**

1. The Office of Student Financial Services will be responsible for assessing the financial aid eligibility status of all students by monitoring their academic progress through documentation received from the deans’ offices and the Office of the Registrar.

2. Following the end of each academic year, the Office of Student Financial Services will send a written notice to students who are not maintaining academic standards as specified by their program and who have been placed on academic probation, informing the student that they are on financial aid probation for the upcoming academic year. The letter will outline for the student the ramifications of being placed on financial aid probation, and inform him/her of the right to appeal. A copy of the written notice will also be sent to the academic dean of the college in which the student is enrolled, to the program director, if applicable, and to the Chair of the Financial Aid Committee.

3. Following the end of each academic year, the Office of Student Financial Services will also send a written notice to students who are entering a second sequential year of academic probation, or who have unsatisfactorily completed a second, non-consecutive year of academic probation, informing the student that he/she is on financial aid suspension, effective immediately. The letter will outline for the student the ramifications of being placed on financial aid suspension, and inform him/her of the right of appeal. A copy of the written notice will also be sent to the academic dean of the college in which the student is enrolled, to the program director, if applicable, and to the Chair of the Financial Aid Committee.

4. If a student is placed on financial aid suspension due to not meeting standards of satisfactory academic progress, the Office of Student Financial Services will reinstate his/her financial aid eligibility upon receipt of written confirmation from the dean of the respective college that
standards of satisfactory academic progress have been met. The Office of Student Financial Services will provide written notification to the student of his/her compliance with standards of satisfactory academic progress, cancellation of his/her suspension and reinstatement of aid. This notification will also be provided to the academic dean of the college in which the student is enrolled, to the program director, if applicable, and to the Chair of the Financial Aid Committee. Financial aid eligibility will not be reinstated for preceding quarters during the academic year in which the student did not meet standards of satisfactory academic progress.

5. A student on financial aid probation or financial aid suspension may appeal the decision of the Director of Student Financial Services by so indicating in writing to the Chair of the Financial Aid Committee. The appeal must include:
   a. Reasons why the minimum academic standards of progress were not met;
   b. Reasons why his/her aid eligibility should not be terminated or should be reinstated; and
   c. A plan that demonstrates a means to bring his/her academic progress up to satisfactory standards within a period of one academic year.

   It is the student’s responsibility to provide appropriate documentation to support his or her appeal. This written appeal must be submitted to the Chair of the Financial Aid Committee within seven (7) working days after receipt of notification of financial aid probation or suspension.

6. The Chair of the Financial Aid Committee and the committee members will review the appeal. Appeals that do not have the required documentation will be returned to the student for completion prior to review by the committee. The student will be permitted to present his/her appeal to the Financial Aid Committee in person upon written request to the Chair of the Financial Aid Committee. The Financial Aid Committee will vote and render a decision regarding the appeal. The Chair of the Financial Aid Committee will send written notification of the decision to the student, the academic dean, and the program director within two (2) weeks of the receipt of the written appeal. In the event that the Financial Aid Committee denies the appeal, the student may then appeal to the dean of their respective college. A student may appeal to the dean based upon the following:
   a. New information;
   b. Bias on the part of a committee member; or
   c. Procedural error.

   It is the student’s responsibility to provide appropriate documentation to support his or her appeal.

7. Students are limited to a maximum of two (2) appeals of their financial aid status during the course of their stay at MWU.

8. A student may appeal standards of satisfactory academic progress based on personal mitigating circumstances. Appeals must be submitted in writing to the Dean of his/her college. Appeals must include:
   a. reasons why the standards of program completion per academic year and/or maximum timeframe completion cannot be met;
   b. reasons why he/she should be granted a timeframe extension;
   c. reasons why his/her aid eligibility should not be terminated.

   It is the student’s responsibility to provide appropriate documentation of the mitigating circumstances to support his or her appeal. The Dean will review the appeal and render a decision within two (2) weeks of the receipt of the written appeal.

9. In the event that the Dean denies the appeal, the student may then appeal to the President. A student may appeal to the President based upon the following:
   a. New information;
   b. Bias on the part of the dean; or
   c. Procedural error.
<table>
<thead>
<tr>
<th>Academic Status</th>
<th>credit hours per quarter</th>
<th>Academic Status</th>
<th>credit hours per quarter</th>
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<tr>
<td>CHS-Biomedical Sciences (M.B.S.)</td>
<td>2</td>
<td>4</td>
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</tr>
<tr>
<td>CHS-Biomedical Sciences (M.A.)</td>
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<td>66%</td>
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<tr>
<td>CHS-PA M.M.S.</td>
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<td>3.33 (40.5 mos.)</td>
<td>30%</td>
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<tr>
<td>CHS-M.O.T.</td>
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<td>3.33 (40.5 mos.)</td>
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<tr>
<td>CHS-Bioethics, (M.A.)</td>
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<td>20%</td>
</tr>
<tr>
<td>CHS-Bioethics Cert.</td>
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<td>5</td>
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<tr>
<td>CHS-Cardiovascular Science (M.S.)</td>
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<td>3</td>
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<tr>
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<tr>
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<td>30%</td>
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<tr>
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<tr>
<td>AZCOPT (extended studies)</td>
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</tr>
</tbody>
</table>

**Please Note:** Classes in which students are auditing (receiving a pass/fail grade) cannot be included in the amount of credit or contact hours earned when determining eligibility for financial aid. In addition, the following grades will not be considered as credit or contact hours earned/attempted for purposes of awarding federal financial aid: "I" Incomplete, "F" Failure, or "W" Withdrawal or "WF" Withdrawal/Failing.

The above policy is subject to change during the 2009-2010 academic year. If revised, an addendum will be distributed to all enrolled students.

**Leave of Absence Policy and Procedure**

1. Any student requesting a leave of absence while enrolled at Midwestern University must adhere to the policies and procedures established by his/her academic dean. In addition, students receiving federal financial aid must understand and follow federal Title IV and Title VII leave of absence regulations as stated in this policy, which may affect the amount of financial assistance received. As stipulated by federal financial aid regulations, any student, including a student receiving Title IV or Title VII assistance, shall be granted a leave of absence under the following conditions:
   1. The student must request the leave of absence in writing to the program director, if applicable, with approval from the dean of the college in which the student is enrolled. The letter should clearly state the reason(s) for the requested leave of absence.
   2. MWU may not charge the student for the leave of absence nor tuition or any educational expenses during the leave of absence. However, in order to continue coverage for long-term disability insurance and/or health insurance, a student on an approved leave is obligated to pay his or her premium. In addition, a student living on campus will be responsible for paying his or her rent, utilities, and covered parking charges.
   3. The leave of absence is limited to 90 days.
   4. A subsequent leave of absence not to exceed 90 days may be granted for the same student due to an
unforeseen circumstance such as military reason, jury duty, or a circumstance not covered under the Family and Medical Leave Act of 1993 (FMLA).

5. Any additional leaves of absence requested may not exceed a total of 180 days in a 12 month period. This 12 month period begins with the first day of the first leave of absence.

6. A student on an approved leave of absence will retain his/her in-school status.

7. There must be a reasonable expectation that a student will return from a leave of absence to continue his/her enrollment at MWU.

B. For purposes of administering federal financial aid, a student who is receiving Title IV or Title VII financial aid funds and is granted an approved leave of absence that does not exceed the above guidelines will be considered to have withdrawn from MWU (for financial aid purposes only). A student who is granted an approved leave of absence by his/her academic dean that exceeds 90 days must adhere to the leave of absence policy and reinstatement procedures established by the dean.

1. A subsequent leave of absence not to exceed 30 days may be granted for the same student due to an unforeseen circumstance such as a military reason, jury duty, or a circumstance covered under the Family and Medical Leave Act of 1993 (FMLA).

2. A student on an approved leave of absence will retain his/her in-school status.

C. If the student who is receiving financial aid fails to return from the leave of absence at the end of the approved period, the student will be considered to have withdrawn from MWU (for financial aid purposes only) as of the first day in which the leave of absence was granted. The Office of Student Financial Services will have 45 days after the last day of an approved leave of absence to calculate a refund and return funds to the lender(s). If a student who is not receiving financial aid is granted a leave of absence by his/her academic dean and fails to return at the end of the approved period, the disposition of such a case will be decided on an individual basis.

D. Before final consideration is given to granting the requested leave of absence, a financial aid administrator will meet with the student and provide information regarding loan obligations, possible revisions in his/her aid package, deferment options, and consequences of not returning to MWU at the expiration of the leave of absence.

E. A student on an approved leave of absence may receive health, dental, and disability insurance coverage for the entire period of the leave, but must pay the entire amount of premiums during the leave. In addition a student on a leave of absence may continue to live in on-campus housing for the duration of the leave, but must pay in advance each quarter. All outstanding balances must be paid in full prior to a student’s return from a leave of absence.

Procedure

A. Upon receiving written notification from the academic Dean that a student has been granted an official leave of absence, the Office of Student Financial Services will take the following steps:

1. Recalculate the loan period and cost of attendance based on months of actual enrollment to determine the total amount of financial aid eligibility for the academic year and, if necessary, correct resulting over-awards.

2. Notify the student and lender(s) of the following:
   (1) Student’s last date of attendance;
   (2) Beginning and ending dates of the approved leave of absence;
   (3) Revised cost of attendance and financial aid eligibility;
   (4) Revised loan period, if applicable;
   (5) Revised graduation date, if applicable;
   (6) Revised student loan disbursement dates, if applicable.

B. The Office of Student Financial Services will promptly return to the lender any loan disbursements received during the approved leave of absence and, if applicable, request that the disbursement be reissued upon the student’s scheduled return to MWU.

C. If the student fails to return at the end of the federally approved leave of absence, the student will be considered to have withdrawn from MWU (for financial aid purposes only) as of the first day in which the leave of absence was granted. The Office of Student Financial Services will perform the following functions:

1. The Office of Student Financial Services will perform refund/repayment calculations.

2. The Office of Student Financial Services will promptly return any Federal funds or student loan funds to lender(s) within 45 days of receipt of notification of the student’s failure to return from the approved leave of absence.

3. The Office of Student Financial Services will attempt to contact the student by telephone for a personal exit interview consultation.

4. If the student cannot be contacted by telephone, the financial aid administrator will mail exit interview materials containing information on borrower rights/responsibilities, loan repayment options, loan deferment options, consolidation, total loan indebtedness and consequences of default directly to the student.

5. The Director of Student Financial Services will notify the academic dean and the program director, if applicable, of the student’s withdrawal status and
the impact the withdrawal has on the student's financial aid award package.

Please Note: Changes in federal, state, and/or university policies could affect the Office of Student Financial Services information printed in this catalog. MWU reserves the right to make changes in any or all of the information contained therein, and to apply such revision to registered and accepted students as well as to new admissions.

Notification of Withdrawal

A. A student’s withdrawal date is the earlier of the date the student officially notified MWU of the intent to withdraw, or the student’s last date of attendance at a documented academically related activity (exam, turning-in of assignment, academic counseling, advisement, etc.), or the midpoint of the period for a student who leaves without notifying the institution.

B. A student must provide written notification and documentation, if applicable, to the appropriate academic dean or program director, stating the reason for withdrawal from MWU. If approved, the Dean will conditionally approve a withdrawal until all clearances are obtained.

C. The student must receive clearance of his/her withdrawal from the MWU departments on the online.midwestern.edu leave system within seven calendar days from the date of Dean’s conditional approval. This time frame will allow offices such as Student Financial Services and the Registrar to process the withdrawal, prepare the required financial aid exit, and calculate the return of unearned Federal Title IV aid and all other aid, as appropriate. If a student does not complete his/her on-line exit counseling requirement, the Registrar Office will withhold official academic transcripts.

D. Upon submission of all completed documentation and adherence to all clearance procedures, the Dean will provide an official letter of withdrawal to the student.

Return of Federal Title IV Funds Policy/MWU Refund Policy

In establishing a refund policy, MWU has instituted and adhered to all requirements included in the Federal Formula for Return of Title IV Funds as specified in Section 484B of the Higher Education Act of 1965 (as amended). MWU’s refund policy will include the following guidelines:

A. Title IV funds includes the following programs available at MWU, LEAP Grant, Federal Perkins loans, subsidized Federal Stafford loans, unsubsidized Federal Stafford loans, Graduate PLUS loans and the Federal Work-Study (FWS) program. However, LEAP and FWS monies awarded or earned by the student will always be excluded from the refund calculation.

B. Withdrawal On or Before the First Day of Classes of the Quarter for Which the Student Is Charged

- 100% of tuition, University housing, and all other fees will be refunded.

C. Withdrawal After the First Day of Classes Through 60% of the Quarter for Which the Student is Charged

- Tuition and student services fee charges will be prorated on a daily basis proportional to the number of days completed divided by the number of days in the payment period for which the student was enrolled.

- University housing for the quarter will be refunded according to the terms on the housing contract.

- For students on a leave of absence, disability and health insurance fees paid to the University for the quarter will not be refunded. A student will be obligated to pay his/her premium through the end of the quarter.

D. Withdrawal After 60% of the Quarter for Which the Student is Charged

- No refund of tuition or student services fee will be made.

- University housing for the quarter will be refunded according to the terms on the housing contract.

- For students on a leave of absence, disability and health insurance fees paid to the University for the quarter will not be refunded. A student will be obligated to pay his/her premium through the end of the quarter.

E. If a subsequent Quarter(s) Has Been Prepaid

- 100% of tuition, student services fee, University housing, health insurance fee and disability insurance fee will be refunded.

F. Information technology fee - If a student withdraws before matriculation, or after the first day of classes through the 60% point of the first quarter only, the information technology fee will be refunded 100% provided that the laptop is returned in the same condition in which the student received it, as determined by the University Information Technology Service, and the student withholds the college.

G. All Non-institutional costs (living, personal, transportation, and book/supply expenses)

- Will be prorated based on the percentage of the quarter completed.

H. All refunds will be distributed in the following order as prescribed by federal law.

1. Unsubsidized Federal Stafford Loan
2. Subsidized Federal Stafford Loan
3. Federal Perkins Loan
4. Federal Graduate PLUS Loan
5. Other Title IV Aid Programs (LEAP Grant)
6. Other Federal Sources of Aid (PCL)
7. Other state or private aid*
8. Institutional aid (MWU Unmet Need Scholarship, CPG Loan and Dr. Lucas Loan)**
9. The Student***
*MWU will refund scholarship monies in accordance with the sponsoring agency’s policy.
**All refunds of institutional aid will be prorated based on the remaining weeks of the quarter. Subsequent quarters of awarded institutional funds will be cancelled; therefore, no refunds will be made.
*** MWU will only refund monies to a student who does not owe a repayment of non-institutional funds or who does not have unpaid charges that he/she owes to the Institution.

I. Students who borrowed and received monies from the unsubsidized/subsidized Federal Stafford loans, Federal Graduate PLUS loans, Federal Perkins loans, institutional (MWU) loans, Primary Care loans and/or private loans will be legally responsible and obligated to repay in accordance with the terms and conditions outlined in the promissory note(s).

J. Upon request by the student, examples of refund worksheets and calculations will be available in the Office of Student Financial Services for distribution.

K. Students who feel that individual circumstances warrant exceptions from published policy may appeal the Return of Title IV Funds policy. Student appeals need to be submitted to the academic dean of the appropriate college.

Tuition Payment
Tuition for full-time students is an annual tuition and may be payable over 2, 3, or 4 quarters per year depending on the academic schedule of the student. Any student enrolled where the course load meets the full-time definition will pay full-time tuition. Students exceeding the maximum prescribed course load will pay overload charges. Students enrolled in an extended studies program will be charged the annual tuition rate for their extra year of enrollment. Students who extend their program for one quarter or less will be charged the quarterly tuition rate or per credit hourly rate depending on the program and their enrollment status.

We encourage all students to pay their bills via our secure site at https://online.midwestern.edu. Options for payment include debit card, credit card or direct debit from your checking or savings account. MWU accepts Visa, MasterCard, American Express, and the Discover Card for tuition payments. For those paying by mail or in person, all checks and money orders should be made payable to Midwestern University, with the MWU student ID number indicated on the front. Tuition due dates will be publicized quarterly via MWU email. If tuition payments are made through the mail, please address the envelope as follows:

Midwestern University
Attn: Student Financial Services
19555 N. 59th Avenue
Glendale, AZ 85308

Students who fail to pay tuition at the designated times will have their account processed according to Midwestern University’s Overdue Accounts Policy.

Fee Charges
All full and part-time degree seeking students enrolled in a full academic year (3 or 4 quarters) must pay the student services fee. Students who are enrolled 3 or 4 quarters per year will be charged the full annual student services fee. Students who are enrolled in a program that ends with 1 quarter over the summer or 2 quarters over the summer and fall will be charged 25% and 50% of the annual student services fee, respectively. The student services fee funds such areas as the recreation center, sports intramurals, counseling services, operation of the student lounge, student council, student representation in government, graduation fees, and student events on and off-campus.

Add/Drop Charges
The last day to add or drop a course is the second Friday of each quarter. Charges for courses added/dropped by this date will be adjusted according to the student’s new in-school status (i.e. full-time, part-time, half-time, etc.). Please note that if all courses are dropped and a student is determined to be withdrawing for the entire quarter, tuition and fee charges may be assessed and will be based upon guidelines stated in the Return of Federal Title IV Funds/MWU Refund Policy.

Partial Course Load
Students registered for courses that total fewer than 12 credit hours per quarter are considered to have a partial course load. Prior authorization from the academic dean is required before students can begin a quarter with a part-time course load. In such circumstances, tuition is charged on a per credit hour basis. The rate for each credit hour is calculated based on the current quarterly full-time tuition divided by 12 for credit hours. The per credit hour rate is multiplied by the enrolled credit hours to equal the tuition charge for the quarter.

Course Overload
Students desiring to register for more than the prescribed course load in a given quarter are considered to have registered for a course overload. These students must receive prior approval from the academic dean before starting the quarter. Tuition in addition to full tuition will be charged for each additional credit hour above the prescribed course load on the following basis:

- The credit hour rate for courses that cause a course overload will be calculated based on the current quarterly full-time tuition rate divided by the current quarter’s prescribed course load.
- The per credit hour rate is multiplied by the enrolled credit hours to equal the tuition charge for the quarter.
Overloads are defined as follows: AZCOM >29 credit hours; CPG: >21 credit hours; CHS Graduate >23 credit hours; CHS Podiatric Medicine >27 credit hours; CDM >30 credit hours; AZCOPT >30 credit hours.

Payment Plans
The Office of Student Financial Services offers a payment plan that allows a student to divide his/her unpaid balance into equal monthly installments over a course of a quarter. The following are policies regarding the payment plan:
1. It will be mandatory for students to utilize MWU’s electronic billing and payment system, available at https://online.midwestern.edu to set up the payment plan.
2. Payment plans will be effective for the entire quarter.
3. A fee of $25 will be charged per quarter. This fee is to cover costs associated with payment plan enrollment, maintenance, billing, collections, and monthly follow-up on the plans.
4. The plan is interest-free.
5. All financial aid must be applied toward the unpaid balance due first before accepting student payments.
6. A 1.5% late fee will be applied to accounts at 10 days late and the balance may be accelerated to fully due.
7. The unpaid balance must be paid by the end of each quarter. Example: Student’s balance due is $10,500+ $25 payment plan fee. The quarter is three months long. $10,500/3 = $3,500. Thus, student’s first payment will be $3,525, which includes the payment plan fee. The next two payments will be $3,500 per month.
8. Student must not have been late on any prior MWU payment plans.
9. Student’s account must be paid in full from the previous quarter.

Prepayment Plans
Any student has the option to prepay the entire amount of tuition for his/her program at the tuition rate that is effective for the first year of study. Prepayment of the entire program’s tuition must be paid in full by the first day of matriculation.

Any student may prepay a year at a time of tuition at the current rate. This tuition must be prepaid one full academic year in advance. For example, a student matriculating in the 2009-2010 academic year in September 2009 who wishes to pay his/her 2010-2011 tuition must make this prepayment by the first day of matriculation in September 2009. If this same student does not choose to pay at matriculation but later decides for example to prepay year three at the current year two rate, this prepayment for year three must be made by the first day of year two classes. Any exceptions to this policy must be approved by the University Director of Student Financial Services & Registrars.

Credit Cards
The Office of Student Financial Services does accept credit cards as payment of tuition, student services fees, disability/health insurance fees, and institutional housing; however, the following requirements do apply:
1. Mastercard, Visa, Discover and American Express are accepted.
2. All financial aid funds must be applied to the balance first before using a credit card for payment.
3. When using a parent’s credit card, the Office of Student Financial Services must receive a memo authorizing the charges or have phone authorization from the parent.
4. Credit card payments will not be accepted on accounts already paid in full unless the student provides written authorization to hold the pre-payment for future quarters in which the student owes an outstanding balance after applying financial aid funds.

Direct Deposit
Direct deposit for financial aid refund checks is mandatory. Students requesting to appeal this mandatory requirement must submit a letter to the Director of Student Financial Services explaining the circumstances that make it impossible for funds to beelectronically submitted to the student’s personal checking or savings account.

MWU will not be held responsible for any fees or charges that result due to checks written when a student had insufficient funds in his/her account. MWU is also not responsible for late charges on any past due bills a student may incur. It is the student’s responsibility to ensure that the deposit has cleared prior to writing checks.

A direct deposit made in error must immediately be returned to MWU.

Overdue Accounts
The Office of Student Financial Services will follow up with students to collect past due accounts. This will enable the Office of Student Financial Services to encourage all students to pay their balance owed on time so that they are not dropped from the enrollment of their appropriate college.

Consequences of past due accounts can include any and all of the items listed below:
1. 1.5% late fee on unpaid balance is assessed at 10 days delinquent for all balances of $500 or more. Balances of $499 or less are assessed a flat $7.50 late fee. These fees are assessed on a monthly basis throughout the quarter until the account becomes current.
2. Past due notices will be sent via email.
3. Follow up phone calls may be made to your residence.
4. Notification of delinquency will be made to the academic dean.
5. Dropped from enrollment of the college.
6. Will not be permitted to attend or participate in class, participate in clinical rotations, take examinations, or receive any academic credit. Will lose student status.

7. Suspension and/or termination from classes at MWU. Student must reapply for admission to MWU.

8. Withholding of official academic transcripts.

9. Account reported to collection agency for further action.

All students with accounts 30 days delinquent may be terminated from MWU.

Note: A student may be exempt from the payment deadlines and permitted to continue in school without risk of suspension. However, students must notify the Office of Student Financial Services of any and all circumstances that may necessitate an exception to the payment deadlines. Exceptions to this policy may be made for the following reasons:

a. Circumstances beyond the student’s control (i.e., non-arrival of financial aid, scholarship, or grant funds by the due date);

b. A payment plan has been approved by the Office of Student Financial Services;

c. Any documented extraordinary circumstance that prevents the student from paying his/her account balance on time.

Returned Checks
A $35.00 fee will be charged on any returned check. After two returned checks you will be required to pay by cashier’s check or money order. No exception will be made.

Glendale Tuition and Fees (for academic year 2009-2010)
Please Note: Tuition rates are subject to change each academic year for all enrolled students. Tuition for full-time students is an annual tuition and may be payable over two, three, or four quarters per year depending on the academic schedule of a student. Historically, tuition has increased between 2% and 7% annually.

<table>
<thead>
<tr>
<th>Program</th>
<th>Tuition</th>
</tr>
</thead>
<tbody>
<tr>
<td>AZCOM</td>
<td>$45,469</td>
</tr>
<tr>
<td>CPG</td>
<td>$38,884</td>
</tr>
<tr>
<td>PA M.M.S.</td>
<td>$32,500</td>
</tr>
<tr>
<td>OT M.O.T.</td>
<td>$28,043</td>
</tr>
<tr>
<td>Bio Sci. M.A.</td>
<td>$29,925</td>
</tr>
<tr>
<td>Car. Sci. M.S.</td>
<td>$27,958</td>
</tr>
<tr>
<td>Bioethics M.A.</td>
<td>$25,587</td>
</tr>
<tr>
<td>MHPE</td>
<td>$25,587</td>
</tr>
<tr>
<td>AZPod</td>
<td>$28,690</td>
</tr>
<tr>
<td>CRNA</td>
<td>$29,166</td>
</tr>
<tr>
<td>PsyD</td>
<td>$23,662</td>
</tr>
<tr>
<td>Dental Medicine *</td>
<td>$51,693</td>
</tr>
<tr>
<td>AZCOPT*</td>
<td>$27,500</td>
</tr>
</tbody>
</table>

For the 2009-2010 academic year, all programs (both full-time and part-time) have a yearly $400 student services fee. These fees are subject to change each academic year. Students enrolled on a less than full-time basis will be charged tuition based on a per credit fee as determined by the Office of Student Financial Services. All rates and fees are subject to correction if they are stated in error.

* The College of Optometry has the following additional fees: Technology fee $1200 and Equipment fee $3086. The College of Dental Medicine has the following additional fees: Supply Fee $3385, Instrument rental fee $1577, Sim Lab and Clinic Fee $4120, Technology fee $1200, and Surgical Atlas and Telescope fee $1391.

**Midwestern University Academic Calendar 2009-2010**

**SUMMER QUARTER 2009**

<table>
<thead>
<tr>
<th>Event</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classes Resume (PS10)</td>
<td>April 27, 2009</td>
</tr>
<tr>
<td><strong>Memorial Day <em>No Class</em></strong></td>
<td>May 25, 2009</td>
</tr>
<tr>
<td>OCM IV Didactic Lectures</td>
<td>May 26 - June 12, 2009</td>
</tr>
<tr>
<td>Orientation (PAI/NAI/PS12)</td>
<td>June 3 - 4, 2009</td>
</tr>
<tr>
<td><strong>Commencement (MS, CVSP, PM, BMS)</strong></td>
<td>June 5, 2009</td>
</tr>
<tr>
<td>Classes Begin (PAI/NAI/PS12)</td>
<td>June 8, 2009</td>
</tr>
<tr>
<td><strong>Commencement (PS)</strong></td>
<td>June 12, 2009</td>
</tr>
<tr>
<td>OCM III Introduction to Clerkship</td>
<td>June 15 - 26, 2009</td>
</tr>
<tr>
<td>Last Day of Class (PS10)</td>
<td>July 2, 2009</td>
</tr>
<tr>
<td><strong>Independence Day (Observed) <em>No Class</em></strong></td>
<td>July 3, 2009</td>
</tr>
<tr>
<td>Quarterly Exams (PS10)</td>
<td>July 6 - 10, 2009</td>
</tr>
<tr>
<td>Quarter Break (PS10)</td>
<td>July 13 - 17, 2009</td>
</tr>
<tr>
<td>Last Day of Class (PAI/NAI/PS12/OTII/OTIII/BMS/PMII/PMIII/CPI/CPII)</td>
<td>August 14, 2009</td>
</tr>
<tr>
<td>Event</td>
<td>Dates</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Quarter Break (PAI/NAI/PS12/OTII/OTIII/BMS/PMII/PMIII/CPI/CPII)</td>
<td>August 24 - 28, 2009</td>
</tr>
<tr>
<td>Commencement (PA, OT, NA)</td>
<td>August 28, 2009</td>
</tr>
<tr>
<td><strong>FALL QUARTER 2009</strong></td>
<td></td>
</tr>
<tr>
<td>Classes Begin (PS10)</td>
<td>July 20, 2009</td>
</tr>
<tr>
<td>Orientation (MSI/PMI)</td>
<td>August 4 - 6, 2009</td>
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<tr>
<td>Classes Begin (MSI/PMI)</td>
<td>August 10, 2009</td>
</tr>
<tr>
<td>Program Completion (PAIII)</td>
<td>August 28, 2009</td>
</tr>
<tr>
<td>Classes Begin</td>
<td>August 31, 2009</td>
</tr>
<tr>
<td><strong>Labor Day <em>No Class</em></strong></td>
<td>September 7, 2009</td>
</tr>
<tr>
<td>Last Day of Class (PS10)</td>
<td>September 25, 2009</td>
</tr>
<tr>
<td>Quarterly Exams (PS10)</td>
<td>September 28 - October 2, 2009</td>
</tr>
<tr>
<td>White Coat Ceremony</td>
<td>October 9, 2009</td>
</tr>
<tr>
<td>Last Day of Class (PM III)</td>
<td>October 5, 2009</td>
</tr>
<tr>
<td>Last Day of Class</td>
<td>November 6, 2009</td>
</tr>
<tr>
<td>Thanksgiving Break</td>
<td>November 16 - 27, 2009</td>
</tr>
<tr>
<td><strong>WINTER QUARTER 2009-2010</strong></td>
<td></td>
</tr>
<tr>
<td>Classes Begin</td>
<td>November 30, 2009</td>
</tr>
<tr>
<td>Winter Break</td>
<td>December 23, 2009 - January 1, 2010</td>
</tr>
<tr>
<td>Classes Resume</td>
<td>January 4, 2010</td>
</tr>
<tr>
<td><strong>Martin Luther King, Jr. Day <em>No Class</em></strong></td>
<td>January 18, 2010</td>
</tr>
<tr>
<td>CAREERxPO (CPG)</td>
<td>February 4, 2010</td>
</tr>
<tr>
<td>Last Day of Class</td>
<td>February 19, 2010</td>
</tr>
<tr>
<td>Quarterly Exams</td>
<td>February 22 - 26, 2010</td>
</tr>
<tr>
<td>Spring Break</td>
<td>March 1 - 5, 2010</td>
</tr>
<tr>
<td><strong>SPRING QUARTER 2010</strong></td>
<td></td>
</tr>
<tr>
<td>Classes Resume</td>
<td>March 8, 2010</td>
</tr>
<tr>
<td>Event</td>
<td>Dates</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>Last Day of Class</td>
<td>May 14, 2010</td>
</tr>
<tr>
<td>(MSI/MSII/DMI/DMII/PS11/PS12/PAI/NAI/PMI/PMII/PMIII/OTI/OTII/BMS/</td>
<td></td>
</tr>
<tr>
<td>SPI/CPI/CPII/CPIII/OPI)</td>
<td></td>
</tr>
<tr>
<td>Quarterly Exams</td>
<td>May 17 - 21, 2010</td>
</tr>
<tr>
<td>(MSI/MSII/DMI/DMII/PS11/PS12/PAI/NAI/PMI/PMII/PMIII/OTI/OTII/BMS/</td>
<td></td>
</tr>
<tr>
<td>SPI/CPI/CPII/CPIII/OPI)</td>
<td></td>
</tr>
<tr>
<td>OCM III Exam Week (MSIII)</td>
<td>May 24 - 28, 2010</td>
</tr>
<tr>
<td>Quarter Break (PS11/PS12)</td>
<td>May 24 - 28, 2010</td>
</tr>
<tr>
<td>Quarter Break (DMII/NAI/PMI/PMII/OTI/OTII/BMS/CPI/CPII/CPIII)</td>
<td>May 24 - June 4, 2010</td>
</tr>
<tr>
<td>Quarter Break (MSII)</td>
<td>May 24 - June 11, 2010</td>
</tr>
<tr>
<td>Quarter Break (MSI/DMI/OPI)</td>
<td>May 24 - August 27, 2010</td>
</tr>
<tr>
<td>Prep for Clinical Practice (PAI/CVSPi)</td>
<td>May 24 - 28, 2010</td>
</tr>
<tr>
<td><strong>Memorial Day <em>No Class</em></strong></td>
<td>May 31, 2010</td>
</tr>
<tr>
<td>Quarter Break (PAI/CVSPI)</td>
<td>May 31 - June 4, 2010</td>
</tr>
<tr>
<td><strong>COMMENCEMENT (MS, CVSP, PM, BMS)</strong></td>
<td>June 4, 2010</td>
</tr>
<tr>
<td><strong>COMMENCEMENT (PS)</strong></td>
<td>June 18, 2010</td>
</tr>
<tr>
<td><strong>COMMENCEMENT (PA, OT, NA)</strong></td>
<td>August 27, 2010</td>
</tr>
</tbody>
</table>
MISSION
The mission of the Arizona College of Osteopathic Medicine (AZCOM)—Midwestern University (MWU) is to meet the contemporary societal need for physicians by emphasizing care and educational experiences needed to serve all communities. The curriculum provides an innovative academic foundation incorporating the philosophy of osteopathic principles and practices, striving to be fully integrated throughout the basic and clinical sciences, while promoting faculty development and research.

ACCREDITATION
The Arizona College of Osteopathic Medicine is accredited by the Commission on Osteopathic College Accreditation (COCA). COCA is recognized as the accrediting agency for colleges of osteopathic medicine by the United States Office of Education and the Council of Postsecondary Accreditation (COPA). AZCOM is currently accredited through 2014 having received a 7 year accreditation in 2007.

For further information, please contact the Commission on Osteopathic College Accreditation, American Osteopathic Association, 142 E. Ontario St., Chicago, IL 60611; 800/621-1773.

DEGREE DESCRIPTION
Upon graduation from Arizona College of Osteopathic Medicine, the Doctor of Osteopathic Medicine (DO) degree is granted. The usual length of the course of study is 4 academic years. The curriculum consists of 2 years of primarily didactic instruction followed by 2 years of primarily clinical rotations including the applicable didactic material. Upon graduation with the DO degree, the graduate is eligible for postdoctoral residency training in all fields of medicine.

Students in good standing may apply to the AZCOM Dean for a combined D.O./Master’s program in either Bioethics (M.A.) or Health Professions Education (M.H.P.E.)

ADMISSIONS
The Arizona College of Osteopathic Medicine considers for admission those students who possess the academic, professional, and personal qualities necessary to become exemplary osteopathic physicians. To select these students, the College uses a rolling admissions process within a competitive admissions framework.

Admission Requirements
Students seeking admission to AZCOM must submit the following documented evidence:
1. Completion of the prerequisite coursework.
   • Grades of C or better (grades of C- are not acceptable)
   • To be competitive, students should have minimum cumulative GPAs and science GPAs over 3.00 on a 4.00 scale
2. Completion of a bachelor’s degree at regionally accredited colleges or universities prior to matriculation.
   • Applicants participating in special affiliated programs with the College and other exceptions to this policy will be considered on an individual basis.
3. Competitive test scores on the Medical College Admissions Test (MCAT)
   • Average MCAT score for students entering in 2008 was 26
   • Only MCAT exam scores earned from tests taken no more than 3 years prior to the planned enrollment year are acceptable
   • Register for MCAT tests through the MCAT Program Office at 319/337-1357 or visit www.aamc.org/students/mcat for information
   • MCAT exams are offered multiple times throughout the year
4. Two letters of recommendation are required
   • One letter from either a premedical advisory committee or science professor who has taught the applicant
2. Second letter from either a D.O. or an M.D. Letters from osteopathic physicians are strongly recommended, and letters written by immediate family members are not acceptable
3. Demonstration of sincere understanding of and interest in osteopathic medicine
4. Demonstration of a people or service orientation through community service or extracurricular activities
5. Motivation for and commitment to health care as demonstrated by previous work, volunteer work, or other life experiences
6. Oral and written communication skills necessary to interact with patients and colleagues
7. Passing the Midwestern University criminal background check
8. Commitment to abide by Midwestern University Drug-Free Workplace and Substance Abuse Policy
9. Meet the Technical Standards for the College
10. Commitment to the Free Workplace and Substance Abuse Policy
11. Meet the Technical Standards for the College

**Admission Prerequisites**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology with Lab</td>
<td>8 S/12 Q</td>
</tr>
<tr>
<td>General Chemistry with Lab</td>
<td>8 S/12 Q</td>
</tr>
<tr>
<td>Organic Chemistry with Lab</td>
<td>8 S/12 Q</td>
</tr>
<tr>
<td>Physics</td>
<td>8 S/12 Q</td>
</tr>
<tr>
<td>English Composition</td>
<td>6 S/9 Q</td>
</tr>
</tbody>
</table>

*Courses that may contribute to success in medical school include Anatomy, Physiology, and Biochemistry*

**International Applicants**

An international student must satisfy all of the requirements for admission to the College or Program that apply to a student who has completed all of his/her prerequisite coursework in the U.S. at a regionally accredited college or university. In addition, an international student must demonstrate proficiency in the English language. This may be accomplished by satisfying both of the following requirements:

1. The international student has completed a minimum of two full time semesters or three full time quarters of instruction at a postsecondary institution in the United States. Completed coursework must include a minimum of 50% of the prerequisite science coursework for the college or program of interest, 6 semester hours of non-remedial English composition, and 3 semester hours of public speaking/speech.
2. The international student must submit official TOEFL scores. A minimum passing score is 550 (paper version, maximum score 677) or 100 (internet version, maximum score 120). The TOEFL scores must be from an exam taken within two years of the anticipated date of matriculation into the college or program.

If the international student wishes to receive credit for prerequisite coursework completed at a college or university outside of the United States, he/she must submit an official, detailed, course-by-course evaluation of this coursework. The student must obtain this evaluation from one of the following services:

1. Educational Credential Evaluators (ECE): 414/289-3400 or Fax 414/289-3411 (www.ece.org, e-mail: info@ece.org)
3. World Education Service (WES): 212/966-6311 or Fax 212/739-6100 (www.wes.org, e-mail: info@wes.org)

Based on the official foreign transcript evaluation and the grade earned in the course(s), the college or program will decide if it will apply any of these credits toward fulfillment of its prerequisites.

**Competitive Admissions**

Within their competitive admissions framework, the College uses multiple criteria to select the most qualified candidates from an applicant pool that exceeds the number of seats available. For the class that matriculated in the fall of 2008, AZCOM received nearly 3,500 applications for its 250 seats.

**Rolling Admissions**

AZCOM uses a rolling admissions process in which applications are reviewed and interview decisions are made at regular intervals during the admissions cycle. Interviews are conducted and selection decisions for the College are made until the classes are filled. Applicants are notified of their selection status within two to four weeks after their interview date. To be competitive within this process, candidates should apply early in the admissions cycle.

**Application Process and Deadlines**

The official AACOMAS application deadline is January 1st; however, applicants are strongly encouraged to apply early in the cycle. Due to the large number of applications and the limited number of seats available, applications will be considered on a first-come, first-served basis only until all seats are filled.

1. **AACOMAS Application - January 1, 2010 Deadline**
   To initiate the application process, all applicants must apply online via the centralized application service administered by ACOM at http://aacomas.aacom.org/. The AACOMAS application is typically available in early June. As part of this process, students must submit official MCAT scores (for tests taken no earlier than April 2007) and official transcripts directly to AACOMAS. The Office of Admissions will not accept MCAT scores or transcripts submitted directly to Midwestern University. The deadline for submission of the AACOMAS application is January 1.

2. **AZCOM Supplemental Application - March 1, 2010 Deadline**
   Upon receipt of the AACOMAS application from the application service, the Midwestern University Office of Admissions will e-mail the supplemental application to all applicants who have earned minimum cumulative
GPAs and science GPAs of 2.75. Applicants must complete and submit the supplemental application forms with their resume, essay responses, and nonrefundable/nonwaivable $50 processing fee to the Office of Admissions. All supplemental application materials must be received in the Office of Admissions on or before the deadline of March 1, 2010.

3. **Letters of Recommendation - March 1, 2010 Deadline**

Applicants must submit two letters of recommendation. One letter must be written by a prehealth advisory committee or science professor who has taught the applicant. The second letter must be written by a physician, either a D.O. or an M.D. Letters from osteopathic physicians are strongly recommended. The required letters of recommendation must be received in the Office of Admissions on or before the deadline of March 1, 2010. Letters must adhere to the following guidelines:

- The applicant’s full legal name and ACOMAS ID number must be on the front page of the recommendation. Please provide this information to evaluator.
- Letters must be sent directly from the evaluator and must be printed on letterhead stationary, which includes the complete contact information for evaluator.
- The evaluator’s academic degrees must be listed (e.g., Ph.D., D.O., M.D.).
- Students who have previously applied to AZCOM must submit new letters of recommendation.
- Letters from immediate family members will NOT be accepted.

4. **Completed Applications - March 1, 2010 Deadline**

All application materials, including the ACOMAS application, MCAT scores (as reported to ACOMAS), two required letters of recommendation, and all supplemental application materials with the application fee must be received in the Office of Admissions on or before March 1, 2010. Only completed applications received by the Office of Admissions on or before the deadline date will be reviewed for potential fall 2010 enrollment.

5. **Application Reviews and Interview Decisions**

AZCOM uses a rolling admissions process to review completed applications and make interview decisions. Applications will not be reviewed until all required application materials have been received by the Office of Admissions, including the ACOMAS application, official MCAT scores (as reported to ACOMAS), supplemental application materials, processing fee, and both required letters of recommendation. Students complete their files as soon as possible to remain competitive in this process and to ensure full consideration of their applications.

**Please Note:** Applicants are responsible for tracking the receipt of their application materials and verifying the status of their required application materials on the University website. Instructions for accessing your application information on the university website will be sent to you by the Office of Admissions. Please keep the Office of Admissions informed of any changes to your mailing address and e-mail address. All requests for application withdrawals must be made in writing. Applicants are expected to act professionally in their interactions with ACOMAS and with AZCOM. Please follow ACOMAS’s applicant protocol at all times.

**Interview and Selection Process**

Applicants must meet all of the admissions requirements listed previously to be considered for on-campus interviews. After the Office of Admissions receives all of the required application materials, applicant files are reviewed to determine whether applicants merit interview invitations based on established criteria of the Admissions Committee. Applicants who are invited to interview will be contacted by the Office of Admissions and receive instructions for scheduling their interviews via the University’s web-based scheduling system. Additional applicants may be placed on an interview “Waiting List” pending possible interview openings toward the end of the interview cycle. The on-campus interview process typically begins in September and ends in April.

When applicants accept interview appointments, they join several other interviewees to meet with members of a three-person interview panel—a panel selected from a volunteer group of basic scientists, current students, administrators, and clinicians. Team members question applicants about their academic, personal, and health care preparedness for medical school, and they rate applicants on a standardized evaluation form relative to each variable. At the conclusion of the interviews, the team members forward their applicant evaluations to the Admissions Committee. The Committee may recommend to accept, to deny, or to place the applicant on either the hold or alternate list. This recommendation is then forwarded to the Dean for final approval. The Dean, via the Office of Admissions, notifies students of their status within three or four weeks of their interview.

The interview process typically begins in September and ends in April.

**Technical Standards for Admission**

The educational mission of AZCOM is to produce competent osteopathic physicians, emphasizing primary care but including traditional specialties and subspecialties. Because the D.O. degree signifies that the holder is a physician prepared for entry into the practice of medicine within postgraduate training programs, graduates must have the knowledge and skills to function in a broad variety of...
clinical situations and to render a wide spectrum of patient care, including direct hands-on analysis and treatment.

Accordingly, the following abilities and expectations must be met by all students admitted to AZCOM with reasonable accommodation. A candidate must have abilities and skills in five areas: 1) observation; 2) communication; 3) motor; 4) intellectual, conceptual, integrative, and quantitative; and 5) behavioral and social. Technological compensation can be made for some limitation in some areas, but a candidate should be able to perform in a reasonably independent manner.

I. Observation: The candidate must be able to accurately make observations at a distance and close at hand. Observation necessitates the functional use of the sense of vision and somatic sensation and is enhanced by the functional use of all of the other senses.

II. Communication: The candidate must be able to communicate effectively, efficiently and sensitively in both oral and written form and be able to perceive nonverbal communication.

III. Motor: Candidates must be able to coordinate both gross and fine muscular movements, maintain equilibrium and have functional use of the senses of touch and vision. The candidate must possess sufficient postural control, neuromuscular control and eye-to-hand coordination to perform profession-specific skills and tasks.

IV. Intellectual, Conceptual, Integrative and Quantitative Abilities: The candidate must be able to problem solve, measure, calculate, reason, analyze, record and synthesize large amounts of information in a timely manner. The candidate must be able to comprehend three-dimensional relationships and understand spatial relationships.

V. Behavioral and Social Attributes: The candidate must possess the emotional health required for full utilization of his/her intellectual abilities, the exercise of good judgment and the consistent, prompt completion of all responsibilities and the development of mature, sensitive and effective relationships. Candidates must be able to tolerate physically, mentally and emotionally taxing workloads and to function effectively under stress. The candidate must be able to adapt to changing environments, to display flexibility, and to learn to function in the face of uncertainties. Compassion, integrity, concern for others, effective interpersonal skills, willingness and ability to function as an effective team player, interest and motivation to learn are all personal qualities required during the educational process.

Candidates are required to certify that they understand and meet these Technical Standards. Candidates must provide such certification prior to matriculation. Candidates who may not meet the Technical Standards must inform the Director of Admissions, who will then contact the Dean of Students. The Dean of Students, in consultation with the academic dean (and program director), will identify and discuss what accommodations, if any, the College(Pro)gram would need to make that would allow the candidate to complete the curriculum. The College(Pro)gram is not able to grant accommodations that alter the educational standards of the curriculum. Students must meet the Technical Standards for the duration of enrollment in their professional program.

Matriculation Process
To initiate the matriculation process, newly accepted students must return both their signed matriculation agreement and their deposit by the date designated in their matriculation agreement. To conclude the matriculation process, a student must also:

1. Submit deposit monies and administrative fees by the dates designated in their matriculation documents. Deposits are applied towards first quarter’s tuition.

2. Submit official transcripts from all colleges attended post–high school by the deadline of two weeks (14 calendar days) prior to the first day of classes. Students who are accepted to MWU less than one month prior to the first day of classes will have 30 calendar days from the date of their acceptance to submit all official transcripts to the Office of Admissions. Any special circumstances or requests for exceptions to this policy must be sent to and approved by the Office of the Dean of the College.

3. Submit completed medical files as instructed in the information sent by the Office of Student Services.

4. Submit proof of medical and disability insurance coverage. Students may select either a plan offered by AZCOM or an AZCOM-approved outside carrier of their choice.

5. Provide documentation verifying that sufficient funds have been deposited in a U.S. bank to cover all expenses while attending AZCOM (for non–U.S. citizens/nonpermanent residents only).

6. Submit additional documents as required by the Office of Admissions.

7. Authorize and pass the Midwestern University criminal background check.

8. Sign and submit a Midwestern University Drug-Free Workplace and Substance Abuse policy Statement.

9. Complete a physical exam and submit form.

10. Sign and submit a Credit Policy Statement.
Articulation Agreement Between Midwestern University Programs

Students enrolled in a Midwestern University program are guaranteed an admission interview with another Midwestern University program if the student:

1. is currently in good standing in the academic program in which the student is enrolled and does not have any pending misconduct charges against him/her;
2. meets all admission requirements for the professional program of interest;
3. after a minimum of two full time quarters of study, achieves a minimum Midwestern University grade point average, derived from all courses completed at Midwestern, that is equal to or greater than 3.0; AND
4. achieves a score on the professional entrance exam (if required) that is not less than one standard deviation below the mean score for students that matriculated into the professional degree program in the previous year.

A guaranteed interview does not guarantee admission into the professional program.

Combined D.O./Master’s Program

Through the Biomedical Sciences Program of Midwestern University, D.O. students may enroll in a dual degree option in either Bioethics (M.A.) or Health Professions Education (M.H.P.E.). Both degrees are intended to supplement the educational experience and career opportunities for D.O. students. Degrees can be completed while simultaneously completing the requirements for the D.O. degree.

The Bioethics Program will provide students with the background necessary to understand the process by which ethical decisions that relate to patient care and health care practice are made.

The Health Professions Education Program will provide students with the background necessary for development as effective educators in the field of medicine.

See the Biomedical Sciences Program catalog, or call the Office of Admissions for more details.

Deferred Admission

Deferments are only considered under extreme circumstances in which students are physically unable to begin classes due to a medical condition. If granted, students may defer their admission for one year only.

To initiate the deferred admission process, students must request deferment in writing to the Director of Admissions by the date designated in their matriculation agreements. These requests must be accompanied by a letter(s) from the student’s physician(s) documenting the conditions that prevent students from beginning their medical education.

The Director will respond to written requests with a letter detailing the specific conditions associated with deferral. Typically, the conditions include:

1. At the time of their deferral requests, students must submit their remaining deposit monies by the first week of December during the year preceding their matriculation.
2. Students must provide letters from their physicians stating that students can begin their medical education.

Students are NOT required to interview again or submit another supplemental application or letters of evaluation.

Reaplication Process

After receiving either denial or end-of-cycle letters, applicants may reapply for the next enrollment cycle. Before reapplying, however, applicants should seek the advice of an admissions counselor.

To initiate the reaplication process, applicants must submit their applications to AACOMAS. Applications are then processed according to standard application procedures.

Transfer Admission

AZCOM may elect to accept transfer students from other U.S. osteopathic medical schools as long as these students remain in good academic standing and provide acceptable reasons for seeking their transfers. The Commission on Osteopathic College Accreditation (COCA) standards require that the last two years of instruction must be completed within the college of osteopathic medicine granting the D.O. degree.

Students requesting transfers must meet the College’s general requirements for admission and follow transfer procedures:

1. All inquiries for transfer to AZCOM must be submitted to the Office of Admissions.
2. The Office of Admissions will confirm the availability of rotation sites through the Division of Clinical Education.
3. If sites are available, applications will be sent.
4. Students must return their completed applications to the Office of Admissions and must include: transcripts from the COM, class rank (must be in top 50%), statement of reason for transfer, Dean’s letter verifying “Good Academic Standing,” a letter of reference from the Dean of Student Affairs, and COMLEX Level 1 scores, if available.
5. Completed applications are forwarded to the Associate Dean for Clinical Education.
6. The Associate Dean for Clinical Education reviews applications and conducts interviews with applicants and the Chairs.
7. Recommendations are forwarded to the Dean of AZCOM for final approvals.
8. Applicants are notified by the Dean of the final transfer decision.
GRADUATION REQUIREMENTS
The degree Doctor of Osteopathic Medicine is conferred upon candidates of good moral character who have completed all academic requirements, satisfied all financial obligations, and completed all graduation requirements. All graduating students are required to attend the ceremony at which the degree is conferred, unless excused by the Dean.

Students must pass COMLEX Level I and both components of the COMLEX Level II examinations of the National Board of Osteopathic Medical Examiners. A minimum of 45 months must elapse between the date of matriculation and graduation.

LICENSURE REQUIREMENTS
Osteopathic physicians can obtain full practice rights in all 50 states as well as many foreign countries. To obtain licensure, osteopathic physicians must meet the requirements established by individual states. Typically, states grant licensure in one of two ways:

1. The state accepts a certificate issued by the National Board of Osteopathic Medical Examiners.
2. The state honors a formal, or informal, reciprocity agreement with another state(s).

Postdoctoral requirements vary among states. For example, Illinois requires at least two years of postdoctoral training for licensure.

For further information concerning licensure, please contact the American Osteopathic Association (AOA) at (800)621-1773.

CURRICULUM

First Year

<table>
<thead>
<tr>
<th>First Year</th>
<th>Fall Quarter (10 weeks)</th>
<th>Credit hours</th>
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<tbody>
<tr>
<td>ANAT 1511</td>
<td>Gross Anatomy I</td>
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Spring Quarter (10 weeks)

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<td>Clinical Correlates/ICM III</td>
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<td>MICR 1531</td>
<td>Immunology</td>
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<td>PHYS 1532</td>
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<td>Mandatory Elective(s)</td>
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Second Year

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<td>CMED 1613</td>
<td>Patient Care Experiences I</td>
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<td>FMED 1612</td>
<td>Topics in Medicine I</td>
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<td>FMED 1614</td>
<td>Clinical Correlates/Case Presentations IV</td>
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<td>Microbiology I</td>
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<td>PATH 1611</td>
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<td>PHAR 1611</td>
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Winter Quarter (10 weeks)

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<tr>
<td>CMED 1624</td>
<td>Patient Care Experience II</td>
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<td>Clinical Correlates/Case Presentations V</td>
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<td>ICMD 1625</td>
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<td>Microbiology II</td>
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Spring Quarter (10 weeks)

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<tbody>
<tr>
<td>CLMD 1631</td>
<td>Introduction to Radiology</td>
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<td>FMED 1630</td>
<td>Clinical Medicine Capstone</td>
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Third Year

<table>
<thead>
<tr>
<th>Third Year</th>
<th>Summer, Fall, Winter, and Spring Quarters (*54 weeks)</th>
<th>Credit hours</th>
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<tbody>
<tr>
<td>CARD 1701</td>
<td>Cardiology (4 weeks)</td>
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<tr>
<td>CLMD 1701</td>
<td>Osteopathic Clinical Medicine II-CE</td>
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<td>FMED 1701</td>
<td>Family Medicine I (4 wks)**</td>
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<tr>
<td>FMED 1702</td>
<td>Family Medicine II (4 wks)**</td>
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<tr>
<td>FMED 1703</td>
<td>Primary Care (4 weeks)**</td>
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<tr>
<td>IMED 1701</td>
<td>Gen. Internal Med. I (4 wks)</td>
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</table>
**IMED 1702** Gen. Internal Med. II (4 wks) 4.0  
**OBGY 1701** Obstetrics/Gynecology (4 weeks) 4.0  
**PEDI 1701** Pediatrics (4 weeks) 4.0  
**PSYC 1701** Psychiatry (4 weeks) 4.0  
**RURL 1701** Rural/Underserved Medicine (4 weeks) 4.0  
**SURG 1701** General Surgery (4 weeks) 4.0  
**Total** 54.0

*Total weeks includes orientation and a holiday break/vacation.

**Fourth Year**

**Summer, Fall, Winter, and Spring Quarters (40 weeks)**

<table>
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<th>Course</th>
<th>Description</th>
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<td>EMED 1801</td>
<td>Emergency Medicine</td>
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<tr>
<td>IMED 1803</td>
<td>Subspecialty Medicine</td>
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<tr>
<td>IMED 1804</td>
<td>Critical Care (4 weeks)</td>
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<tr>
<td>SURG 1802</td>
<td>Subspecialty Surgery II</td>
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</tr>
<tr>
<td>ELEC 1801</td>
<td>Electives (20 weeks req’d)</td>
<td>Maximum 24 wks * 20.0</td>
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**Total** 40.0

*Four (4) additional weeks of elective time may be scheduled as a rotation, vacation, interview, or study time.

**Total Curricular Hours**

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<tr>
<th>Year</th>
<th>Credits</th>
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<tr>
<td>First Year</td>
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<tr>
<td>Second Year</td>
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<tr>
<td>Elective Credits</td>
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<tr>
<td>Third Year</td>
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<tr>
<td>Fourth Year</td>
<td>40.0</td>
</tr>
<tr>
<td>Total</td>
<td>231.9</td>
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</tbody>
</table>

Note: The Arizona College of Osteopathic Medicine reserves the right to alter its curriculum however and whenever it deems appropriate.

**Elective Courses**

Students are required to accumulate a total of 2 credit hours of approved elective courses by the end of second year. Students may begin as early as the spring quarter of their first year and must complete this requirement by the end of the second year. Course availability varies from year to year. The most current offerings may be viewed on the MWU intranet.

**Clinical Rotations**

**Required Core Rotations**

Students must successfully complete required clinical rotations in the following disciplines: family medicine/OMM, internal medicine, surgery, pediatrics, cardiology, psychiatry, and obstetrics/gynecology at AZCOM in-system rotation facilities. There are also required rotations in emergency medicine, critical care, subspecialty medicine, subspecialty surgery, rural/underserved medicine, and primary care medicine. These rotations may be done at either in-system or out-of-system sites.

**Required Elective Rotations**

Students must successfully complete a minimum of 20 weeks of elective rotations during their fourth year in recognized disciplines of medicine. This may include the following specialties: anesthesiology, cardiology, family medicine, osteopathic manipulative medicine), dermatology, gastroenterology, hematology/oncology, infectious disease, nephrology, neurology, neurosurgery, nuclear medicine, endocrinology/metabolism, obstetrics/gynecology, ophthalmology, orthopedic surgery, otolaryngology, pathology, radiology, rheumatology/immunology, cardiovascular/thoracic surgery, and urology. Students may also schedule a four week elective in international medicine and/or research.

Students are restricted to a maximum of eight weeks of elective rotations in any one discipline. The appropriate Department Chair may be petitioned for prior approval for up to an additional four weeks of rotations in that discipline.

Elective clinical rotations may be done at osteopathic, allopathic, or military institutions. To be eligible for academic credit, elective rotation schedules must be planned with the assistance of, and approval by, the appropriate clinical department chairs.

**Breaks/Vacation**

There is a two week holiday break at the end of the calendar year during the third and fourth years. In addition, there is a one week break for graduation activities culminating in the Friday graduation in June.

Students may arrange academic breaks to attend out-of-area interviews, take COMLEX-USA Level II-PE, or to study for COMLEX-USA Level II-CE.

**Department Descriptions**

**Department of Anatomy**

Through a comprehensive course of study in gross anatomy, embryology, histology, and neuroscience, the anatomy section of the basic sciences provides thorough instruction in the morphology of the human body. The study of anatomy is particularly germane to osteopathic medicine because the relationship between structure and function is a fundamental tenet of osteopathic philosophy. Direct observation of human structure is the essence of the anatomy courses. In Gross Anatomy, all students participate in the dissection of the cadaver under the guidance of the Anatomy faculty. Dissection is supplemented by the study of surface projections, models, osteologic specimens, radiographs and transverse sections. The microscopic structure of cells and their organization into tissues and organs are presented in the
Histology course. In Embryology, students study the normal pattern of human development with an emphasis on the development of specific organ systems. The Neuroscience course is a multidisciplinary course that incorporates several of the basic science disciplines and uses case studies to apply and reinforce basic concepts and new trends in the field of neuroscience.

Department of Biochemistry
Biochemistry is the science concerned with cellular constituents at the molecular level and all the reactions that take place within a living cell. A biochemical understanding of molecular and cellular components in health enables physicians to appreciate how the properties and function of these components are altered in disease. Biochemistry is fundamental to understanding all branches of the life sciences. The course is offered during the first two terms of medical school and is composed of both lectures and workshops. Workshops are conducted with small groups using case-based learning to illustrate the application of biochemical concepts in a clinical setting.

Department of Clinical Education
The Department of Clinical Education offers several courses throughout the four (4) years of medical school. The purpose of clinical courses is to prepare the medical student for the clinical experiences during the third and fourth years of medical school. In addition, the Department of Clinical Education aims to assist the medical student in achieving the integration of knowledge in the development of differential diagnoses, the reporting of patient care, and the development of professional skills.

Department of Family Medicine
The Department of Family Medicine is responsible for required clinical rotations in family medicine, family medicine/OMM, rural medicine and primary care. It facilitates specialty-specific didactic lectures during the first, second, third and fourth years. The department is also responsible for elective rotations including, but not limited to public health/preventative medicine, rehabilitation medicine, sports medicine, dermatology, international rotations, and addiction medicine.

Department of Integrated Medicine
The Department of Integrated Medicine is responsible for required clinical rotations in psychiatry, emergency medicine and elective rotations including, but not limited to radiology, pathology and laboratory medicine, and preventive medicine. It facilitates specialty-specific didactic lectures during the second, third and fourth years.

Department of Medicine
The Department of Internal Medicine is responsible for required rotations in General Internal Medicine, Cardiology, Critical Care, and the medical subspecialties. It is responsible for elective rotations in Cardiology, Rheumatology, Gastroenterology, Hematology/Oncology, Neurology, Allergy/Immunology, Infectious Disease, Pulmonology, Nephrology, and Geriatrics. It delivers or facilitates didactic lectures, small group tutorials, objective structured clinical examinations and curricular instruction in all areas of Internal Medicine while preparing, grading and conducting remediation examinations both written and practical in the discipline.

Department of Microbiology and Immunology
Infectious diseases have always had a tremendous impact on virtually every aspect of daily life. Currently, greater than one third of all cases seen by family practice physicians involve infectious diseases or immunologically related disorders. Through a comprehensive presentation of medical microbiology and immunology, the student is introduced to the fundamental characteristics of pathogenic microorganisms and immune mechanisms. Using an organ-system approach, students receive the information necessary for an understanding of the factors that make microbes pathogenic. Pertinent information for various diseases includes the etiology, epidemiology, clinical manifestations, diagnostic procedures, and necessary methods for prevention and control. A separate course in immunology explores the immune system. The roles of cells and molecules in the protection of the human host as well as their roles in immunologically mediated disorders are explored. Insight into the mechanisms that provide effective defense from infection and malignancy is emphasized.

Department of Obstetrics and Gynecology
The Department of OB/GYN is responsible for required clinical rotations in obstetrics and gynecology. It facilitates specialty-specific didactic lectures during the second, third and fourth years. The department is also responsible for elective rotations in related subspecialties.

Department of Osteopathic Manipulative Medicine
The Department of Osteopathic Manipulative Medicine is responsible for integrating the first two years of basic osteopathic manipulative medicine into the clinical curriculum of years three and four. All aspects of the clinical application of osteopathic philosophy, science and methods, including appropriate use of osteopathic manipulative treatment, are considered and facilitated.

Department of Pediatrics
The Department of Pediatrics is responsible for required clinical rotations in general pediatrics. It facilitates specialty-specific didactic lectures during the second, third and fourth years. The department is also responsible for elective rotations including, but not limited to pediatric subspecialties and adolescent medicine.
Department of Pharmacology
The science of pharmacology deals with properties and effects of drugs and, in a more general sense, with the interactions between chemical compounds and living systems. Medical pharmacology focuses on the mechanisms of action, toxicities, and therapeutic uses of biologically active substances in humans. Pharmacologic knowledge per se is valueless unless health care professionals can apply the information in their daily practice of medicine. Physicians must be able to utilize pharmacology not only to treat but also to prevent disease. At AZCOM, medical students are shown the correlation between pharmacology and related medical sciences, taught how to interpret the actions and uses of major classes of drugs, and instructed in the applications of pharmacodynamics to therapeutics.

Department of Physiology
Physiology is the branch of the life sciences concerned with the function of living systems. Health is customarily defined in physiologic terms: disease is perceived as a deviation from the normal physiologic states of the body. In addition, disease states, and their associated symptomatology, are understood and diagnosed through a refined appreciation of the diverse regulatory processes that maintain the normal, functional status of the human body. The Physiology Department offers courses that provide a comprehensive understanding of the functions of human organs and organ systems, as well as a sound basis for comprehending the adaptations and functional transitions that occur in disease. Mastery of physiologic concepts and problem-based learning are emphasized to provide a foundation that is conducive to the development of diagnostic skills. In addition to conventional didactic instruction, small group clinical case discussion sessions and workshops are used to promote critical thinking, problem solving, and application of physiologic concepts and principles to clinically relevant problems.

Department of Surgery
The Department of Surgery is responsible for required clinical rotations in general surgery. It facilitates specialty-specific didactic lectures during the second, third and fourth years. The department is also responsible for elective rotations including, but not limited to ophthalmology, otolaryngology, plastic and reconstructive surgery, orthopedic surgery, proctology, anesthesia, neurological surgery, thoracic/cardiovascular surgery, vascular surgery, and urology.

COURSE DESCRIPTIONS
Prerequisites for courses may be established by the department that administers the course. Prerequisites are recommended to the Curriculum Committee for approval and are listed within the course description in the catalog.

On a case-by-case basis, prerequisites may be waived upon approval of the department chair of the department that delivers the course.
CARD 1701 Core Cardiology Rotation
This third year, 4-week rotation is designed to provide the student with a fundamental knowledge base in cardiology and to introduce students to basic procedures relevant to the practice of cardiology. Both ambulatory and inpatient settings are utilized to expose the student to various aspects of the management of patients in a cardiology practice. Rotation experiences should include reading, lectures, seminars, small group sessions, and patient care management.
4 credits

CLMD 1631 Introduction to Radiology
Presented in the spring quarter of the second year, this course provides clinical lectures to prepare students to recognize and understand the utilization of common imaging procedures.
1 credit

CLMD 1701 Osteopathic Clinical Medicine III-CE
Objective Structured Clinical Examinations (OSCE) are conducted at the beginning of third year to evaluate the student’s history and physical examination skills. After rotations begin, didactic lectures are presented one week every quarter. These lectures emphasize clinical medicine and its applications. Material includes case presentations using simulated clinical scenarios in order to assure a well-rounded approach to important clinical information in a stimulating and interactive format. In addition, small group learning sessions are developed for core rotations. At the end of third year, a comprehensive written examination is administered. Students must pass this examination to progress to the fourth year and as a requirement for graduation.
7 credits

CLMD 1702 Osteopathic Clinical Medicine III-PE
At the end of the third year, students participate in a series of Objective Structured Clinical Examinations (OSCEs) as part of their summative evaluation. Students are graded across three domains: history and physical skills, interpersonal and communication skills, and written documentation skills. The OSCEs are structured to mirror the COMLEX Level 2 Physical Examination that each student must take and pass as a requirement for graduation.
3 credits

CMED 1613 Patient Care Experience I
This course is designed to give the student the opportunity to conduct history and physical examinations on patients in various population groups. The course is divided into five units. Each unit consists of large group lecture and a small group session. The large group lectures will meet weeks 1, 3, 5, 7, and 9 of the quarter. If you miss the large group lecture, there is a DVD available to review before the small group meets. Small groups will meet once per unit, or once every 2 weeks.
5 credits

CMED 1624 Patient Care Experience II
Course transitions students from a screening history and physical exam without a chief complaint to a problem focused history and physical exam with a chief complaint. Emphasis is on generating differential diagnoses, obtaining a problem focused history and physical exam, oral presentation skills and documentation utilizing the SOAP format. Students will gain experience in formulating diagnostic and treatment plans. There will be three interactive Objective Structured Clinical Examinations (OSCEs) and two individual OSCEs. Students will conduct a focused history and exam on a standardized patient and write a SOAP note for each OSCE. Additionally, they will complete a self-assessment after watching a tape of their proctor-observed standardized patient exam, write a SOAP note after the encounter, and give an oral presentation to the proctor. The student will receive immediate feedback on their performance.
0.5 credits

CORE 1460 Interdisciplinary Health Care
The Interdisciplinary Healthcare course involves the Colleges of Health Sciences, Osteopathic Medicine, Dentistry, and Pharmacy, to teach all clinically-based students about each other’s programs: Cardiovascular Sciences, Nurse Anesthesia, Occupational Therapy, Osteopathic Medicine, Pharmacy, Physician Assistant, Dentistry, and Podiatry. Together, they learn about the importance of an interdisciplinary approach to patient care. Lectures will be given in a seminar format in conjunction with panel presentations and discussions by interdisciplinary team members.
0.5 credits

CORE 1470 Interdisciplinary Health Care
The Interdisciplinary Healthcare course involves the Colleges of Health Sciences, Osteopathic Medicine, Dentistry, and Pharmacy, to teach all clinically-based students about each other’s programs: Cardiovascular Sciences, Nurse Anesthesia, Occupational Therapy, Osteopathic Medicine, Pharmacy, Physician Assistant, Dentistry, and Podiatry. Together, they learn about the importance of an interdisciplinary approach to patient care. Lectures will be given in a seminar format in conjunction with panel presentations and discussions by interdisciplinary team members.
0.5 credits

CORE 1480 Interdisciplinary Health Care
The Interdisciplinary Healthcare course involves the Colleges of Health Sciences, Osteopathic Medicine, Dentistry, and Pharmacy, in order to teach all clinically-based students cardiovascular sciences, nurse anesthesia, occupational therapy, osteopathic medicine, pharmacy, physician assistant and podiatry students together about the importance of an interdisciplinary approach to patient care. Lectures will be
given in a seminar format, in conjunction with panel presentations and discussions by interdisciplinary team members.

0.5 credits

**EMED 1801 Emergency Medicine Core Rotation**
This fourth-year rotation consists of 4 weeks of emergency department experiences, and exposes the student to various aspects of managing patients in an emergency department setting. This rotation emphasizes diagnostic skills, ability to prioritize patient care and different views of problems that are usually seen only in the hospital emergency department setting.
4 credits

**FMED 1511 Clinical Correlates/ICM I**
ICM/CC presents basic history and physical exam skills and provides laboratory experiences. Normal and abnormal findings are illustrated through clinical cases. The development of clinical reasoning skills is emphasized. Training is enhanced by guest lecturers, and history and physical experiences.
3 credits

**FMED 1522 Clinical Correlates/ICM II**
ICM/CC presents basic history and physical exam skills and provides laboratory experiences. Normal and abnormal findings are illustrated through clinical cases. The development of clinical reasoning skills is emphasized. Training is enhanced by guest lecturers, blood draw labs, and history and physical experiences.
3 credits

**FMED 1531 EBM/Epidemiology I**
This course covers evidence-based medicine and biostatistics in detail to include P-values, numbers needed to treat, evaluation of prognosis, diagnosis, treatment and harm articles. Current and clinically relevant articles will be used for problem-based analysis. Preparing a poster presentation will be covered.
1.5 credits

**FMED 1553 Clinical Correlates/ICM III**
ICM/CC presents basic history and physical exam skills and provides laboratory experiences. Normal and abnormal findings are illustrated through clinical cases. The development of clinical reasoning skills is emphasized. Training is enhanced by standardized patients, guest lecturers, and history and physical experiences.
3.5 credits

**FMED 1612 Topics in Medicine I**
Topics in Medicine covers medical ethics, medical jurisprudence and selected office management and clinical care topics in medicine. All of the lectures are designed to help the student grasp an understanding of issues that arise in association with the practice of medicine.
1.5 credits

**FMED 1614 Clinical Correlates/Case Presentations IV**
A case-based format is used to link the preclinical and clinical years of the medical school curriculum. Medical problem solving with emphasis on evidence-based medicine and correlation of the basic science curriculum is presented in an interactive forum.
3 credits

**FMED 1630 Clinical Medicine Capstone**
Clinical Capstone, in spring of 2nd year, continues to link the preclinical and clinical years of the medical school curriculum. Clinical lectures concentrate on topics to ready the student for rotations, including ACLS. In addition, weekly cases are presented and students work either in groups or individually to formulate differential diagnoses and treatment plans. SOAP notes, admission notes, prescriptions and orders are written weekly in the first section of the course. The second section of the course is team taught by basic science and clinical faculty with case-based vignettes used to stimulate discussion.
6.0 credits

**FMED 1625 Clinical Correlates/Case Presentations V**
A case-based format is used to link the preclinical and clinical years of the medical school curriculum. Medical problem solving with emphasis on evidence-based medicine and correlation of the basic science curriculum is presented in an interactive forum.
3 credits

**FMED 1701 Family Medicine/OMM Core Rotations**
The Family Medicine I core rotation consists of a four week experience in 3rd year, primarily preceptor-based, but may include both ambulatory and inpatient settings. This service should expose the student to various aspects of the diagnosis and management of patients in a family medicine practice. This experience is supplemented by mini-lectures, small group hands-on OMM sessions, didactic small group sessions, online cases, and case presentations to peers. Student may choose Family Medicine I to be their OMM-FM block, where they will have an opportunity to hone OMM skills in a primary care setting.
4 credits
**FMED 1702 Family Medicine II Core Rotation**
The Family Medicine II core rotation consists of a four week experience in 3rd year, primarily preceptor-based, but may include both ambulatory and inpatient settings. This service should expose the student to various aspects of the diagnosis and management of patients in a family medicine practice. This experience is supplemented by mini-lectures, small group hands-on OMM sessions, didactic small group sessions, online cases, and case presentations to peers. Student may choose Family Medicine II to be their OMM-FM block, where they will have an opportunity to hone OMM skills in a primary care setting.
4 credits

**FMED 1703 Primary Care Rotation**
Students may arrange for a Primary Care rotation either in Arizona, or at an out-of-state site. Any out-of-state site must be approved by the Department Chair who oversees that particular discipline. In addition, out-of-state rotations require an affiliation agreement or letter of understanding prior to the start of the rotation. This will be initiated by the Department of Clinical Education upon approval to do the rotation has been obtained. Rotations are in family medicine, general internal medicine, general surgery, osteopathic manipulative medicine, pediatrics, obstetrics-gynecology, and urgent care. No rotations with family members are permitted.
4 credits

**HIST 1511 Histology/Embryology I**
In Histology, students study the structure of the cell and the distinguishing morphologic characteristics of the four types of tissues: epithelium, connective tissue, muscle tissue, and nervous tissue. Students will learn how these four basic tissues are combined to form organs. This portion of the course focuses on the normal microscopic features of the lymph, circulatory, respiratory, and gastrointestinal systems. In the Embryology component of the course, students learn the general pattern and principles of normal development and the basic aspects of development of the musculoskeletal, circulatory, and gastrointestinal systems. This course uses a lecture-based format. Examinations include both written and image-based practical questions.
4.4 credits

**HIST 1522 Histology/Embryology II**
The Histology portion of the course continues with the microscopic examination of the urinary, reproductive, and endocrine systems and the eye and ear. The development of the urogenital system, the eyes, the face, and structures derived from the pharyngeal arches are the focus of the Embryology portion of this course. Regional coordination with the Gross Anatomy course also continues. This course uses a lecture-based format. Examinations include both written and image-based practical questions.
1.5 credits

**ICMD 1614 Introduction to Clinical Medicine IV**
Introduction to Clinical Medicine in the second year curriculum is a case-based curriculum that integrates the materials being taught in other second year courses into clinical application. Each week, a new case is presented, and students must obtain a history and physical examination on the patient. Students work in groups to determine problem lists, differential diagnoses, and initial treatment plans. Students write SOAP notes, histories and physicals, admission notes, admission orders, discharge summaries and prescriptions based on their clinical case. Later, students do write-ups and their presentations will be discussed.
1.5 credits

**ICMD 1625 Introduction to Clinical Medicine V**
Introduction to Clinical Medicine in the second-year curriculum is a case-based curriculum that integrates the materials being taught in other courses, during the second-year curriculum, into clinical application. Each week, a new case is presented, and students must obtain a history and physical examination on the patient. During the week, students work in groups to determine problem lists, differential diagnoses, and initial treatment plans. Students write SOAP notes, histories and physicals, admission notes, admission orders, discharge summaries and prescriptions based on their clinical case. The following week, students turn in their write-ups and are presented with the actual approach to the patient, the diagnosis, and the differential diagnoses of the presentation.
1 credit

**IMED 1701 General Internal Medicine Core Rotation I**
During the third year, each student will participate in a 4-week rotation in internal medicine. This rotation may include internal medicine learned in hospital ward-based training, department-based training, and ambulatory internal medicine. Rotation specific reading objectives supplement the clinical experience.
4 credits

**IMED 1702 General Internal Medicine II**
During the third year, each student will participate in a second 4-week rotation in internal medicine. This rotation may include internal medicine learned in hospital ward-based training, department-based training, and ambulatory internal medicine. Rotation specific reading objectives supplement the clinical experience.
4 credits
IMED 1803 Subspecialty Internal Medicine Core Rotation I
During the fourth year, each student will participate in at least one 4-week medical sub-specialty rotation in a discipline of their choice. Appropriate subspecialties include but are not limited to Cardiology, Gastroenterology, Hematology, Oncology, Rheumatology, Pulmonology, Neurology, Infectious Disease, Nephrology, Immunology and Endocrinology. Rotation specific reading objectives supplement the clinical experience for each specialty.
4 credits

IMED 1804 Critical Care Core Rotation
Each fourth year student will participate in a 4-week Critical Care rotation. The objectives for this rotation include examining, reading about and participating in the management of patients in the hospital Critical Care setting. The student will become familiar with many common and some uncommon presentations encountered by the critical care physician and observe and/or perform procedures indicated for each patient.
4 credits

MICR 1531 Immunology
This course uses a didactic approach for a comprehensive coverage of immunology. Students are presented with information pertinent to fundamental principles of immunology, the cells and cell products involved in host defense mechanisms, their origin, function, roles in health, in infectious processes, and in immunologic disorders and deficiencies.
3 credits

MICR 1611 Microbiology I
This course covers basic morphologic, cultural, physiologic, and antigenic characteristics of microorganisms with special emphasis on factors pertinent to clinical medicine. Topics include the principles of microbial genetics and chemotherapy; an organ system approach to viral, bacterial, fungal, and parasitic agents of disease, and their biologic characteristics, natural history, public health importance, course of infection, and host interaction. Laboratory exercises and demonstrations help students develop the microbiologic skills applicable for clinical practice, acquaint students with available diagnostic laboratory tests and their interpretation.
5 credits

MICR 1622 Microbiology II
This course is a continuation of MICR 1611 and also uses an organ system approach with lectures and laboratories.
5 credits

NEUR 1531 Neuroscience
This four-unit course utilizes lectures to deliver the anatomy of the nervous system and clinical correlations related to the various pathways of the nervous system. The first unit studies surface landmarks, internal anatomy, and blood supply of the spinal cord, brainstem, and forebrain. This provides the framework and terminology for the remaining units, which adopt a systems approach to the study of the nervous system. The second unit focuses on the sensory systems, the third unit studies the motor systems, and the fourth unit studies systems not as easily categorized, including higher cortical functions. Throughout the course, basic anatomy is presented in the context of neurological disorders that involve the system or pathway being studied. Written and practical examinations assess student progress.
6.5 credits

OBY 1701 Obstetrics/Gynecology Core Rotation
This third year, 4-week rotation is designed to provide the student with the fundamental knowledge base in Obstetrics and Gynecology, introduce the student to basic procedures relevant to the practice of OB/GYN, facilitate an understanding of the approach to clinical problem solving in OB/GYN, and promote acquisition of skills in the diagnosis, management, and prevention of common obstetrical and gynecological conditions. Practice settings include both hospital ward-based and ambulatory center based sites.
4 credits

OMED 1511 Osteopathic Medicine I
Course consists of weekly one-hour lectures followed by three-hour laboratory sessions. Instruction begins with an orientation to the osteopathic profession including the distinctive contribution of the osteopathic profession to the delivery of health care. The laboratory sessions reinforce lecture content and identify and develop the practical skills needed to diagnose and treat patients. Early laboratory periods emphasize palpation, identification of anatomic landmarks, evaluation of motion, and evaluation of soft tissues. Diagnostic and manipulative treatment procedures are also taught. Normal anatomy and physiology are emphasized. Students are evaluated by weekly quizzes as well as quarterly written and practical examinations.
2.5 credits

OMED 1522 Osteopathic Medicine II
Course consists of weekly one-hour lectures followed by three-hour laboratory sessions. Laboratory sessions reinforce material presented in lectures and identify and develop the practical skills needed to diagnose and treat patients. Additional diagnostic procedures and manipulative treatment procedures will be taught in the laboratory. The course progresses into the pathophysiology of the musculoskeletal system and the structural-functional disturbances that can occur. Multiple classifications of technique are taught for clinical practice and to prepare for the national board examination. Students are evaluated by weekly quizzes as well as quarterly written and practical examinations.
2.5 credits
OMED 1533 Osteopathic Medicine III
Osteopathic Medicine instruction consists of a weekly one-hour lecture followed by a three-hour laboratory session. Laboratory sessions are designed to reinforce material presented in lectures and to identify and develop the practical skills needed to diagnose and treat patients. Musculoskeletal findings and the somatic components of disease covering all organ systems are presented throughout the year. The student is evaluated by weekly quizzes as well as quarterly written and practical examinations.

At the conclusion of the first year, the medical student is expected to demonstrate proficiency in diagnostic palpation and simple, basic manipulative procedures.
2.5 credits

OMED 1614 Osteopathic Medicine IV
Course consists of weekly one-hour lectures followed by three-hour laboratory sessions. Laboratory sessions reinforce material presented in lectures and identifies and develops the practical skills needed to diagnose and treat patients. Additional diagnostic procedures and manipulative treatment procedures will be taught in the laboratory. The second year is an expansion and continuation of the previous year’s work and the material is presented in the context of clinical problem solving. The sequence of material is coordinated with material presented in other second year courses. Students are evaluated by weekly quizzes as well as quarterly written and practical examinations.
2.5 credits

OMED 1625 Osteopathic Medicine V
Course consists of weekly one-hour lectures followed by three-hour laboratory sessions. Laboratory sessions reinforce material presented in lectures and identifies and develops the practical skills needed to diagnose and treat patients. Additional diagnostic procedures and manipulative treatment procedures will be taught in the laboratory. The second year is an expansion and continuation of the previous year’s work and the material is presented in the context of clinical problem solving. The sequence of material is coordinated with material presented in other second year courses. Students are evaluated by weekly quizzes as well as quarterly written and practical examinations.
2.5 credits

OMED 1636 Osteopathic Medicine VI
Course consists of weekly one-hour lectures followed by three-hour laboratory sessions. Laboratory sessions reinforce material presented in lectures and identifies and develops the practical skills needed to diagnose and treat patients. Additional diagnostic procedures and manipulative treatment procedures will be taught in the laboratory. The second year is an expansion and continuation of the previous year’s work and the material is presented in the context of clinical problem solving. The sequence of material is coordinated with material presented in other second year courses. Students are evaluated by weekly quizzes as well as quarterly written and practical examinations.

At the conclusion of the first year, the medical student is expected to demonstrate proficiency in diagnostic palpation and simple, basic manipulative procedures.
2.5 credits

PATH 1611 Pathology I
This course introduces students to the basic concepts of pathology. It stresses altered cellular, genetic, and molecular mechanisms, and attempts to convey the dynamic nature of the processes involved. By focusing on the organism as a whole system, the discipline of pathology can provide a bridge for transition by showing the interrelationship between basic scientific principles and the practice of clinical medicine. This approach provides a complete, medical overview of the disease process in relation to its histological, functional, and structural changes. Students have an opportunity to develop the skills necessary to interpret and use laboratory data in describing and recognizing various types of injury to cells, tissues, and organs.
6 credits

PATH 1622 Pathology II
A continuation of basic pathology, this course identifies the causes and mechanisms of disease as they relate to specific organ systems as well as stressing the need for the medical student to understand the pathophysiology of disease and its implications to both the patient and the physician. Emphasis is also placed on the dynamic process of the pathologic progression of changes, adaptive responses, and therapeutic modifications as well as discovering how all these changes produce the ultimate clinical manifestations of disease processes.
6 credits

PATH 1633 Pathology III
A continuation of basic pathology, this course identifies the causes and mechanisms of disease as they relate to specific organ systems as well as stressing the need for the medical student to understand the pathophysiology of disease and its implications to both the patient and the physician. Emphasis is also placed on the dynamic process of the pathologic progression of changes, adaptive responses, and therapeutic modifications as well as discovering how all these changes produce the ultimate clinical manifestations of disease processes.
5 credits

PEDI 1701 Pediatric Core Rotation
This third year, 4-week rotation is designed to introduce students to the management of common pediatric conditions. Emphasis is placed on obtaining a pediatric history,
performing the physical examination, communicating with adult care givers, formulating differential diagnoses, and selecting appropriate diagnostic studies where appropriate. Students should be able to differentiate between normal and abnormal findings, provide patient and family education, provide well child examinations and anticipatory guidance, and begin to develop a cost effective management plan that incorporates referrals when necessary. 4 credits

**PHAR 1611 Pharmacology I**
This course deals with the general principles of pharmacology, all aspects of absorption, distribution, metabolism, and elimination of drugs, mechanisms of drug actions, drug testing in humans, and prescription writing. In addition, this course describes in great detail the pharmacologic actions and clinical uses of autonomic and cardiovascular drugs, and the principles of toxicology. 4 credits

**PHAR 1622 Pharmacology II**
This course is a continuation of PHAR 1611. Topics covered include the drugs for the central nervous system, hormones and hormone antagonists, gastric drugs, i.e. antacids, digestants, laxatives, and antihistamines. In addition, the course includes several lectures in clinical pharmacology. Workshops are conducted to demonstrate the application of pharmacologic principles in simulated human cases. In these presentations, emphasis is placed on problem solving, formulating hypotheses, making therapeutic decisions, and evaluating the patient’s response to pharmacotherapy. 4 credits

**PHAR 1633 Pharmacology III**
This course is a continuation of PHAR 1622. Topics include the chemotherapy of microbial viral and parasitic diseases, chemotherapy of neoplastic diseases, drugs acting on the immune system and drugs causing birth defects. Course also includes a series of reviews of the most important topics of the previous subjects. In addition, it includes several lectures in clinical pharmacology. Workshops are conducted to demonstrate the application of pharmacologic principles in simulated human cases. In these presentations, emphasis is placed on problem solving, formulating hypotheses, making therapeutic decisions, and evaluating the patient’s response to pharmacotherapy. 3 credits

**PHYS 1521 Physiology I**
This course presents the biophysics, functional properties, and regulation of membrane transport, excitable cells, skeletal muscle, cardiovascular and gastrointestinal systems. A discussion of circulatory fluid dynamics, peripheral vascular tone, blood pressure, and electrical and mechanical activity of the heart is included in the cardiovascular section of the course. Small group case discussions and workshops facilitate development of critical thinking and problem solving skills as students use basic physiologic concepts to understand the pathogenesis of signs and symptoms in specific case studies. 5.5 credits

**PHYS 1522 Physiology II**
This course is a sequel to PHYS 1521 and builds on physiologic foundations developed during the preceding semester. This course covers the function, mechanism of action, regulation, and integration of the renal and respiratory systems that maintain body homeostasis through fluid, electrolyte and gas balance. The endocrine section of the course presents the function, mechanism of action, and regulation of specific hormones and several special topics will be explored. Small group discussions will refine critical thinking and problem solving skills as students identify physiologic and pathophysiologic mechanisms underlying the signs and symptoms described in pertinent clinical case studies. 5.5 credits

**PSYC 1511 Introduction to Human Behavior I**
This module begins with an introduction of the doctor-patient relationship. The student will be exposed to patient interviewing techniques. The biopsychosocial model is also covered. The human life cycle will be described, including pregnancy, birth, early infancy, latency period, the adolescent period, the family, early adulthood, and trail of courtship and marriage. Special topics include childhood violence and abuse and domestic violence. 1 credit

**PSYC 1522 Introduction to Human Behavior II**
The human life cycle continues covering middle age, the aging process, death and dying, and human sexuality. Special topics include rape, incest, sexual harassment, and abortion issues. 1 credit

**PSYC 1533 Introduction to Human Behavior III**
Special topics related to human behavior will be covered, including forensic issues, nutritional issues, ethical issues, religion and spirituality in health and illness, issues of alternative medicine, social responsibilities of physicians, psychological underpinnings of medical symptoms, and the impaired physician. 1 credit

**PSYC 1634 Psychopathology IV**
Psychopathology and treatment will be discussed in detail for two blocks of three hours each. Case presentations and video
presentations will provide the students with a first-hand look at psychiatric illnesses. These will be electives for more in-depth study of the major psychiatric illnesses that the primary care physician will see in his/her practice.

1 credit

RURL 1701 Rural/Underserved Medicine
This third-year rotation focuses on the unique challenges faced when caring for patients in a rural or underserved area. Students complete a 4-week rotation in an area where the population is 50,000 or less or an area that qualifies as a federally designated medically underserved area. The rotation does not have to be in Family Medicine but may be in other disciplines that meet the rural/underserved location. This is a third year required rotation.

4 credits

PSYC 1701 Psychiatry Rotation
This 4-week rotation is designed to provide the student with a fundamental knowledge base in psychiatry, facilitate an understanding of the approach to clinical problem solving in psychiatry, and promote the acquisition of skills for the diagnosis, management, and prevention of acute and chronic psychiatric conditions. Both ambulatory and inpatient settings are utilized. Students have an option to complete a rotation in psychiatry or in neurology according to student interest and availability.

4 credits

SURG 1701 General Surgery Core Rotation
This third year, 4-week rotation is designed to provide the student with a fundamental knowledge base in surgery and introduce the student to basic procedures relevant to the practice of general surgery. Ward based, department based, and ambulatory based settings are utilized to expose the student to various aspects of managing surgical patients. Students are introduced to the practice of anesthesiology and should have the opportunity to develop basic skills in airway management.

4 credits

SURG 1802 Subspecialty Surgery II
Students in the fourth year of training will complete a 4-week subspecialty surgery rotation. Building on the skills learned in the third year general surgery rotation, students may choose from a variety of surgical subspecialties such as anesthesia, orthopedic, cardiovascular, plastic, ENT, etc. While this is a required rotation, there is no post-rotation examination for the surgical subspecialties.

4 credits

ELEC 1801 Elective Rotations
Students are required to complete 20 weeks of a possible 24 weeks of electives during the fourth year. Rotations must be done in four week blocks, although students can petition the respective clinical department chair to be allowed to split an elective into two 2-week blocks for a compelling reason. Students may request electives in basic science or clinic research. One 4-week elective can be used for an international rotation. Students can designate four weeks of the possible 24 weeks as a vacation month. All electives must be approved by the Department of Clinical Education. Additional policies regarding electives are provided in the Clinical Education Policies Manual.

24 credits

COURSE CREDIT
Course credits are generally determined according to the following formulation: one credit is assigned to a course for 3–4 laboratory contact hours per week; two contact hours per week involving interactive group problem-solving or discussion sessions; or one contact hour of formal lecture per week. One credit is given for each week of clinical rotations.

MWU/OPTI: AN OSTEOPATHIC POSTDOCTORAL TRAINING INSTITUTION
AZCOM offers a continuity of osteopathic medical education from the first year of medical school to the final year of postgraduate training. Internship and residency programs cover the spectrum of medical specialties. As one of the nation’s largest postdoctoral programs dedicated to the osteopathic philosophy of medicine, the MWU/OPTI’s curriculum is broad in scope and encompasses a multifaceted approach to graduate medical education that focuses on primary care. With unique learning opportunities at some of the finest health care facilities in the country, MWU/OPTI’s affiliated hospitals consistently lead the nation in terms of cutting-edge technology, treatment, and care. Postdoctoral programs include rotating internships, residencies in all primary disciplines, and fellowship programs in many subspecialties. Programs follow the guidelines of and receive accreditation from the Bureau of Education of the American Osteopathic Association. Some rotations during postgraduate training years may be completed at affiliated hospitals and medical centers.

Residency or fellowship training is offered in the following disciplines:
Cardiology Critical Care
Dermatology
Emergency Medicine
Emergency Medicine/Family Medicine
Emergency Medicine/Internal Medicine
Family Medicine and Osteopathic Manipulative Medicine
Gastroenterology
General Surgery
Hematology/Oncology
Internal Medicine
Interventional Cardiology
STUDENT ACADEMIC POLICIES

Academic Policies
The following academic policies apply to all AZCOM students who matriculate during the academic year of this catalog publication. These policies will apply throughout the entire time a student is enrolled in the college. In the event that these policies need to be revised as the result of new accreditation requirements, mandate by the Department of Education, or other unforeseen circumstances, students will be notified in writing prior to the effective date of the new policy.

Academic Progress, Satisfactory
As required by federal law, reasonable standards of satisfactory academic progress have been established by AZCOM for the Doctor of Osteopathic Medicine program. These standards apply to all students applying for or currently receiving financial assistance. The policy and procedure for assessing financial aid status is noted in the Student Financial Services section of this handbook.

Academic Review & Progression
Two faculty committees of the medical school review the academic performance of students: the Preclinical Promotions Committee for the preclinical years and the Clinical Promotions Committee for the clinical years.

Preclinical Promotions Committee
This committee is charged with maintaining standards of excellence in the academic preclinical courses. At a minimum, it meets at the end of each academic quarter to assess the academic status of students with an academic failure, an incomplete, or an in progress grade. The committee assesses the progress of each student at the end of the academic year. Students who attain satisfactory academic and professional progress are promoted to the next academic year, provided all tuition and fees have been paid. Students who accumulate 3 or more failures in an academic year, students with 2 or more failures in a single academic quarter, and students in the extended-study program (ESP) who accumulate 1 or more failures in an academic year are required to meet with the Preclinical Promotions Committee. Notification of the date, time, and place of the committee meeting is sent to the student by priority email or telephone at least 48 hours in advance. Decisions of the committee are mailed to the student. The right to appeal a decision for dismissal or deceleration exists and is described elsewhere in this handbook. Appeals must be filed with the Dean within three working days following official notification of the committee decision.

Preclinical Promotions Committee Guidelines*

<table>
<thead>
<tr>
<th>Basic Sciences Courses</th>
<th>Usual Action*</th>
<th>Academic Status</th>
<th>Repeat Course Timing**</th>
<th>Action Following Retake*</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Passed</td>
<td>Promote</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Failure</td>
<td>Retake Course</td>
<td>Warning</td>
<td>Summer or Next</td>
<td>Fail-ESP</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Academic Year</td>
<td>Pass-Promote</td>
</tr>
<tr>
<td>2 Failures (different quarters)</td>
<td>Retake Courses</td>
<td>Warning/or Probation</td>
<td>Summer or Next</td>
<td>Fail-ESP</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Academic Year</td>
<td>Pass-Promote</td>
</tr>
<tr>
<td>2 Failures (same quarter)</td>
<td>ESP or Involuntary Academic Leave of Absence</td>
<td>Probation</td>
<td>Summer or Next</td>
<td>Fail-ESP</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Academic Year</td>
<td>Dismiss Pass-Promote</td>
</tr>
<tr>
<td>3 Failures (over more than one academic year)</td>
<td>ESP or Involuntary Academic Leave of Absence</td>
<td>Probation</td>
<td>Next Academic Year</td>
<td>Fail-Dismiss Pass-Promote</td>
</tr>
<tr>
<td>3 Failures (one academic year)</td>
<td>Dismissal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Cumulative Failures</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Action may be modified by the Preclinical Promotions Committee.

**Course repeat schedule is at the discretion of the Preclinical Promotions Committee.

Failures in elective courses carry the same weighting as failures in core curriculum courses.

W/F may be considered as a course failure by the Preclinical Promotions Committee.
### Preclinical Promotions Committee Guidelines for Student on Voluntary Extended Study Program ONLY

<table>
<thead>
<tr>
<th>Basic Science Courses</th>
<th>Usual Action*</th>
<th>Academic Status</th>
<th>Repeat Course Timing**</th>
<th>Action Following Retake*</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Passed</td>
<td>Promote</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>1 Failure</td>
<td>Retake Course</td>
<td>Academic Warning</td>
<td>Next Academic Year</td>
<td>Fail-Dismiss Pass-Promote</td>
</tr>
<tr>
<td>2 or more Failures</td>
<td>Recommend Dismissal</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>

*Action may be modified by the Preclinical Promotions Committee.

**Course repeat schedule is at the discretion of Preclinical Promotions Committee.

Failures in elective courses carry the same weighting as failures in core curriculum courses.

W/F may be considered as a course failure by the Preclinical Promotions Committee.

### Clinical Promotions Committee

The committee meets as needed to review academic and professional progress of students in the third and fourth years. Students with academic failures, or with identified academic deficiencies, are required to meet with the committee as well as those who have not met the professional standards set forth in the Osteopathic Oath. Notification of the date, time, and place of the committee meeting is sent to the student at least 48 hours in advance by priority email or telephone. The Chair of this committee is the Associate Dean of Clinical Education. Decisions of the committee are mailed to the student. The right of appeal exists and is described elsewhere in this catalog. Appeals must be filed with the Dean within three working days following official notification of the committee decision. The Clinical Promotions Committee also recommends to the Faculty Senate for graduation those students who have passed Level I and Level II of the National Board of Osteopathic Medical Examiners examinations, and who have paid all tuition and fees.

### Clinical Promotions Committee Guidelines

<table>
<thead>
<tr>
<th>Clinical Rotation or Course</th>
<th>Usual Action*</th>
<th>Academic Status</th>
<th>Action Following Remediation</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Passed</td>
<td>Promote or Graduate</td>
<td>Academic Warning**</td>
<td>Fail - Probation, Repeat of Academic Year or Dismissal Pass-Promote or Graduate</td>
</tr>
<tr>
<td>One Failure</td>
<td>Repeat Rotation or Course</td>
<td>Academic Warning**</td>
<td>Fail - Repeat Academic Year or Dismissal Pass - Promote or Graduate</td>
</tr>
<tr>
<td>Two Failures</td>
<td>Repeat Rotation or Course</td>
<td>Academic Probation</td>
<td>Fail - Repeat Academic Year or Dismissal Pass - Promote or Graduate</td>
</tr>
<tr>
<td>Three Failures</td>
<td>Repeat Academic Year or Dismissal</td>
<td>Academic Probation</td>
<td></td>
</tr>
</tbody>
</table>

*May be modified by the Clinical Promotions Committee for reasons of additional consideration.

**Letters of academic warning will indicate that if another failure occurs the student will be placed on academic probation.

### Unsatisfactory Evaluation in One or More Categories

When an unsatisfactory grade occurs in one or more categories on the evaluation form during a rotation, the student may be tracked for a period of three to twelve months based upon the increasing preponderance of unsatisfactory marks. The number of tracking months will reflect the extent of unsatisfactory marks. Tracking will necessitate notification of all departments receiving the student during the tracking period and the notification will include the areas of deficiencies that have been recognized. A request will be made to each department for close monitoring and any necessary remediation to take place to correct the deficiencies.

### Re-examination/Retest

Re-examination (Retest) occurs when a student fails a course, but qualifies for a re-examination. It is the prerogative of the course director to offer, or not offer, a re-examination for a course failure and to determine the eligibility criteria for a re-examination. If a course director has a re-examination policy, it should be stated in the course syllabus. If a student qualifies for a re-examination, a grade of "I" should be submitted to the Registrar at the end of the quarter. The re-examination(s) must be completed within 10 working days beginning from the first Monday following the end of the quarter. If the student passes the re-examination, the grade of "I" will be converted to the minimal passing grade of the
college/program. If the student fails the re-examination, the grade of "I" will be converted to a grade of "F". If the Registrar does not receive a change of grade form within 10 working days, the "I" will automatically be changed to a grade of "F".

Retake
Retake occurs when formal repetition of an entire course or a portion of the course is required due to course failure. A failed course may be retaken due to:

1. Course failure with no reexamination offered by the department.
2. Course failure followed by failure of the reexamination.
3. Course failure and failure to meet eligibility criteria for reexamination.

It is the decision of the Pre-Clinical Promotion Committee to recommend retake of the failed course. The Pre-Clinical Committee, following department approval, will determine the time frame for completion of the repeated course.

Only students with one or two failures in a given academic year may retake courses in the summer. Such courses must fulfill the same performance requirements of the regular academic year and tuition will be billed accordingly. Failures are made up in one of three ways:

1. Students must retake the failed course if it is offered through AZCOM;
2. Students may take the failed course at an accredited institution that offers comparable course content and curriculum as reviewed and approved by the department chair and the dean.
3. Departments may offer, and students can elect to take, a faculty-supervised remedial course.

Students will be charged tuition for any failed courses offered for retake on the Glendale campus by the AZCOM Departments.

Students are limited to the second option if the department does not offer a retake course as outlined in options one and three. Students who are unsuccessful in passing remedial courses are remanded to the Preclinical Promotions Committee before the start of the next academic year.

Upon repetition of a failed course, the original grade of F remains on the transcript but is no longer included in the computation of the GPA. The repeated course and grade are entered on the transcript. The grade for a course repeated at an outside institution, or at MWU, and passed is recorded as PR with a GPA value equivalent to a grade of C (2.000 quality points per credit). If a repeated course is failed, a grade of F is recorded on the transcript. If the course is retaken at MWU, the student will be required to pay tuition for the course.

**Academic Warning & Probation**
Academic warning is a formal notification of substandard quarterly academic performance, which cautions the student that continued performance at this level may result in the student being placed on academic probation. The Preclinical Promotions Committee issues academic warnings. For a non ESP student, an academic warning is issued when he/she has failed (less than a grade of C) one class in a single quarter and up to two classes in an academic year, as long as the number of cumulative failures in the current academic year is less than three. For an ESP student, an academic warning is issued when he/she has failed (less than a grade of C) one class in a quarter, as long as there are no other failures in the current academic year. When a student is placed on academic warning, it is noted in the student’s academic file. Subsequently, when the student is returned to good academic standing, this is also noted in the student’s file. Academic warning is not noted on transcripts. Students on academic warning are ineligible to hold student organizational offices unless appealed to and approved by the Dean.

Academic probation represents notice that continued inadequate academic performance might result in dismissal. If a student on academic probation successfully completes a probationary quarter, his/her academic status reverts to academic warning. To return to good academic standing, a student must correct deficiencies and incur no further failures. When a student is placed on academic probation, it is noted in the student’s academic file. Subsequently, when a student is returned to good academic standing, this is also noted in the student’s file. Academic probation is not noted on transcripts. Students on academic probation are ineligible to hold student organizational offices.

**Advanced Standing**
All requests for advanced standing by admitted, transfer or enrolled students are processed on a course-by-course basis by the Office of the Dean. A student should submit a letter or petition form of request to the Office of the Dean in which the student lists the course(s) in which he or she is requesting advanced standing. The student must provide an official course description(s), a transcript, and a syllabus(syllabi) of the course(s) previously taken. All requests must be submitted prior to the start of the course being considered. The recommendation to grant or deny advanced standing will be made by the department in consultation with the AZCOM Dean’s Office. It is expected that a minimum grade equal to a "B" would have been achieved in the class being petitioned.

**Appeal Process**
Following notification of a decision for dismissal or academic deceleration into the ESP program, a student may appeal, in writing, the decision within three working days to the Dean.
The Dean makes the final decision on appeals. The Dean may grant an appeal only if a student can demonstrate one of the following:

1. Bias of one or more Committee members.
2. Material information not available to the Committee at the time of its initial decision.
3. Procedural error.

During the appeal process, students must continue to attend classes.

**Attendance Policy**
AZCOM encourages students to attend all lectures, laboratory activities, and clinical assignments. First- and second-year students must attend the first class of each course during each quarter, as well as the first day of class after scheduled vacations. Third- and fourth-year students must attend all clerkship rotations. Departments may establish their own attendance requirements.

**Commitments made prior to matriculation at AZCOM.**
In the event that you have made a commitment prior to matriculating at AZCOM, you must understand that there may be curricular priorities that are not compatible with your tentative schedule. It is required that a student make a request of each course director and department chair during the first week of the academic year regarding requests for time off. Every effort will be made to accommodate the commitment. MWU does not guarantee that prior commitments will be approved.

**Non-rotation events while on clinical rotations.**
Attendance at, and on-call requirements for clinical rotations take precedence over non-rotation events. Students must be sure that the requirements of each clinical rotation are understood and will be met prior to scheduling non-rotation events. AZCOM will make every effort to accommodate non-rotation events, however the first requirement (priority) of a physician (and medical student) is patient care.

**Class Rank**
Class rank is reported at the end of spring quarter grading each year. It will be available to students at [http://online.midwestern.edu](http://online.midwestern.edu).

**COMLEX Exam Policy**

**COMLEX Eligibility**
Students must successfully complete all OMS II course requirements prior to taking COMLEX-USA Level 1, and the initial attempt to pass the Level 1 examination must occur within 30 days after the completion of all OMS II course requirements. Students begin clinical rotations while awaiting results of the first examination attempt.

**COMLEX Level I Failure**
Any student who fails the COMLEX-USA Level I examination will be allowed to complete the clinical rotation in which he/she is participating at the time of failure notice. The student will be assigned to a minimum one-month involuntary academic leave of absence to study for the next attempt. The student will return to a clinical rotation once he/she has taken the examination for the second time and is awaiting the results of the second examination attempt.

Any student who fails the Level I examination a second time will be allowed to complete the clinical rotation in which he/she is participating at the time of failure notice. The student must meet with the Pre-Clinical Promotions Committee as soon as possible to determine the most appropriate course of action for the third attempt. The student will be placed on involuntary academic leave of absence for a length of time determined by the Dean in order to study for the third attempt.

Beginning with students matriculating in 2009, with an anticipated graduation date of 2013, a student who fails the COMLEX-USA Level 1 examination a third time will be dismissed.

**COMLEX Level II CE or PE Failure**
Any student who fails the COMLEX-USA Level II CE or PE examination must meet with the Chair of the Clinical Promotions Committee and the Dean as soon as possible to determine the most appropriate course of action, including whether clinical rotations may be continued and how to prepare for the second attempt.

Any student who fails either component of the COMLEX-USA Level II examination a second time must appear before the Clinical Promotions Committee to determine the course of action, up to and including involuntary academic leave of absence or dismissal.

Beginning with students matriculating in 2009, with an anticipated graduation date of 2013, any student who fails the COMLEX-USA Level II CE examination three times regardless of their performance on the COMLEX-USA Level II PE examination will be dismissed, and any student who fails the COMLEX-USA Level II PE examination three times regardless of their performance on the COMLEX-USA Level II CE examination will be dismissed.

**Course Prerequisites**
Prerequisites for courses may be established by the department that administers the course. Prerequisites are recommended to the Curriculum Committee for approval and are listed with the course description in the University Catalog. On a case-by-case basis, prerequisites may be waived upon approval by the Department Chair of the Department that delivers the course.
Criminal Background Checks

Some facilities now require criminal background checks of students who are rotating through their system. The criminal background check is valid for one year only, so it must be performed within the year prior to starting the rotation. The Student Services Department of MWU will arrange for the background check. The costs are included in the activity fee.

Some facilities may require the student to meet a different requirement, such as fingerprinting at a designated agency immediately prior to the start of the rotation. If the MWU background check does not meet a facility’s requirement, other procedures must be performed at the student’s expenses. Criminal background information will be shared with clinical sites that are affiliated with MWU educational programs.

Disciplinary Warning/Probation

Disciplinary warning or probation occurs for student acts of professional misconduct as defined in Appendices 2 and 4 in the Student Handbook. Disciplinary warning or probation is not noted on transcript but is kept in the student’s file. Disciplinary Probation information may be shared with clinical sites that are affiliated with Midwestern University educational programs.

Dismissal

Matriculation in medical school is a privilege, not a right. Therefore, a student can be dismissed for the following reasons:

1. Failure to exhibit the personal qualifications prerequisite to the practice of medicine.
2. Violation of AZCOM policies that are grounds for dismissal.
3. Failure to achieve minimum academic standards.

Students who fail three or more courses in a single academic year, and Extended Study Program students who accumulate two failures, usually receive a recommendation for dismissal. Students who receive four cumulative course failures in the preclinical years usually receive a recommendation for dismissal. The Committee reserves the right to change its usual actions for reasons of additional consideration. All decisions of the Preclinical Promotions Committee can be appealed to the Dean in accordance with policies found in this handbook.

Extended Study Program (ESP)

Voluntary

Students have the option of voluntarily entering the Extended Study Program (ESP) program. Its purpose is to provide additional time to address personal and academic issues by creating a program of study that allows students to complete the first two years of the curriculum in three years.

Students must petition the Dean to voluntarily become an ESP student no later than the end of the fifth week of a quarter. Requests received after the fifth week are reviewed by the Dean and granted only for reasons of substantiated hardship or ill health. Proposed schedules for all students on an extended study program are sent to department chairs for their approval.

Academic

A student will be placed in the Extended Study Program (ESP) for academic reasons at the discretion of the Promotions Committee having jurisdiction over the student’s academic progress. A student placed in the ESP for academic reasons is automatically placed on academic probation and may not be returned to good academic standing until all failures are remediated. If a student is placed on the ESP, such action does not modify or limit the Preclinical Promotion Committee’s options for recommendation for dismissal. Thus, the student may be dismissed for academic reasons while in the ESP.

Students who accumulate three failures in any single academic year, or two failures in a single quarter are placed immediately in the Extended Studies Program, or on suspension. The student is also placed on academic probation. They are required to retake failed courses during the regular academic year and are not eligible for summer remediation courses at AZCOM or any other medical school. The Preclinical Promotions Committee individually reviews ESP students who fail academic courses. Students who voluntarily enter the ESP may be allowed to remediate courses over the summer, at AZCOM or another approved institution, at the discretion of the Preclinical Promotions Committee.

Students will be assessed prorata tuition for any additional years.

Faculty Advisor/Mentor

Students are encouraged to use the advice, expertise, and help of the faculty. The faculty advisor/mentor takes a personal interest in students. Students should feel free to contact a faculty member of their choice for advice, encouragement, and support.

Failure Policy

Students must meet all requirements for their class year in order to be promoted to the next class year.

Grade Appeal Policy

I. Appeal of Non-Failing Course Grades

A student who wishes to appeal a non-failing course grade must make the appeal to the Course Director within one week following receipt of the grade. The Course Director must act upon the student’s appeal within one week.
following receipt of that appeal. A narrative explaining the basis of the appeal must accompany the request.

An appeal must be based on one of the following premises:

1. Bias.
2. Mathematical error in calculating the final grade.
3. Factual errors in course assessment tools.

If the appeal is denied, the student has the right to appeal the decision to the Course Director’s immediate supervisor within one week of receipt of the Course Director’s denial. The Course Director’s supervisor should notify the student of his/her decision within one week following receipt of the student’s reappeal. The decision of the Course Director’s supervisor is final.

II. Appeal of Course Grades Subject to Academic Review

A student whose academic progress will be subject to review by his/her Promotions Committee and who wishes to appeal a grade must do so in an expedited manner prior to the scheduled meeting of the Committee. In this case, an appeal of a course grade must be submitted within 24 hours following receipt of the grade and must be based on one of the premises stated above. The Course Director must act on this appeal within 24 hours. Any appeal of this decision will be addressed by the Course Director’s supervisor. The student is responsible for notifying the chair of the Promotions Committee that a grade appeal has been filed prior to the meeting of the Committee.

All appeals and decisions must be communicated in written form.

Grading System

Students receive letter grades corresponding to the level of achievement in each course, based on the results of examinations, required course work, and, as applicable, other established criteria. The letter grades, percent ranges, and quality points per credit are as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percent (%)</th>
<th>Quality Points (per credit)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>93-100</td>
<td>4.000</td>
<td>--</td>
</tr>
<tr>
<td>A-</td>
<td>90-92</td>
<td>3.670</td>
<td>--</td>
</tr>
<tr>
<td>B+</td>
<td>87-89</td>
<td>3.330</td>
<td>--</td>
</tr>
<tr>
<td>B</td>
<td>83-86</td>
<td>3.000</td>
<td>--</td>
</tr>
<tr>
<td>B-</td>
<td>80-82</td>
<td>2.670</td>
<td>--</td>
</tr>
<tr>
<td>C+</td>
<td>77-79</td>
<td>2.330</td>
<td>--</td>
</tr>
<tr>
<td>C</td>
<td>70-76</td>
<td>2.000</td>
<td>--</td>
</tr>
<tr>
<td>F</td>
<td>&lt;70</td>
<td>0.000</td>
<td>For professional programs</td>
</tr>
</tbody>
</table>

Grade Point Average

Courses are recorded in terms of quarter hour(s) of credit. Multiplication of the credits for a course by the numeric value for the grade awarded gives the number of quality points earned for a course. Dividing the total number of quality points earned in courses by the total number of credits in those courses gives the grade point average. Grades reported as W and WF are recorded on the student’s permanent record but are not used in the calculation of the student’s grade point average.

The student’s cumulative grade point average is computed and recorded by the Office of the Registrar. It is calculated at the end of the end of the academic year, and does not include any grades or credits for courses audited or accepted for transfer, or courses with a grade of withdrawal (W), withdrawal failing (WF), pass (P) or failed (F) that were later repeated.

If a student receives a failing grade, that grade is recorded on the transcript as a letter grade or F entry. Upon repetition of a failed course, the original grade of F remains on the transcript and the repeated course and grade are entered on the transcript. The grade for an MSI or MSII year course repeated at an outside institution or at MWU and passed is recorded on the transcript as P/R with a GPA value equivalent to a grade of C (2.000 quality points per credit). For all repeated clinical rotations at MWU during the MSIII and MSIV years that are passed, a grade of P/R will be recorded on the transcript with a GPA value equivalent to a grade of C (2.000 quality points per credit). For both preclinical coursework and clinical rotations, the original failing grade will remain on the transcript but will not be included in the GPA calculations. If a repeated preclinical course or clinical rotation is failed, a grade of F is recorded on the transcript.
<table>
<thead>
<tr>
<th>Grade</th>
<th>Percent (%)</th>
<th>Quality Points (per credit)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>--</td>
<td>0.000</td>
<td>An Incomplete (I) grade may be assigned by a course director when a student’s work is of passing quality but incomplete, or if a student qualifies for re-examination. It is the responsibility of the student to request an extension from the course instructor. By assigning an “I” grade, it is implied that an instructor agrees that the student has a valid reason and should be given additional time to complete required coursework. To resolve an incomplete grade, an instructor must fill out and submit a Change of Grade form to the Registrar. All incomplete grades must be resolved within 10 working days starting from the first Monday following the end of the quarter unless there is written authorization by the Dean to extend the deadline. If an incomplete grade remains beyond 10 days, it may be converted to a grade of “F,” which signifies failure of the course.</td>
</tr>
<tr>
<td>P</td>
<td>--</td>
<td>0.000</td>
<td>Pass; designation indicates that the student has made satisfactory progress or completed required coursework satisfactorily. Grade of ‘P’ is counted toward credit hour accruals for graduation but is not counted in any GPA calculations.</td>
</tr>
<tr>
<td>W</td>
<td>--</td>
<td>0.000</td>
<td>Withdrawal can be given during the first eight weeks of the quarter. This designation indicates that the student was making satisfactory progress at the time of the withdrawal. There is no penalty and no credit.</td>
</tr>
<tr>
<td>W/F</td>
<td>--</td>
<td>0.000</td>
<td>Withdrawal/Failing is given after 3 or more weeks from the beginning of the quarter; grade indicates that the work completed up to the time of withdrawal was unsatisfactory. This grade is not counted in any GPA calculations and is not counted in credit hour accruals for graduation. W/F may be considered as a failure by a Program Student Academic Review Committee. Students are not allowed to withdraw from a course after the end of the eighth week of class.</td>
</tr>
<tr>
<td>IP</td>
<td></td>
<td></td>
<td>In Progress grade may be assigned by a course director under certain circumstances (illness, family death, etc.) when incomplete work cannot be resolved within a 10-day period. Outstanding grade should not extend for more than one quarter with notification of the Registrar.</td>
</tr>
<tr>
<td>PR</td>
<td>70</td>
<td>2.000</td>
<td>Given upon repetition of a failed course. Value equivalent to grade of “C” (2.000 quality points per credit).</td>
</tr>
<tr>
<td>AU</td>
<td>--</td>
<td>0.000</td>
<td>This designation indicates an audited course, that is, a student registered for a course with the understanding that neither academic credit nor a grade is earned. The possibility does not exist to change the course status from audit to full credit after the start of the quarter. The designation AU is not counted in the GPA calculation.</td>
</tr>
<tr>
<td>AP</td>
<td></td>
<td></td>
<td>This designation indicates the decision of a college to award academic credit that precludes a student from taking required course work. The designation of Advanced Placement (AP) is applied toward credit hour accruals, but is not counted in the GPA calculation.</td>
</tr>
</tbody>
</table>

*These grading scales apply to all courses unless otherwise noted in the course syllabus.*

**Graduation Walk-Through Policy**

1. A student who has not satisfied academic requirements for a particular degree may seek permission to participate in a graduation ceremony for his/her program/college if the student will complete all academic requirements for the degree within one quarter immediately following the official scheduled end of the academic program for his/her class.

2. To seek permission, the student must submit a formal request to participate in the graduation ceremony to the Dean of AZCOM. The request should be submitted no later than eight weeks prior to the official AZCOM graduation date.

3. The Dean is responsible for verifying that the student will fulfill their requirements for graduation by the end of the winter quarter. The request will be forwarded by the Dean to the Clinical Promotion Committee. If approved, the Committee will add the student to the proposed list of candidates for graduation, denoting on the listing that the student will not have completed the academic requirements by the official graduation date. This list will be forwarded to the Dean. The Dean will then forward the list of candidates for graduation to the MWU Faculty Senate for review and approval at an appropriately scheduled meeting, prior to the official graduation date. The Senate will forward the list of approved candidates for degrees to the University President for review and approval by the Board of Trustees.
Immunization Policy
Full-time students enrolled in a program with a clinical component are required to have all immunizations as outlined in the general policy section of this catalog.

Leave of Absence
The Dean’s Office initiates leaves of absence or withdrawals with a conditional approval. Leaves of absence consist of two types: mandatory and voluntary. There are three types of mandatory leave of absence: academic, medical and administrative probation.

Mandatory academic leave of absence may occur when a student has failed one or more courses or has accumulated two or more quarters of cumulative GPA less than required by his/her program. Mandatory academic leave of absence may or may not be preceded by academic probation. This action entails the removal of the student from all academic courses for a period of up to one year, or until all program requirements for re-entry have been fully met. Mandatory academic leave of absence is noted on the student’s transcript.

The student who has been on leave of absence does not have to reapply for admission and is guaranteed reentry into his/her academic program upon successful completion of all deficient courses and/or when all programmatic requirements are met. Upon reentry to the academic program, the student is routinely placed on academic probation for the following quarter.

Voluntary leaves of absence include four types: medical, maternity, personal, and military.

The student must be cleared by all departments for a mandatory or voluntary leave to become final. The criteria for student clearances are determined by each department.

When a student returns from mandatory or voluntary leave, the Dean’s Office initiates the return with a conditional approval. All departments must approve the final return from leave.

Liaison Structure
Student/Faculty Liaisons/Representatives, Preclinical
Each class elects student liaisons/representatives following the guidelines stated in the current Student Handbook. The student liaisons/representatives serve to bring to discussion any issues pertaining to academic schedules, University policy and academic and nonacademic issues that relate to the teaching environment in the first and second years. The student liaisons/representatives can meet directly with the Associate Dean, the chairpersons, the course directors or the faculty of the departments formally involved in the preclinical curriculum to address the issues noted above.

Student/Faculty Liaisons/Representatives, Clinical
Each class elects student liaisons/representatives following the guidelines stated in the current Student Handbook. The student liaisons/representatives serve to bring to discussion any issues pertaining to academic schedules, University policy and academic and nonacademic issues that relate to the teaching environment in the third and fourth years. The student liaisons/representatives can meet directly with the Associate Dean, the chairpersons, the course directors and the faculty of the departments formally involved in the clinical curriculum to address the issues noted above.

Supervision of Medical Students by Physicians Only
While on clinical rotations, medical students must have direct, on-premises supervision by a physician who is licensed to practice medicine in the state in which care is being provided. Students may not be supervised by other health care providers.

Travel for Clinical Education Rotations
The professional programs of AZCOM require that the students receive instruction in a clinical setting. As a result, it will be necessary for students to make arrangements for transportation to and lodging near clinical facilities. The University does not provide for the cost of transportation or lodging. Travel arrangements are the sole responsibility of the student. Students are not considered an agent or an employee of the University and are not insured for any accidents or mishaps that may occur during any traveling that is done as part of the student’s professional program. Students are responsible for all expenses associated with clinical education, such as transportation, meals, housing, professional attire, laboratory fees, etc.

Withdrawal from Courses
Any student who wishes to withdraw from one or more courses must first receive approval from their respective Course Director. Following approval by the Course Director, the withdrawal must be approved by the Program Director and the AZCOM Dean. If the approval is granted, the student receives one of the following grades: W (withdrew) or W/F (withdrew failing).

There is no penalty and no credit given for withdrawals within the first two weeks of the quarter. Between the start of the third week and the end of the eighth week of the quarter, if work completed up to the time of withdrawal is satisfactory, the student will receive a Withdrawal (W) grade. This grade is not counted in any GPA calculations and is not counted in credit hour accruals for graduation. Between the start of the third week and the eighth of the quarter, if work completed up to the time of withdrawal is below a “C” level, the student will receive a Withdrawal/Failing (W/F) grade. This grade is not counted in any GPA calculations and is not counted in credit hour accruals for graduation. W/F may be considered as a failure by a Pre-Clinical Promotion.
Committee when reviewing the academic status of a student. Multiple F’s and W/F’s can be grounds for dismissal.

Students are not allowed to withdraw from a course after the end of the eighth week of class, unless there are exceptional circumstances.

Withdrawal from the College/University

The decision to withdraw from the University is a serious matter. Any student who withdraws from a college or program is dropped from the rolls of the University. As such, if he/she decides at some later date to reenter the program, he/she must reapply for admission and, if accepted, assume the status of a new student.

Students contemplating withdrawal must inform the Dean of the decision to voluntarily withdraw and voluntarily relinquish his/her position in the program. The student must contact the Dean’s Office and must complete the appropriate clearance procedures. The withdrawal process includes the clearing of all financial obligations of MWU and an exit interview. Following completion of these withdrawal procedures, the designation “Withdrawal” will be placed in the student’s permanent record. The designation “Unofficial Withdrawal” is placed in the permanent record of any student who withdraws from his/her program without complying with the above procedures. For more information, see the Student Financial Services sections on Notification of Withdrawal and Return of Title IV Funds/MWU Refund Policy.

FACULTY

Administrative Faculty

John R. Burdick, Ph.D.
Iowa State University
Dean of Basic Sciences
Vice President for Clinic Operations
Professor

Lori A. Kemper, D.O., M.S.
AT Still University, Kirksville College of Osteopathic Medicine
Dean, Arizona College of Osteopathic Medicine
Assistant Professor

Thomas H. O’Hare, D.O.
Midwestern University, Chicago College of Osteopathic Medicine
Associate Dean, Department of Clinical Education
Professor

Dennis J. Paulson, Ph.D.
Texas Tech University
Vice President, Chief Academic Officer for Dental and Medical Education
Professor

Howard M. Shulman, D.O.
Kansas City University of Medicine and Biosciences College of Osteopathic Medicine
Associate Dean, Department of Postdoctoral Education
Chair, Department of Medicine
Associate Professor

Mark R. Speicher, M.H.A.
Duke University
Associate Dean, Academic Affairs

Department of Anatomy
Linda M. Walters, Ph.D., Chair
Loyola University, Stritch School of Medicine
Professor

Mark N. Coleman, Ph.D.
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Assistant Professor

Justin Georgi, Ph.D.
Stony Brook University
Assistant Professor

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Associate Professor

Ari Grossman, Ph.D.
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Assistant Professor

Christopher Heesy, Ph.D.
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Assistant Professor

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Assistant Professor

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Washington University, St. Louis
Assistant Professor

Gregory A. Mihailoff, Ph.D.
Ohio State University
Professor

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Associate Professor

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Assistant Professor

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Assistant Professor

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Associate Professor
Jose Hernandez, Ph.D.
University of Zaragnoza
Assistant Professor

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University of Madras
Assistant Professor

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Assistant Professor

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Michigan State University
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Associate Professor

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Clinical Associate Professor

Frank LoVecchio, D.O.
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Clinical Assistant Professor

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Clinical Professor

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Director, Subsection Internal Medicine
Clinical Assistant Professor

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Clinical Assistant Professor

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University of Northern Colorado
Professor

Richard F. Collins, Ph.D.
University of Oklahoma Health Sciences Center
Professor

Fernando Gonzales, Ph.D.
University of Texas Southwestern - Medical Center of Dallas
Assistant Professor

Sam Katzif, Ph.D.
Georgia State University
Assistant Professor

Tyler A. Kokjohn, Ph.D.
Loyola University
Professor

Kathryn J. Leyva, Ph.D.
Northern Arizona University
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Robin R. Parmley, Ph.D.
Rush University
Assistant Professor

D. Ellen K. Tarr, Ph.D.
The Johns Hopkins University
Bloomberg School of Public Health
Assistant Professor

Department of Pathology
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University of Arizona, College of Medicine
Assistant Professor

Department of Pharmacology
Pamela E. Potter, Ph.D., Chair
Dalhousie University
Professor

Gerald Call, Ph.D.
University of Kansas Medical Center
Assistant Professor

Laszlo Kerecsen, M.D.
Medical School of Debrecen
Professor

Latchezar Todorov, Ph.D.
Bulgarian Academy of Sciences
Associate Professor

Department of Physiology
Fred D. Romano, Ph.D., Chair
Loyola University of Chicago
Professor
Larry D. Alexander, Ph.D.
Meharry Medical College
Assistant Professor

Layla Al-Nakkash, Ph.D.
University of Newcastle-Upon-Tyne
Associate Professor

Chad C. Carroll, Ph.D.
University of Arkansas for Medical Sciences
Assistant Professor

Thomas L. Broderick, Ph.D.
University of Alberta
Professor

Margaret I. Hall, Ph.D.
Stony Brook University
Assistant Professor

Michael C. Quinlan, Ph.D.
Arizona State University
Associate Professor

Johana Vallejo-Elias, Ph.D.
University of Missouri
Assistant Professor
MISSION
The mission of Midwestern University College of Pharmacy–Glendale is to educate students to be highly competent, caring, and ethical pharmacists. Our dynamic curriculum will develop our graduates to be critical thinkers and life-long learners who can successfully practice in a changing healthcare environment. These pharmacists will contribute to the health of patients, the well being of society and the advancement of the profession of pharmacy.

Midwestern University College of Pharmacy–Glendale embodies a spirit of community in which cooperation, trust, and mutual respect are valued elements. In this positive learning environment, the College achieves its mission by striving for excellence in teaching, critical inquiry, service, community outreach, and personal development.

CONFERRAL OF DEGREES
Midwestern University has been granted authority by the Arizona State Board for Private Postsecondary Education to confer the Doctor of Pharmacy degree.

ACCREDITATION
The Doctor of Pharmacy degree program is accredited by the Accreditation Council for Pharmacy Education (ACPE), 20 North Clark Street, Suite 2500, Chicago, IL 60602-5109, Tel 312/664-3575, FAX 312/664-4652, URL www.acpe-accredit.org.

INSTRUCTIONAL PROGRAM
At the College, students pursue the Doctor of Pharmacy (Pharm.D.) degree. The Pharm.D. Program prepares the student for entry into the profession of pharmacy. The entire program requires a total of five years of coursework, the first two years at another college and the final three calendar years at the College of Pharmacy-Glendale. Students complete, on a year-round basis, required courses, elective professional courses, and clinical/experiential education.

ADMISSIONS
Midwestern University College of Pharmacy - Glendale (MWU-CPG) considers for admission those applicants who possess the academic and professional promise necessary for development as outstanding members of the pharmacy profession. The admissions process is highly selective; approximately 2,220 applications were received for the 2007 entering class. The application deadlines are January 5, 2010 for the PharmCAS application and February 15, 2010 for the MWU-CPG supplemental application (see the Application Process and Deadlines section); however, applicants are strongly encouraged to apply early in the process as the majority of the class is expected to be filled by January 1st.

Evaluation of completed applications will begin in July 2009 and continue until all seats in the class are filled. This initial evaluation will determine which applicants are eligible for on-campus interviews, and a final evaluation will determine which applicants are eligible for acceptance. Multiple criteria are used to select the most qualified candidates in a competitive admissions environment in which the applicant pool exceeds the number of seats available. Grade point averages (GPAs), Pharmacy College Admission Test (PCAT) scores, letters of recommendation, professional preparedness and motivation, personal qualities, communication skills, teamwork skills, and decision-making skills will all be considered when applicant files are reviewed.

Admissions Requirements
Students seeking admission to MWU–CPG must submit the following documented evidence:

1. Completion of 62 semester hours or 90 quarter hours of nonremedial, prerequisite coursework from regionally accredited U.S. colleges or universities, or recognized postsecondary Canadian institutions that use English as its primary language of instruction and documentation.
   - Grades of C or better for prerequisite courses (not C-)
   - Minimum cumulative GPA and science GPA of 2.50 on a 4.00 scale. The Pharmacy College Application Service (PharmCAS) calculates the cumulative and science GPA. Grades from all nonremedial courses completed post-high school are used to calculate the GPA.
2. Completion of prepharmacy coursework requirements by the end of spring semester or spring quarter prior to matriculation to MWU–CPG
3. Direct submission of PCAT scores to PharmCAS (see Application Process and Deadlines)
   - Only test scores earned in June 2005 or later are acceptable
4. Demonstration of a people or service orientation through community service or extracurricular activities
5. Motivation for and commitment to the pharmacy profession as demonstrated by previous work, volunteer work, or other life experiences
6. Oral and written communication skills necessary to interact with patients and colleagues
7. Completion of the MWU–CPG’s on-campus interview process (by invitation only)
8. Passing the Midwestern University criminal background check
9. Commitment to abide by the Midwestern University Drug-Free Workplace and Substance Abuse Policy

<table>
<thead>
<tr>
<th>PREREQUISITE COURSES</th>
<th>Course(s)</th>
<th>Semester Hrs</th>
<th>Quarter Hrs</th>
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<tr>
<td></td>
<td>English Composition</td>
<td>6</td>
<td>9</td>
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<tr>
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<td>Biology with laboratory(for science majors)</td>
<td>8</td>
<td>12</td>
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<tr>
<td></td>
<td>Anatomy (human or vertebrate)</td>
<td>3</td>
<td>4</td>
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<tr>
<td></td>
<td>General Chemistry with laboratory (for science majors)</td>
<td>8</td>
<td>12</td>
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<tr>
<td></td>
<td>Organic Chemistry with laboratory (for science majors)</td>
<td>8</td>
<td>12</td>
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<tr>
<td></td>
<td>Physics (for science majors - mechanics, heat, force, and motion must be included in the course)</td>
<td>3</td>
<td>4</td>
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<tr>
<td></td>
<td>Calculus</td>
<td>3</td>
<td>4</td>
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<tr>
<td></td>
<td>Statistics</td>
<td>3</td>
<td>4</td>
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<tr>
<td></td>
<td>Speech (public speaking)</td>
<td>3</td>
<td>4</td>
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<tr>
<td></td>
<td>Economics (micro, macro, or general)</td>
<td>3</td>
<td>4</td>
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<tr>
<td></td>
<td>Social Sciences (divided among psychology, sociology, anthropology, or political sciences)</td>
<td>6</td>
<td>9</td>
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<tr>
<td></td>
<td>General Education(courses should be divided among humanities, fine arts, foreign language, business, or computer sciences. Science, math, physical education and health care courses are NOT acceptable)</td>
<td>8</td>
<td>12</td>
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<tr>
<td></td>
<td>Total Credit Hours</td>
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<td>90</td>
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International Applicants

An international student must satisfy all of the requirements for admission to the College that apply to a student who has completed all of his/her prerequisite coursework in the U.S. at a regionally accredited college or university. In addition, an international student must demonstrate proficiency in the English language. This may be accomplished by satisfying both of the following requirements:
1. The international student has completed a minimum of two full-time semesters or three full-time quarters of instruction at a postsecondary institution in the U.S. Completed coursework must include a minimum of 50% of the prerequisite science coursework for the College, 6 semester hours of no-remedial English composition, and 3 semester hours of public speaking/speech.
2. The international student must submit official TOEFL scores. A minimum passing score is 550 (paper version, maximum score 677) or 100 (internet version, maximum score 120). The TOEFL scores must be from an exam taken within two years of the anticipated date of matriculation into the College.

If the international student wishes to receive credit for prerequisite coursework completed at a college or university outside the U.S., he/she must submit an official, detailed, course-by-course evaluation of this coursework. The student must obtain this evaluation from one of the following services:
- Education Credential Evaluators (ECE): 414/289-3400; fax 414/289-3411; www.ece.org; or e-mail info@ece.org
- Josef Silny & Associates International Education Consultants: 305/273-1616; fax 305/273-1338; www.jsilny.com; or e-mail info@jsilny.com
- World Education Services (WES): 212/966-6311; fax 212/739-6100; www.wes.org; or e-mail info@wes.org

Based on the official foreign transcript evaluation and the grade earned in the course(s) the College will decide if it will apply any of these credits toward fulfillment of its prerequisites.

Application Process and Deadlines

MWU-CPG uses a two-step application process. Applicants must submit both a completed PharmCAS application and a College supplemental application and meet both the PharmCAS application deadline and the MWU-CPG supplemental application deadline.
1. PharmCAS Application: Applicants must apply via the online PharmCAS application (www.pharmcas.org) which is available usually in June of the academic year preceding the year in which applicants plan to matriculate. Please refer to the PharmCAS application instructions for specific details about completing PharmCAS applications, required documents, and processing time. Applicants who have taken coursework
2. Pharmacy College Admissions Test (PCAT)

Applicants must arrange for sending scores directly from the PCAT to PharmCAS using PCAT code 104. MWU-CPG will only accept test scores received directly from PharmCAS (see Admission Requirements for more details). PCAT scores sent directly to the Office of Admissions will not be accepted. This exam is offered by Harcourt Assessment (also known as Pearson), 800/622-3231 or www.pcatweb.info. The exam is typically offered four times per year. Only test scores earned in June 2005 or later are acceptable.

*Please Note:* It is highly recommended that applicants take the June, August, or October PCAT exams in the year prior to their planned matriculation. For first time test takers, PCAT exams taken in January 2010 by applicants planning matriculation in the same year will not be accepted. Please check with Harcourt Assessment for more details regarding the exam dates.

3. Letters of Recommendation

Applicants must submit two letters of recommendation from two professionals directly to PharmCAS. MWU-CPG will only accept letters received directly from PharmCAS. It is preferred that one letter be written by a college professor who has actually taught the applicant or a prehealth advisory committee, science professor, or health professional who knows the applicant well. Please refer to the PharmCAS application instructions for specific guidelines and requirements for submitting letters of recommendation. The deadline for submission of the letters of recommendation is February 15, 2010.

4. Supplemental Application

After receiving PharmCAS applications from the application service, the Office of Admissions will send supplemental application forms to applicants who meet the minimum cumulative and science GPA requirement of 2.50 on a 4.00 scale. The deadline for submitting the College supplemental application to the Office of Admissions is February 15, 2010.

5. Completed Applications

All application materials, including the PharmCAS application, verification of transcripts by PharmCAS, PCAT scores (as reported to PharmCAS), two letters of recommendation (submitted to PharmCAS), and the MWU-CPG supplemental application with the application fee must be received in the Office of Admissions by February 15, 2010. Only completed applications received by the Office of Admissions on or before the deadline date will be reviewed for potential entrance into the College.

*Please Note:* Applicants are responsible for tracking the receipt of their application materials and verifying the status of their applications on the University web site. The Office of Admissions will send qualified applicants instructions for creating an account along with their supplemental application. Applicants must create and utilize their account to track and check their application status online. Applicants are also responsible for notifying the Office of Admissions of any changes in their mailing address or e-mail address:

Midwestern University
Office of Admissions
19555 North 59th Avenue
Glendale, AZ 85308
623/572-3215 or 888/247-9277
admissaz@midwestern.edu

**Interview and Selection Process**

The Director of Admissions and the Admissions Committee review applicant files when complete and use GPA and PCAT scores to determine applicant eligibility for interviews. Invitations are sent to eligible applicants for on-campus interviews, which are scheduled on a first-call, first-scheduled basis. No interviews will be granted until the application process is complete. Interview invitations typically extend from September through February.

During the interview process, applicants will meet with an interview panel that may consist of pharmacy faculty members, pharmacists, and pharmacy students. Panel members will evaluate professional motivation and preparedness, personal qualities, communication skills, and decision-making ability by rating applicants on a standardized evaluation scale. The interview panel will also review MWU-CPG supplemental applications for their applicants to facilitate the interview process. After reviewing the applicant’s completed application and interview evaluation, the Admissions Committee recommends accepting, denying, or placing applicants on an alternate list. Recommendations are then forwarded to the Dean for final approval.

Applications to MWU-CPG are processed and reviewed during regular intervals in the admissions cycle until the class is filled.
Applicants accepted for a given year must matriculate during that year. No admission deferments are allowed. Students who fail to matriculate must reapply the following year for admission to the College.

The Pharm.D. program at MWU-CPG is rigorous and challenging. The Admissions Committee will therefore assess the quality and rigor of the prepharmacy academic records presented by applicants. When assessing the prepharmacy academic records, the Admissions Committee will:

a. View applicants with cumulative and science grade point averages below 2.75 on a 4.00 scale with particular concern; Although 2.50 on a 4.00 scale is the minimum cumulative and science GPA for admission consideration, higher cumulative GPAs are more competitive and recommended

b. View component and composite PCAT scores below the 50th percentile with particular concern, although there are no minimum PCAT scores

The average overall and science GPAs of applicants admitted in 2008 were 3.28 and 3.21, respectively, on a 4.00 scale

c. View with concern applicants whose prepharmacy math and science coursework was completed longer than 10 years ago

More recent (within five years) prepharmacy math and science coursework is preferred

d. Consider the reputations for quality and rigor of the institutions where applicants have taken coursework, the extent of completion of science prerequisites, the credit load carried per term, the difficulty level of previous coursework, and trends in applicant grades

The technical standards for admission set forth by MWU-CPG outline the nonacademic abilities considered essential for students to achieve the level of competence required by the faculty and by the ACPE, the pharmacy-accrediting agency, in order to obtain the Pharm.D. degree.

A candidate must have abilities and skills in five areas: I) observation; II) communication; III) motor; IV) intellectual, conceptual, integrative, and quantitative; and V) behavioral and social. Technological compensation can be made for some limitation in certain of these areas, but a candidate should be able to perform in a reasonably independent manner.

I. Observation: The candidate must be able to accurately make observations at a distance and close at hand. Observation necessitates the functional use of the sense of vision and somatic sensation and is enhanced by the functional use of all of the other senses.

II. Communication: The candidate must be able to communicate effectively, efficiently and sensitively in both oral and written form and be able to perceive nonverbal communication.

III. Motor: Candidates must be able to coordinate both gross and fine muscular movements, maintain equilibrium and have functional use of the senses of touch and vision. The candidate must possess sufficient postural control, neuromuscular control and eye-to-hand coordination to perform profession-specific skills and tasks.

IV. Intellectual, Conceptual, Integrative and Quantitative Abilities: The candidate must be able to problem solve, measure, calculate, reason, analyze, record and synthesize large amounts of information in a timely manner. The candidate must be able to comprehend three-dimensional relationships and understand spatial relationships.

V. Behavioral and Social Attributes: The candidate must possess the emotional health required for full utilization of his/her intellectual abilities, the exercise of good judgment and the consistent, prompt completion of all responsibilities and the development of mature, sensitive and effective relationships. Candidates must be able to tolerate physically, mentally and emotionally taxing workloads and to function effectively under stress. The candidate must be able to adapt to changing environments, to display flexibility, and to learn to function in the face of uncertainties. Compassion, integrity, concern for others, effective interpersonal skills, willingness and ability to function as an effective team player, interest and motivation to learn are all personal qualities required during the educational process.

Candidates are required to certify that they understand and meet these Technical Standards. Candidates must provide such certification prior to matriculation. Candidates who may not meet the Technical Standards must inform the Director of Admissions, who will then contact the Dean of Students. The Dean of Students, in consultation with the academic dean, will identify and discuss what accommodations, if any, the College would need to make that would allow the candidate to complete the curriculum. The College is not able to grant accommodations that alter the educational standards of the curriculum. Students must meet the Technical Standards for the duration of enrollment in their professional program.

Matriculation Process

The matriculation process begins after students receive notification of their acceptance. Students must return their signed matriculation agreement and their deposit by the deadline date. Students must also:

1. Submit deposit monies by the date designated in their matriculation documents. Deposits are applied toward the first quarter’s tuition.
2. Submit official final transcripts from all colleges attended post-high school by the deadline of two weeks (14 calendar days) prior to the first day of classes. Students who are accepted to MWU less than one month prior to the first day of classes will have 30 calendar days from the date of acceptance to submit official transcripts to the Office of Admissions. Any special circumstances or requests for exceptions to this policy must be sent to and approved by the Office of the Dean of the College. Students who fail to submit all official final transcripts by the stated deadline may jeopardize their acceptance or continued enrollment in the College. PharmCAS does not forward transcripts to MWU-CPG.

3. Submit a completed medical file as requested by the Office of Student Services.

4. Submit proof of medical and disability insurance coverage. Students may select either a plan offered by an MWU-approved carrier or a comparable plan offered by an outside carrier of their choice.

5. Non-U.S. citizens/nonpermanent residents must provide documentation verifying that sufficient funds have been deposited in a U.S. bank to cover all expenses while attending MWU–CPG (for non-U.S. citizens/temporary residents who hold student visas).

6. Authorize and pass the Midwestern University criminal background check.

7. Sign and submit a Midwestern University Drug-Free Workplace and Substance Abuse Policy Statement.

8. Complete a physical exam and submit the appropriate form.


10. Provide documentation that any additional coursework or service requirements stipulated by the Admissions Committee have been completed.

11. Submit additional documents as requested by the Office of Admissions.


Students who either fail to satisfy the above matriculation requirements or omit or falsify information required on official admissions documents automatically forfeit their seat at MWU–CPG. Students will not receive further notification from MWU–CPG regarding this forfeiture.

Reapplication Process

After receiving either denial or end-of-cycle letters, applicants may reapply to MWU–CPG for the next enrollment cycle. Before reapplying, however, applicants should seek the advice of an admissions counselor. To initiate the reapplication process, applicants must submit new applications to PharmCAS. Applications are then processed by the standard application procedures.

Transfer Admission From Another Pharmacy School

MWU–CPG may accept transfer students from other ACPE-accredited pharmacy schools or colleges as long as these students remain in good academic standing and provide legitimate reasons for seeking transfer.

All requests for transfer information should be referred to the Office of the Dean where potential transfer applicants can receive counseling prior to receiving and submitting their applications.

Students requesting transfers must meet MWU-CPG’s general requirements for admission. They must also submit the following documents by January 15, 2009:

1. A letter to the Director of Admissions indicating their reasons for requesting transfer and explaining any difficulties encountered at their current institutions

2. A completed MWU-CPG transfer application

3. Official transcripts from all schools attended—undergraduate, graduate, and professional

4. Catalogs and detailed pharmacy syllabi for any courses for which advanced standing consideration is requested

5. A letter from the dean of the college of pharmacy in which the student is enrolled that describes the current academic status and terms of withdrawal or dismissal

6. One letter of recommendation from a faculty member at the current college of pharmacy

7. Additional documents or letters of recommendation as determined by the Director of Admissions or Dean

The Office of Admissions will collect and forward student portfolios to the Office of the Dean for review. When reviews are positive, candidates will be invited for interviews with the Admissions Committee. The Committee will provide recommendations to the Dean. When transferring students are admitted and request advanced standing, the Office of the Dean will forward these student requests to the appropriate faculty. No advanced standing credit will be awarded for professional pharmacy coursework completed at a foreign college of pharmacy.

Readmission After Dismissal for Poor Academic Performance

Students dismissed for poor academic performance may reapply for admission to MWU–CPG if they:

1. Seek academic counseling from the Office of the Dean prior to enrolling in the required advanced prepharmacy curriculum

2. Complete at least two semesters or three quarters of full-time study (i.e., at least 15 credit hours per semester or quarter) of a curriculum at the advanced prepharmacy level or higher at regionally accredited U.S. colleges or universities

3. Earn grades of at least C (not C–) in all courses taken

4. Maintain a cumulative GPA of 2.50 or better

Students fulfilling these requirements will be permitted to reapply to the University and MWU-CPG. Students should
obtain their applications from the Dean’s Office and not through PharmCAS. Completed readmission applications must be submitted by February 15, 2010 to the Office of the Dean. The completed application of reapplying PS-1 students will be forwarded to the Admissions Committee for review and recommendation. The completed application of a reapplying PS-2 or PS-3 students will be forwarded by the Office of the Dean to the Student Promotion and Graduation Committee for review and recommendations. The respective committees will review applications for evidence of improved academic potential. Committee recommendations are forwarded to the Dean for final action.

No guarantee of admission is implied, and questions related to advanced standing and similar issues will be addressed as they are for new applicants. Readmission will be granted only once.

Articulation Agreement Between Midwestern University Programs

Students enrolled in a Midwestern University program are guaranteed an admission interview with another Midwestern University program if the student:
1. is currently in good standing in the academic program in which the student is enrolled and does not have any pending misconduct charges against him/her;
2. meets all admission requirements for the professional program of interest;
3. after a minimum of two full time quarters of study, achieves a minimum Midwestern University grade point average, derived from all courses completed at Midwestern, that is equal to or greater than 3.0; AND
4. achieves a score on the professional entrance exam (if required) that is not less than one standard deviation below the mean score for students that matriculated into the professional degree program in the previous year.

A guaranteed interview does not guarantee admission into the professional program.

Graduation

The degree Doctor of Pharmacy is conferred upon candidates of good moral character who have completed all academic requirements, satisfied all financial obligations, and completed all graduation requirements. All graduating students are also required to attend the ceremony at which the degree is conferred, unless excused by the Dean.

Candidates for graduation must be of good moral character consistent with the requirements of the pharmacy profession and MWU-CPG faculty. It is the position of the faculty that anyone who uses, possesses, distributes, sells, or is under the influence of narcotics, dangerous drugs, or controlled substances, or who abuses alcohol or is involved in any conduct involving moral turpitude, fails to meet the ethical and moral requirements of the profession and may be dismissed from any program or denied the awarding of any degree from MWU-CPG.

Graduation Requirements

To qualify for graduation, a student must have satisfied the following requirements:
1. Successfully completed a minimum 90 quarter credit hours or 62 semester credit hours of prerequisite core basic science and general education course work, as stipulated, for full admission to the program;
2. Successfully completed the program of professional and experiential coursework approved by the MWU-CPG faculty and Dean;
3. Attained a cumulative grade point average of 2.00 (C) for all requisite professional and experiential coursework at MWU-CPG;
4. Achieved a cumulative rotation grade point average for rotations of 2.00 or greater;
5. Repeated, upon approval, and earned a passing grade for any required courses in the professional program for which a grade of “F” has been issued;
6. Successfully completed, at a minimum, the last 4 didactic quarters and all experiential rotations at MWU-CPG;
7. Been recommended for the degree by a majority vote of the MWU-CPG Student Promotion and Graduation Committee;
8. Settled all financial accounts with the University;
9. Complete all graduation clearance requirements as instructed by the Office of the Registrar;
10. Attended the commencement exercises for conferral of the degree, unless excused by the MWU-CPG Dean.

Licensure Requirements

Laws in all states, including the District of Columbia and Puerto Rico, require applicants for licensure to: 1) be of good moral character; 2) be 21 years of age (Arizona is an exception); 3) have graduated from an ACPE-accredited Doctor of Pharmacy degree program of a college or school of pharmacy; and 4) have passed an examination given by the board of pharmacy. All states, the District of Columbia, Puerto Rico, and the Virgin Islands use the North American Pharmacy Licensure Examination (NAPLEX).

All jurisdictions require candidates for licensure to have a record of practical experience or internship training acquired under the supervision and instruction of a licensed practitioner. Some states, including Arizona accept the training completed during a formal academic program, e.g., MWU-CPG’s Pharm.D. Program.
Publications concerning the NAPLEX licensure examination and internship experience are available from the NABP Publications Desk, 1600 Feehanville Drive, Mount Prospect, IL 60056; 847/391-4406.

For further information regarding licensure, please contact the Office of the Dean.

**CURRICULUM FOR STUDENTS WHO WERE ADMITTED PRIOR TO OR IN FALL 2007**

MWU–CPG reserves the right to revise the curriculum at any time when deemed necessary.

### Fall Quarter, First Year (17qhrs-17.5 qhrs)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>CORE 460</td>
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<tr>
<td>PHYS 501</td>
<td>Human Physiology I</td>
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<td>Biochemistry I</td>
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<td>Pharmaceutics I</td>
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<tr>
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<td>Health Care Systems</td>
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<td>Intro. to Professional Practice I</td>
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<tr>
<td>PPRA 594</td>
<td>Intro. Pharmacy Practice Experience</td>
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### Winter Quarter, First Year (17qhrs-17.5 qhrs)

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<td>Research Methods and Epidemiology for Health Care Professionals</td>
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### Spring Quarter, First Year (18 qhrs)

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<td>PPRA 523</td>
<td>Applied Pharmaceutical Care I</td>
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<td>PSCI 553</td>
<td>Immunology</td>
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<td>PHID 501</td>
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<tr>
<td>PPRA 593</td>
<td>Intro. to Professional Practice III</td>
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### Summer Quarter, First Year (17 qhrs)

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<tbody>
<tr>
<td>PPRA 524</td>
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<td>PPRA 544</td>
<td>Applied Pharmaceutical Care II</td>
<td>2 qhrs</td>
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<td>PSCI 564</td>
<td>Pharmacokinetics &amp; Biopharmaceutics</td>
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<td>PHID 502</td>
<td>Integrated Sequence II</td>
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<tr>
<td>PPRA 534</td>
<td>Public Health and Service Learning</td>
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<tr>
<td>PHID 503</td>
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### Fall Quarter, Second Year (15 qhrs)

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<tr>
<td>PPRA 694</td>
<td>Intro. Community Experience</td>
<td>7.5 qhrs</td>
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<tr>
<td>PPRA 695</td>
<td>Intro. Institutional Experience</td>
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### Winter Quarter, Second Year (17 qhrs)

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<tbody>
<tr>
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<td>Behavioral Medicine and Ethics</td>
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### Spring Quarter, Second Year (16.5 qhrs)

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<tr>
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<td>Pharmacy Practice Management</td>
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<td>PHID 606</td>
<td>Integrated Sequence VI</td>
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<tr>
<td>PHID 607</td>
<td>Integrated Sequence VII</td>
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<tr>
<td>PPRA/PSCI</td>
<td>Electives</td>
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### Summer Quarter, Second Year (17 qhrs)

<table>
<thead>
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<th>Course Title</th>
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<tbody>
<tr>
<td>PPRA 657</td>
<td>Disease Management I</td>
<td>3 qhrs</td>
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<tr>
<td>PPRA 667</td>
<td>Complementary Medicine</td>
<td>2 qhrs</td>
</tr>
<tr>
<td>PHID 677</td>
<td>Health Economics and Outcomes Assessment</td>
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<tr>
<td>PHID 608</td>
<td>Integrated Sequence VIII</td>
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<tr>
<td>PPRA/PSCI</td>
<td>Electives</td>
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### Fall Quarter, Third Year (14 qhrs)

<table>
<thead>
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<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>PPRA 694</td>
<td>Intro. Community Experience</td>
<td>7.5 qhrs</td>
</tr>
<tr>
<td>PPRA 695</td>
<td>Intro. Institutional Experience</td>
<td>7.5 qhrs</td>
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### Winter and Spring Quarters, Third Year (54 qhrs)

Advance Pharmacy Practice Experience Rotations: 36 weeks

<table>
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<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>PPRA 791</td>
<td>Advanced Pharmacy Practice</td>
<td>9.0 qhrs</td>
</tr>
<tr>
<td>PPRA 792</td>
<td>Advanced Pharmacy Practice</td>
<td>9.0 qhrs</td>
</tr>
<tr>
<td>PPRA 793</td>
<td>Advanced Pharmacy Practice</td>
<td>9.0 qhrs</td>
</tr>
<tr>
<td>PPRA 794</td>
<td>Advanced Pharmacy Practice</td>
<td>9.0 qhrs</td>
</tr>
<tr>
<td>PPRA 795</td>
<td>Advanced Pharmacy Practice</td>
<td>9.0 qhrs</td>
</tr>
<tr>
<td>PPRA 796</td>
<td>Elective Experience</td>
<td>9.0 qhrs</td>
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### Professional Electives

Students must complete a **minimum** of 12 hours of elective credit in the program at MWU–CPG. Elective course offerings **may** include the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPRA/PSCI</td>
<td>Special Project/Research</td>
<td>1.5 qhrs</td>
</tr>
<tr>
<td>PPRA/PSCI</td>
<td>Special Project/Research</td>
<td>3 qhrs</td>
</tr>
<tr>
<td>PPRA 611</td>
<td>Advanced Cardiac Life Support</td>
<td>3 qhrs</td>
</tr>
<tr>
<td>PPRA 613</td>
<td>Managing Prescription Benefits</td>
<td>1.5 qhrs</td>
</tr>
<tr>
<td>PPRA 616</td>
<td>Issues in Infectious Diseases</td>
<td>1.5 qhrs</td>
</tr>
<tr>
<td>PPRA 626</td>
<td>Clinical Toxicology</td>
<td>1.5 qhrs</td>
</tr>
<tr>
<td>PPRA 629</td>
<td>Clinical Applications of PDA in Healthcare</td>
<td>1.5 qhrs</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
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<tr>
<td>-------------</td>
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</tr>
<tr>
<td>PPRA 638</td>
<td>Pharmacy-Based Health Screenings</td>
<td>1.5 qhrs</td>
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<tr>
<td>PPRA 639</td>
<td>History of Pharmacy in America</td>
<td>1.5 qhrs</td>
</tr>
<tr>
<td>PPRA 646</td>
<td>Diabetes: A Patient’s Perspective</td>
<td>1.5 qhrs</td>
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<tr>
<td>PPRA 648</td>
<td>Personal Finance for the Health Care Professional</td>
<td>1.5 qhrs</td>
</tr>
<tr>
<td>PPRA 649</td>
<td>Pain and Symptom Management In Terminally Ill Patients</td>
<td>1.5 qhrs</td>
</tr>
<tr>
<td>PPRA 650</td>
<td>Journal Club</td>
<td>1.5 qhrs</td>
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<tr>
<td>PPRA 653</td>
<td>Applied Microbiology for Healthcare Professionals</td>
<td>1.5 qhrs</td>
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<tr>
<td>PPRA 655</td>
<td>Applied Healthcare for Spanish Speaking Populations</td>
<td>1.5 qhrs</td>
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<tr>
<td>PPRA 711</td>
<td>Pharmacological Management of Chronic Pain</td>
<td>1.5 qhrs</td>
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<tr>
<td>PPRA 712</td>
<td>Clinical Management of Patients With HIV/AIDS</td>
<td>1.5 qhrs</td>
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<tr>
<td>PPRA 713</td>
<td>Introduction to Geriatrics</td>
<td>1.5 qhrs</td>
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<tr>
<td>PPRA 714</td>
<td>Political Advocacy and Leadership</td>
<td>1.5 qhrs</td>
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<tr>
<td>PPRA 715</td>
<td>Rare and Interesting Diseases</td>
<td>1.5 qhrs</td>
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<tr>
<td>PPRA 716</td>
<td>Patient Safety and Quality Assurance</td>
<td>1.5 qhrs</td>
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<tr>
<td>PPRA 717</td>
<td>Anticoagulation in Clinical Practice</td>
<td>1.5 qhrs</td>
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<tr>
<td>PSCI 606</td>
<td>Dangerous Plants and Animals</td>
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<td>PSCI 619</td>
<td>Medical Spanish</td>
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<td>PSCI 623</td>
<td>Use and Abuse of Drugs</td>
<td>3 qhrs</td>
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<tr>
<td>PSCI 642</td>
<td>Introduction to Classical Homeopathy</td>
<td>1.5 qhrs</td>
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<tr>
<td>PSCI 647</td>
<td>Pharmaceutical Formulation and Analysis</td>
<td>1.5 qhrs</td>
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<tr>
<td>PSCI 652</td>
<td>Recent Advances in Pharmacology</td>
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<td>PSCI 654</td>
<td>Sterile Products</td>
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<tr>
<td>PSCI 710</td>
<td>Advanced Endocrine Toxicology</td>
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<tr>
<td>PPRA 1534</td>
<td>Introduction to Public Health</td>
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<td>PSCI 1541</td>
<td>Pharmaceutics I</td>
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<tr>
<td>PSCI 1551</td>
<td>Biochemistry</td>
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**Winter Quarter, First Year (16.5/18 qhrs)**

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CORE 470</td>
<td>Interdisciplinary Health Care</td>
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<td>PHID 1501</td>
<td>Integrated Sequence 1</td>
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<td>Integrated Sequence 2</td>
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<tr>
<td>PPRA 1503</td>
<td>Professional Skills Development 3</td>
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<td>PPRA 1535</td>
<td>Comm. Partnership in Public Health (half of class)</td>
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<td>Pharmaceutics II</td>
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<tr>
<td>PSCI 1552</td>
<td>Molecular Biology and Human Genetics</td>
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**Spring Quarter, First Year (16.5/18 qhrs)**

<table>
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<tr>
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<tr>
<td>CORE 480</td>
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<td>MICR 513</td>
<td>Microbiology</td>
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<td>Professional Skills Development 4</td>
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<td>PPRA 1535</td>
<td>Comm. Partnership in Public Health (half of class)</td>
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<td>PSCI 553</td>
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<tr>
<td>PSCI 1564</td>
<td>Pharmacokinetics &amp; Biopharmaceutics</td>
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**Summer Quarter, Second Year (12 qhrs)**

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<td>Introductory Community Experience</td>
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<td>PPRA 1695</td>
<td>Introductory Institutional Experience</td>
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**Fall Quarter, Second Year (18 qhrs)**

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<td>Professional Skills Development 5</td>
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<tr>
<td>PPRA 1665</td>
<td>Ethical Decision Making</td>
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<td>PPRA 1672</td>
<td>Research Methods &amp; Epidemiology for Health Care Professionals</td>
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<tr>
<td>PPRA/PSCI</td>
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**Winter Quarter, Second Year (16 qhrs)**

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<tr>
<td>PHID 1606</td>
<td>Integrated Sequence 6</td>
<td>5 qhrs</td>
</tr>
<tr>
<td>PHID 1607</td>
<td>Integrated Sequence 7</td>
<td>4 qhrs</td>
</tr>
<tr>
<td>PPRA 1606</td>
<td>Professional Skills Development 6</td>
<td>1.5 qhrs</td>
</tr>
<tr>
<td>PPRA 1676</td>
<td>Evidence-Based Health Care</td>
<td>2 qhrs</td>
</tr>
<tr>
<td>PPRA/PSCI</td>
<td>Electives</td>
<td>3 qhrs</td>
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**Spring Quarter, Second Year (18 qhrs)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PHID 1608</td>
<td>Integrated Sequence 8</td>
<td>4.5 qhrs</td>
</tr>
<tr>
<td>PHID 1609</td>
<td>Integrated Sequence 9</td>
<td>4 qhrs</td>
</tr>
<tr>
<td>PPRA 1607</td>
<td>Professional Skills Development 7</td>
<td>1.5 qhrs</td>
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<tr>
<td>PPRA 1667</td>
<td>Complementary and Alternative Medicine</td>
<td>2 qhrs</td>
</tr>
<tr>
<td>PPRA 1675</td>
<td>Pharmacy Practice Management</td>
<td>3 qhrs</td>
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</table>
Summer Quarter, Third Year (15.5 qhrs)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>PPRA 1701</td>
<td>Acute Care Management</td>
<td>4 qhrs</td>
</tr>
<tr>
<td>PPRA 1708</td>
<td>Professional Skills Development</td>
<td>8 1.5qhrs</td>
</tr>
<tr>
<td>PPRA 1737</td>
<td>Disease State Management</td>
<td>4 qhrs</td>
</tr>
<tr>
<td>PPRA 1776</td>
<td>Human Resource Management</td>
<td>3 qhrs</td>
</tr>
<tr>
<td>PPRA/PSCI</td>
<td>Electives</td>
<td>3 qhrs</td>
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</tbody>
</table>

Fall, Winter, and Spring Quarters, Third Year (54 qhrs)

Advanced Pharmacy Practice Experience Rotations:
36 weeks for a total of 54 qhrs.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>PPRA 1791</td>
<td>Advanced Pharmacy Practice Experience</td>
<td>9 qhrs</td>
</tr>
<tr>
<td>PPRA 1792</td>
<td>Advanced Pharmacy Practice Experience</td>
<td>9 qhrs</td>
</tr>
<tr>
<td>PPRA 1793</td>
<td>Advanced Pharmacy Practice Experience</td>
<td>9 qhrs</td>
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<tr>
<td>PPRA 1794</td>
<td>Advanced Pharmacy Practice Experience</td>
<td>9 qhrs</td>
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<tr>
<td>PPRA 1795</td>
<td>Advanced Pharmacy Practice Experience</td>
<td>9 qhrs</td>
</tr>
<tr>
<td>PPRA 1796</td>
<td>Advanced Pharmacy Practice Experience</td>
<td>9 qhrs</td>
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Professional Electives
Students must complete a minimum of 12 hours of elective credit in the program at MWU-CPG. Elective course offerings may include the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>PPRA/PSCI 601</td>
<td>Special Project/Research</td>
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</tr>
<tr>
<td>PPRA/PSCI 602</td>
<td>Special Project/Research</td>
<td>3 qhrs</td>
</tr>
<tr>
<td>PPRA 611</td>
<td>Advanced Cardiac Life Support</td>
<td>3 qhrs</td>
</tr>
<tr>
<td>PPRA 613</td>
<td>Managing Prescription Benefits</td>
<td>1.5 qhrs</td>
</tr>
<tr>
<td>PPRA 616</td>
<td>Issues in Infectious Diseases</td>
<td>1.5 qhrs</td>
</tr>
<tr>
<td>PPRA 626</td>
<td>Clinical Toxicology</td>
<td>1.5 qhrs</td>
</tr>
<tr>
<td>PPRA 629</td>
<td>Clinical Applications of PDA in Healthcare</td>
<td>1.5 qhrs</td>
</tr>
<tr>
<td>PPRA 638</td>
<td>Pharmacy-Based Health Screenings</td>
<td>1.5 qhrs</td>
</tr>
<tr>
<td>PPRA 639</td>
<td>History of Pharmacy in America</td>
<td>1.5 qhrs</td>
</tr>
<tr>
<td>PPRA 646</td>
<td>Diabetes: A Patient’s Perspective</td>
<td>1.5 qhrs</td>
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<tr>
<td>PPRA 648</td>
<td>Personal Finance for the Health Care Professional</td>
<td>1.5 qhrs</td>
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<tr>
<td>PPRA 649</td>
<td>Pain and Symptom Management</td>
<td>1.5 qhrs</td>
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<tr>
<td></td>
<td>In Terminally Ill Patients</td>
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<tr>
<td>PPRA 650</td>
<td>Journal Club</td>
<td>1.5 qhrs</td>
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<tr>
<td>PPRA 653</td>
<td>Applied Microbiology for Healthcare Professionals</td>
<td>1.5 qhrs</td>
</tr>
<tr>
<td>PPRA 655</td>
<td>Applied Healthcare for Spanish Speaking Populations</td>
<td>1.5 qhrs</td>
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</table>

Experiential Rotations
Students are required to complete one introductory community experience, one introductory institutional experience, and six advanced pharmacy practice experiences. One advanced pharmacy practice experience may be a non-patient care elective experience.

During their introductory experiences, students spend time in a community pharmacy setting developing the skills necessary to dispense prescriptions, provide patient information, acquire and store drugs, and keep accurate records. In the hospital setting, students will develop the skills necessary to distribute medications, prepare parenteral products, process drug information requests, and perform quality assurance audits. During their advanced patient care experiences, students work closely with clinical faculty to develop competencies in the areas of medication therapy management, pharmacotherapy, drug information and patient education. Students can also select an elective rotation that may or may not involve direct patient contact. All rotations place an emphasis on the development of problem solving, critical thinking, and communications skills in the delivery of patient-centered care.

DEPARTMENTS

Department of Pharmaceutical Sciences
The Department of Pharmaceutical Sciences (PSCI) subsumes several specialty areas that provide the student with a foundation of knowledge upon which the therapeutics of pharmacy practice will be understood. The specialty areas are
taught throughout the curriculum in unique classes as well as in the Integrated Sequence courses that are threaded through the didactic portion of the curriculum. The specialty areas taught by the PSCI faculty include physiology, pathophysiology, pharmaceutics/pharmacokinetics, medicinal chemistry, and pharmacology/toxicology. The mission of the Department is to empower students with the foundational knowledge that is essential to the professional pharmacy curriculum. The faculty provides the highest quality instruction in basic biomedical and pharmaceutical sciences. The faculty serves as role models in leadership, and help future pharmacists develop skills in critical thinking, problem solving, scholarship, and life-long learning. Recruitment, mentoring, and development of faculty with strong research and teaching credentials are essential to maintaining a positive, stimulating, research and instructional environment that fosters excellence in critical inquiry. Research collaboration within the University, with regional clinical and basic research centers, and with pharmaceutical industry will be continually strengthened. The Department also endeavors to contribute significantly to Midwestern University by excelling in service both within and outside of the College.

Department of Pharmacy Practice
The Department of Pharmacy Practice is comprised of faculty who provide education in the social, administrative and clinical aspects of pharmacy practice, including patient care experiences. Required courses in the social and administrative science area include an introduction to career development and current pharmacy topics, a survey of the health care system, professional practice management, and pharmacy law and ethics. Required courses in the clinical science area include drug literature evaluation and the pharmacotherapeutics of prescription and non-prescription medications. A professional skills development sequence integrates the knowledge and skills from other courses including communications, prescription processing, and pharmaceutical care. Supervised practice experiences required during the program provide opportunities for students to apply knowledge acquired in didactic courses to life situations. The experiences are designed to promote the development of technical, cognitive, and decision-making skills that are necessary for the contemporary practice of pharmacy in a variety of practice environments. Various states apply these experiences to their state board of pharmacy internship requirements.

COURSE DESCRIPTIONS
Prerequisites are listed for those courses with such requirements. When no prerequisite is listed in a course description, it is implied that there is no prerequisite.

Required Courses

CORE 460, 470, 480 Interdisciplinary Health Care
The Interdisciplinary Healthcare course involves the Colleges of Health Sciences, Osteopathic Medicine, Dentistry, and Pharmacy, in order to teach all clinically based students about the importance of an interdisciplinary approach to patient care. Lectures will be given in a seminar format, in conjunction with panel presentations and discussions by interdisciplinary team members.
0.5 credits each

MICR 513 Microbiology
This survey course in basic and medical microbiology focuses on the more common pathogenic microorganisms that cause morbidity and mortality in humans. The pattern of discussion is uniform: etiology, epidemiology, pathogenesis and pathology, clinical manifestations, diagnosis and prevention.
3 credits

PHID 501-503, 604-608, 709, Integrated Sequence I-IX
The integrated sequence is a series of nine sequential modules of varying lengths. Each module incorporates the principles of pathophysiology, medicinal chemistry, pharmacology, and pharmacotherapeutics utilizing an organ systems approach. PHID 501 Integrated Sequence I, 6 credits, Prerequisites: PHYS 501 Human Physiology I, PHYS 502 Human Physiology II, PSCI 552 Biochemistry II
PHID 502 Integrated Sequence II, 4 credits, Prerequisite: PHID 501 Integrated Sequence I
PHID 503 Integrated Sequence III, 4 credits, Prerequisite: PHID 502 Integrated Sequence II
PHID 604 Integrated Sequence IV, 5 credits, Prerequisite: PHID 503 Integrated Sequence III
PHID 605 Integrated Sequence V, 4 credits, Prerequisite: PHID 604 Integrated Sequence IV
PHID 606 Integrated Sequence VI, 5 credits, Prerequisite: PHID 605 Integrated Sequence V
PHID 607 Integrated Sequence VII, 5.5 credits, Prerequisite: PHID 606 Integrated Sequence VI
PHID 608 Integrated Sequence VIII, 6 credits, Prerequisite: PHID 607 Integrated Sequence VII
PHID 709 Integrated Sequence IX, 4.5 credits, Prerequisite: PHID 608 Integrated Sequence VIII
PHID 1501-1503, 1604-1609, Integrated Sequence 1-9

The integrated sequence is a series of nine sequential modules of varying lengths. Each module incorporates the principles of pathophysiology, medicinal chemistry, pharmacology, and pharmacotherapeutics utilizing an organ systems approach.

- PHID 1501 Integrated Sequence 1, 4 credits,
  Prerequisites: PHYS 1501 Human Physiology I, PHYS 1502 Human Physiology II, PSCI 1551 Biochemistry; completion of or concurrent enrollment in PPRA 1503 Professional Skills Development 3
- PHID 1502 Integrated Sequence 2, 4 credits,
  Prerequisites: PHID 1501 Integrated Sequence 1; completion of or concurrent enrollment in PPRA 1503 Professional Skills Development 3
- PHID 1503 Integrated Sequence 3, 4 credits,
  Prerequisites: PHID 1502 Integrated Sequence 2; completion of or concurrent enrollment in PPRA 1504 Professional Skills Development 4
- PHID 1604 Integrated Sequence 4, 5 credits,
  Prerequisites: PHID 1503 Integrated Sequence 3; completion of or concurrent enrollment in PPRA 1605 Professional Skills Development 5
- PHID 1605 Integrated Sequence 5, 3.5 credits,
  Prerequisites: PHID 1604 Integrated Sequence 4; completion of or concurrent enrollment in PPRA 1605 Professional Skills Development 5
- PHID 1606 Integrated Sequence 6, 5.5 credits,
  Prerequisites: PHID 1605 Integrated Sequence 5; completion of or concurrent enrollment in PPRA 1606 Professional Skills Development 6
- PHID 1607 Integrated Sequence 7, 4 credits,
  Prerequisites: PHID 1606 Integrated Sequence 6; completion of or concurrent enrollment in PPRA 1606 Professional Skills Development 6
- PHID 1608 Integrated Sequence 8, 4.5 credits,
  Prerequisites: PHID 1607 Integrated Sequence 7; completion of or concurrent enrollment in PPRA 1607 Professional Skills Development 7
- PHID 1609 Integrated Sequence 9, 4 credits,
  Prerequisites: PHID 1608 Integrated Sequence 8; completion of or concurrent enrollment in PPRA 1607 Professional Skills Development 7

PHYS 1501 Human Physiology I

This course provides the core knowledge of physiology required by students to understand normal body function and the ability to analyze and interpret the immediate and long-term compensatory responses to common disease states of excitable cells (muscle and nervous tissue), the sensory system, and the endocrine and reproductive systems. Basic and applied terms are defined. Essential relationships between structure and function are defined and discussed. 3 credits

PHYS 1502 Human Physiology II

This course provides core knowledge of physiology required by students of pharmacy in order to understand normal function and to acquire the ability to analyze and interpret the immediate and long-term compensatory responses to common disease states of the renal, cardiovascular, respiratory, and gastrointestinal systems. Basic and applied terms are defined. Essential relationships between structure and function are defined and discussed. 3 credits

PPRA 571 Health Care Systems

This course provides the student with a broad overview of the organization, delivery and financing of medical and pharmaceutical care in the U.S. Particular emphasis is placed on the interdependent roles of pharmacists, other health care providers, and the various organizations and institutions that are involved in delivering care to patients. Historical perspective is provided where it contributes to an understanding of contemporary practice. 3 credits

PPRA 657 Disease Management I

This course focuses on wellness, prevention, and management of major ambulatory disease states, with an emphasis on cardiovascular conditions. This is accomplished through in-depth coursework, patient interviewing and triage, application of physical assessment skills, and formulation of appropriate therapeutic plans. 3 credits

PPRA 665 Behavioral Medicine and Ethics

This course is designed to provide pharmacy students with the knowledge and sensitivity needed to communicate and intervene effectively in a variety of psychosocial situations with different patient populations. Patient education and communication, cultural and social awareness, and sensitivity issues are presented. Emphasis is placed on normal psychosocial life and adjustment to common problems encountered in the health care environment including pharmacy’s role in dealing effectively with patients and caregivers concerning these circumstances. 2 credits

PPRA 667 Complementary Medicine

This course is designed as a survey of complementary medicine. Students will be introduced to the theory and practice of some of the more popular complementary therapies such as acupuncture, traditional Chinese medicine, homeopathy, herbal medicine, and other dietary supplements. The course will also include the use of complementary medicine associated with the common disease
states. Students will have the opportunity to research and present an alternative treatment to the class.
2 credits

**PPRA 675 Pharmacy Practice Management**
This course introduces students to concepts, principles, and techniques that are applied in contemporary pharmacy practice management. The course is organized into three broad areas of managerial activity and responsibility: financial management, operations management and selected topics in marketing and entrepreneurship.
3 credits

**PPRA 676 Evidence-Based Medicine**
The goal of this course is to provide students with the skills needed to maintain an evidence-based health care practice, which involves identifying clinical questions, finding the evidence, evaluating the evidence, and applying the information to patients. Students will be asked to answer questions about medications using tertiary resources, conduct literature searches in Pubmed and International Pharmaceutical Abstracts, and evaluate randomized, controlled clinical trials.
3 credits
Prerequisite: PPRA 572 Research Methods and Epidemiology for Health Care Professionals

**PPRA 677 Health Economics and Outcomes Assessment**
This course introduces students to the methods and tools used within the managed care environment to document, evaluate, and improve upon the medication use process in achieving defined therapeutic outcomes. Areas that will be elaborated include formulary management, drug usage evaluation, adverse drug events, pharmaceutical care, disease management, pharmacoeconomics, methods of reimbursement, and health care reform.
3 credits

**PPRA 694 Introductory Community Experience**
This experience provides an opportunity for students to participate in basic patient care and distribution services in a community pharmacy practice setting. All students are expected to utilize their pharmacy knowledge and life experiences thus far to provide patient centered care. Students will communicate with other health care professionals and patients and answer basic prescription related questions utilizing a systematic approach to drug information retrieval. Pharmacy students, under the supervision of adjunct clinical faculty, gain experience in community pharmacy practice including the areas of patient counseling, medication distribution, extemporaneous products, and application of federal and state pharmacy laws.
7.5 credits
Prerequisite: Passing grades in all PS-1 year didactic courses and an annual grade point average of 2.00 or above

**PPRA 695 Introductory Institutional Experience**
This experience provides an opportunity to allow students to participate in basic patient care and distribution services in an institutional pharmacy practice setting. All students are expected to utilize their pharmacy knowledge and life experiences thus far to provide patient centered care. Students will communicate with other health care professionals and patients and answer basic prescription related questions utilizing a systematic approach to drug information retrieval. Pharmacy students, under the supervision of adjunct clinical faculty, gain experience in institutional pharmacy practice including the areas of medication distribution systems, sterile product preparation, interprofessional activities, and application of federal and state pharmacy laws.
7.5 credits
Prerequisite: Passing grades in all PS-1 year didactic courses and an annual grade point average of 2.00 or above

**PPRA 701 Acute Care Management**
This course integrates advanced problem-solving, monitoring and documentation in the management of patients in the acute care setting. This class will also reinforce the principles of clinical pharmacokinetics and review the management of patients experiencing toxicological emergencies and acute overdose. Emphasis will be placed on the development and documentation of evidence based cost effective treatment regimens and care plans.
3.5 credits

**PPRA 737 Disease Management II**
This course focuses on wellness, prevention, and management of major ambulatory disease states, with further emphasis on cardiovascular, pulmonary, and endocrine conditions. This is accomplished through in-depth coursework, patient interviewing and triage, application of physical assessment skills, and formulation of appropriate therapeutic plans.
3 credits
Prerequisites: PHID 608 Integrated Sequence VIII, PPRA 657 Disease Management I

**PPRA 791-796 Advanced Pharmacy Practice Experiences**
The advanced pharmacy practice experiences build upon the foundation of the introductory pharmacy practice experiences provided in the PS-II year and the didactic curriculum. Under preceptor supervision, the student participates in four required APPE course types: community, health-system, ambulatory care, acute care, and two additional APPE experiences. Only one experience may be a non-patient care experience.
9 credits each
Prerequisites: Passing grades in all PS-3 fall quarter didactic courses and an annual grade point average of 2.00 or above
These courses integrate the skills needed to fill the professional responsibilities of pharmacy practice as they relate to patient-centered care and the patient care process, utilizing principles taught in this course and the co-requisite courses to provide the contextual framework for the skills considered.

- PPRA 1501 Professional Skills Development 1, 3.5 credits
- PPRA 1502 Professional Skills Development 2, 3.5 credits, Prerequisite: PPRA 1501 Professional Skills Development 1
- PPRA 1503 Professional Skills Development 3, 2 credits, Prerequisites: PPRA 1502 Professional Skills Development 2; completion of or concurrent enrollment in PHID 1501 Integrated Sequence 1, PHID 1502 Integrated Sequence 2
- PPRA 1504 Professional Skills Development 4, 2 credits, Prerequisites: PPRA 1503 Professional Skills Development 3; completion of or concurrent enrollment in PHID 1503 Integrated Sequence 3
- PPRA 1605 Professional Skills Development 5, 1.5 credits, Prerequisites: PPRA 1504 Professional Skills Development 4; completion of or concurrent enrollment in PHID 1604 Integrated Sequence 4, PHID 1605 Integrated Sequence 5
- PPRA 1606 Professional Skills Development 6, 1.5 credits, Prerequisites: PPRA 1605 Professional Skills Development 5; completion of or concurrent enrollment in PHID 1606 Integrated Sequence 6, PHID 1607 Integrated Sequence 7
- PPRA 1607 Professional Skills Development 7, 1.5 credits, Prerequisite: PPRA 1606 Professional Skills Development 6; completion of or concurrent enrollment in PHID 1608 Integrated Sequence 8, PHID 1609 Integrated Sequence 9
- PPRA 1708 Professional Skills Development 8, 1.5 credits, Prerequisites: PPRA 1607 Professional Skills Development 7; completion of or concurrent enrollment in PHID 1701 Acute Care Management, PPRA 1737 Disease State Management

This course presents principles of law and public policy as they relate to pharmacy practice under federal, state and local regulations. Topics include general rules and regulations governing pharmacy practice, controlled substances, Health Insurance Portability and Accountability Act (HIPAA), and public policy.

2.5 credits

**PPRA 1533 Patient Decision Making**

This course introduces health belief models and theories, including the patient's perspective of health, illness, and patient-provider interactions, educational assessment, and consultation related to medication use. The main goal of this course is to help students understand and empathize with patients. The course emphasizes the patient instead of focusing upon the disease. Sociological and psychological implications of living with disease are discussed. Students learn to consider how the patient feels and how they can impact patient outcomes as health care professionals.

3 credits

**PPRA 1534 Introduction to Public Health**

This course presents the basic and critical issues in public health within the context of population health care and an in-depth discussion of the role of pharmacy professionals in promoting and protecting the health of the public. In order to address public health needs, pharmacists must understand and address the fundamental determinants of health in a population in order to provide effective health promotion, disease prevention, and quality health services. This course focuses on strategies for the identification and management of the health care needs of specific populations.

2 credits

**PPRA 1535 Community Partnership in Public Health**

Community Partnership in Public Health is a service-learning and population-based experience in which students participate in activities that connect individual and community needs by interacting with different community leaders, providing health education, identifying individual/community needs and community resources. This course places students in contact with specific populations and agencies working within the community that address the needs of the population. Assignments introduce students to the concepts of health promotion, wellness, disease prevention, community development, patient empowerment, at-risk populations, barriers to care, and ultimately the health of populations. This course consists of weekly community activities and several campus-based activities during the quarter.

1.5 credits

Prerequisite: PPRA 1534 Introduction to Public Health

**PPRA 1524 Pharmacy Law and Public Policy**

This course provides the student with a brief history and evolution of the profession of pharmacy, with a focus on career opportunities for the present and future as the role of the pharmacist continues to change in the 21st century. Students complete a self-evaluation to help determine their primary interests in practice and interact with a number of practitioners from varied practice settings.

1 credit
PPRA 1665 Ethical Decision Making
In daily pharmacy practice, pharmacists encounter a variety of behavioral and ethical issues related to interactions among patients, providers, and health care organizations. This course presents the principles underlying the dynamics of these constantly changing interactions to help future pharmacists better understand, predict, and ultimately change the nature of their interactions with patients, other providers, and health care organizations. Future pharmacists who have mastered the concepts in this course are better equipped to optimize their delivery of pharmaceutical care and ultimately achieve positive patient outcomes.
2 credits

PPRA 1667 Complementary and Alternative Medicine
This course introduces students to the theory and uses of some of the more popular complementary and alternative therapies. Examples include herbal products, dietary supplements, acupuncture, traditional Chinese medicine, and homeopathy. The course includes the use of complementary medicine associated with the common disease states. Students research and present a complementary or alternative treatment to the class.
2 credits
Prerequisites: PPRA 1504 Professional Skills Development 4; PPRA 1676 Evidence-Based Health Care

PPRA 1672 Research Methods & Epidemiology for Health Care Professionals
This course introduces students to statistics and research design. The course covers basic statistical concepts, techniques, notations and computations including descriptive and inferential statistics with an emphasis on statistical methods, computerized data analysis and data assessments most commonly associated with pharmaceutical and medical research. Basic descriptive and inferential statistical processes and procedures are presented as well as topics on the development of research protocols, survey research, and clinical drug investigations.
3 credits

PPRA 1675 Pharmacy Practice Management
This course introduces students to concepts, principles, and techniques that are applied in contemporary pharmacy practice management. The course is organized into three broad areas of managerial activity and responsibility: financial management, operations management and selected topics in marketing, and entrepreneurship.
3 credits

PPRA 1676 Evidence-Based Health Care
In this course, students will learn and apply skills that will improve their ability to practice evidence-based health care (EBHC). Students were introduced to the steps of practicing EBHC and learned about Step 1 (identify a clinical question) and Step 2 (find relevant literature) of practicing EBHC in previous courses. The course focuses on Step 3 (critically evaluate literature) and Step 4 (apply information to patients).
2 credits
Prerequisite: PPRA 1672 Research Methods and Epidemiology for Health Care Professionals

PPRA 1694 Introductory Community Experience
This experience provides an opportunity for students to participate in basic patient care and distribution services in a community pharmacy practice setting. All students are expected to utilize their pharmacy knowledge and life experiences thus far to provide patient centered care. Students will communicate with other health care professionals and patients, and answer basic prescription and OTC medication related questions utilizing a systematic approach to drug information retrieval. Pharmacy students, under the supervision of adjunct clinical faculty, gain experience in community pharmacy practice including the areas of patient counseling, medication distribution, extemporaneous products, and application of federal and state pharmacy laws.
6 credits
Prerequisite: Passing grades in all PS-1 year didactic courses and an annual grade point average of 2.00 or above

PPRA 1695 Introductory Institutional Experience
This experience provides an opportunity for students to participate in basic patient care and distribution services in an institutional pharmacy practice setting. All students are expected to utilize their pharmacy knowledge and life experiences thus far to provide patient centered care. Students will communicate with other health care professionals and patients and answer basic prescription related questions utilizing a systematic approach to drug information retrieval. Pharmacy students, under the supervision of adjunct clinical faculty, gain experience in institutional pharmacy practice including the areas of medication distribution systems, sterile product preparation, interprofessional activities, and application of federal and state pharmacy laws.
6 credits
Prerequisite: Passing grades in all PS-1 year didactic courses and an annual grade point average of 2.00 or above

PPRA 1701 Acute Care Management
This course integrates both the practice and patient care management of patients in the acute care setting. Students enhance their knowledge not only through in depth coursework, but also learn how to interview and triage patients, apply physical and laboratory assessment knowledge and formulate appropriate therapeutic plans for patients in the acute care setting.
4 credits
Prerequisites: PHID 1609 Integrated Sequence 9; PPRA 1607 Professional Skills Development 7; completion of or concurrent enrollment in PPRA 1708 Professional Skills Development 8, PPRA 1737 Disease State Management

**PPRA 1737 Disease State Management**
This course focuses on the skills necessary for pharmacist-directed management of common ambulatory medical conditions involving the cardiac, pulmonary, and endocrine systems. The course builds upon the fundamental information provided in the Integrated Sequence through the incorporation of disease prevention strategies and medication therapy management principles into complex patient casework.
4 credits
Prerequisites: PHID 1609 Integrated Sequence 9; PPRA 1607 Professional Skills Development 7; completion of or concurrent enrollment in PPRA 1708 Professional Skills Development 8

**PPRA 1776 Human Resource Management**
This course prepares students to engage in the classic functions of a human resource manager in the pharmacy practice setting including planning, organizing, decision making, staffing, leading or directing, communicating, motivating and evaluating.
3 credits

**PPRA 1791-1796 Advanced Pharmacy Practice Experiences**
The advanced pharmacy practice experiences build upon the foundation of the introductory pharmacy practice experiences provided in the PS-II year and the didactic curriculum. Under preceptor supervision, the student participates in four required APPE course types: community, health-system, ambulatory care, acute care, and two additional APPE experiences. Only one experience may be a non-patient care experience.
9 credits each
Prerequisites: Passing grades in all PS-3 summer quarter didactic courses and an annual grade point average of 2.00 or above

**PSCI 553 Immunology**
This course presents basic aspects of the body’s defense system. Initial lectures address cells and organs of the immune system, complement activation, antigen processing and presentation, and cytokines. Introductory lectures are tied together later in the course with discussions of inflammation and the body’s response to infectious disease. The role of the immune system in the rejection of organ transplants, autoimmunity, hypersensitivity, cancer, and AIDS are also discussed in detail. Current advances in immunotherapy and immunoprophylaxis are emphasized.
3 credits

**PSCI 1540 Pharmaceutical Calculations**
This course introduces the student to the mathematical skills needed for drug product dispensing and compounding of dosage forms essential to the practice of pharmacy. Topics covered include systems of measurement, prescription and medication orders, weights and measures, percentage strength, density, dosage calculations, aliquoting, isotonicity, milliequivalents, and osmolarity. Calculations for the preparation of specific dosage forms such as capsules, suppositories, and parenterals will also be covered. The course utilizes various instructional methods in order to develop and establish mathematical competency necessary for future coursework and clinical application.
2 credits

**PSCI 1541 Pharmaceutics I**
Pharmaceutics I & II are an integration of physical pharmacy, dosage forms, pharmacy calculations, and pharmaceutical compounding presented by dosage form classification. The course presents the principles important for the administration, preparation, stability, and performance of drug products; the appropriate evaluation, documentation, and labeling of prescriptions; the mathematical calculations essential to the compounding, dispensing, and delivery of drug products, and the basic skills and techniques necessary for compounding pharmaceutical delivery systems.
Pharmaceutics I is the first of two required courses in pharmaceutics for pharmacy students; specific dosage forms covered in this course include powders, capsules, tablets, suppositories, ointments, and transdermal patches.
4 credits
Prerequisite: PSCI 1540 Pharmaceutical Calculations

**PSCI 1542 Pharmaceutics II**
Pharmaceutics I & II are an integration of physical pharmacy, dosage forms, pharmacy calculations, and pharmaceutical compounding presented by dosage form classification. The course presents the principles important for the administration, preparation, stability, and performance of drug products; the appropriate evaluation, documentation, and labeling of prescriptions; the mathematical calculations essential to the compounding, dispensing, and delivery of drug products, and the basic skills and techniques necessary for compounding pharmaceutical delivery systems.
Pharmaceutics II is the second of two required courses in pharmaceutics for pharmacy students; specific dosage forms covered in this course include solutions, suspensions, emulsions, aerosols, ophthalmics, and parenterals.
4 credits
Prerequisite: PSCI 1541 Pharmaceutics I
**PSCI 1551 Biochemistry**
This course instills basic principles in biochemistry with particular emphasis on pharmaceutical applications. Lectures address acid/base chemistry, structure and function relationships of proteins, enzymes in biochemistry, and major pathways for protein, carbohydrate, and lipid metabolism, and pertinent nutritional topics.
3 credits

**PSCI 1552 Molecular Biology and Human Genetics**
This course instills basic principles in molecular biology and human genetics. Lectures address nucleic acid structure, the flow of information from DNA to protein, current techniques in DNA technology including gene therapy and pharmacogenetics, the molecular basis of cancer and several topics in clinical genetics. Emphasis is placed on the pharmaceutical applications of all topics addressed.
2 credits
Prerequisite: PSCI 1551 Biochemistry

**PSCI 1564 Pharmacokinetics and Biopharmaceutics**
This course introduces pharmacy students to the principles of biopharmaceutics and pharmacokinetics. The relationships between physiology, mathematics, and pharmacokinetic theory are explored and applied to pharmacy practice. During this course, students learn how to calculate and interpret pharmacokinetic parameters, discuss and explain pharmacokinetic principles, assess factors that affect drug disposition, design and adjust drug dosage regimens, and predict and explain the mechanism(s) involved in drug interactions. In addition, students learn to apply basic pharmacokinetic skills to manage therapy of some common clinically monitored medications.
4 credits
Prerequisite: PSCI 1542 Pharmaceutics II

**ELECTIVE COURSES**

**PPRA 601/602 Special Project/Research**
These courses provide an opportunity for students to work with individual faculty mentors on projects of variable scope. Activities may include clinical, library, laboratory, and/or survey-type research; assistance with syllabus development for future elective courses; or other activities agreed on between the student and the mentor. All special projects/research require the approval of the appropriate department chair and Dean.
PPRA 601, 1.5 credits; PPRA 602, 3 credits

**PPRA 611 Advanced Cardiac Life Support (ACLS) Certification**
This course is designed to provide students with the skills necessary for the management of critically ill patients.

Students with an interest in cardiovascular, critical care, emergency, and nutrition support pharmacotherapy are encouraged to participate. After completion of this course, the student will be able to identify relevant life-threatening arrhythmias, list the treatment modalities and medications used during ACLS, develop and evaluate treatment plans for persons with life-threatening emergencies, and receive ACLS certification upon successful completion of the ACLS tests.
3 credits
Prerequisites: Students admitted prior to or in Fall 2007 - PHID 605 Integrated Sequence V; Students admitted in June 2008 or thereafter - PHID 1605 Integrated Sequence 5

**PPRA 613 Managing Prescription Benefits**
This course discusses major factors having direct and indirect influence on pharmaceutical benefits in the U.S. External forces (social, political, and economic) affecting medication use and the policy issues surrounding those forces are explored. Specifically, prescription benefits, reimbursement strategies, methods to manage medication use, the role of prescription benefit management organizations, and technology are examined. Where appropriate, guest lecturers address specific topics.
1.5 credits

**PPRA 616 Issues in Infectious Disease**
This course is an in-depth review of the key issues found in the practice of infectious diseases pharmacotherapy. The class will rely on case presentations to review key areas of infectious diseases pharmacotherapy. Topics may include, but are not limited to, HIV/AIDS, HCAP, fungal infections, SSTI, and CAP. The course will incorporate self-directed learning, lecture, group case discussion, and written critiques to better understand these important infectious diseases issues.
1.5 credits
Prerequisites: Students admitted prior to or in Fall 2007 - PHID 608 Integrated Sequence VIII; Students admitted in June 2008 or thereafter - PHID 1608 Integrated Sequence 8

**PPRA 626 Clinical Toxicology**
This elective course provides an overview of basic concepts in clinical toxicology including the diagnosis and treatment of common poisonings. Emphasis is given to the basic concepts of patient-oriented toxicology. Upon completion of this course, students will have been exposed to critical problem solving skills in toxicology including patient interviewing techniques, differential diagnosis of poisoning, rational therapeutic plans for toxicological problems, and patient monitoring parameters.
1.5 credits
PPRA 629 Clinical Applications of PDAs in Health Care
This course introduces the pharmacy student to Microsoft Pocket PC database applications and mobile computing that relate to the practice of pharmacy. The course also allows students to learn concepts and techniques for the systematic creation, storage, reproduction, distribution, and retention of patient records using the latest technologies in handheld computing.
1.5 credits

PPRA 638 Pharmacy-Based Health Screenings
Through active participation in lecture discussions as well as laboratory exercises, the student will be prepared to develop health-screening programs in a variety of pharmacy practice settings. The focus is risk factor assessment and hands-on experience with technological devices related to cancer, cardiovascular disease (blood pressure and cholesterol), diabetes, and osteoporosis. This course will address OSHA training, CLIA regulations, policies and procedures, and implementation of screening programs. The course meets once weekly for either a 1.5-hour lecture or a combination of 1-hour lecture and 2-hour lab/workshop. The course evaluation is based upon competency assessment of techniques during lab/workshop and a final student project consisting of developing and presenting a screening program.
1.5 credits

PPRA 639 History of Pharmacy in America
The objective of this course is to introduce the pharmacy student to the history of pharmacy. This is accomplished by focusing upon the historical development of pharmacy in the United States. By examining the growth and professionalization of the field, its statutory regulation and its product development, students will be able to apply the lessons of history to current and future practice philosophies. "If we forget history, we are bound to repeat it." At the end of this course, students will understand and be familiar with the general historical development of American pharmacy, its literature, and its reference tools for historical inquiry. The history of pharmacy is an area that receives little attention in the pharmacy curriculum but its lessons and tradition are of great importance in recognizing and understanding the professionalism required of a pharmacist.
1.5 credits

PPRA 646 Diabetes: A Patient's Perspective
This elective emphasizes the knowledge and skills required for the delivery of diabetes education by focusing on the patient’s perspective in the management of the disease. The course builds on the material presented in required courses in the curriculum by examining the barriers faced by patients during self-management and potential solutions for addressing them.
1.5 credits
Prerequisites: Students admitted prior to or in Fall 2007 - PHID 503 Integrated Sequence III; Students admitted in June 2008 or thereafter - PHID 1503 Integrated Sequence 3

PPRA 648 Personal Finance for the Health Care Professional
The objective of this course will be to provide students with the tools needed to financially succeed after graduation. They will be taught personal finance knowledge in the area of taxes, insurance, basic investing, loans and credit, debt consolidation, home purchasing, and basic money management. The course will be taught partly in lecture format, small group interactions, and case studies. Other faculty members and outside guest speakers may speak and lead discussion where appropriate. Students will follow a hypothetical case in the beginning of the course and then be responsible for filling out personal worksheets and developing a financial plan post-graduation. The course will be attendance-based and based on weekly assignments. There will be no examination in the course.
1.5 credits

PPRA 649 Pain and Symptom Management in Terminal Patients
This course is designed to provide an overview of common diseases and symptoms encountered in terminal patients. Emphasis will be placed on the appropriate selection of medications to palliate symptoms such as pain, dyspnea, excess secretions, constipation, diarrhea, hiccups, pruritus, etc. Common diseases include but are not limited to, breast, brain, lung, colon and renal cancers; COPD; dementia; and CHF. Patient cases will be used during each session to illustrate symptom management issues.
1.5 credits
Prerequisites: Students admitted prior to or in Fall 2007 - PHID 607 Integrated Sequence VII; Students admitted in June 2008 or thereafter - PHID 1607 Integrated Sequence 7

PPRA 650 Journal Club
The goal of this course is for students to improve their ability to find and evaluate recently published information on medications. Information from the major therapeutic areas will be emphasized. In this course, each student will summarize clinically relevant information from an assigned journal weekly. Additionally, each student will present and critique one randomized, controlled trial in detail at least once during the quarter. Grades will be determined on presentation preparedness and style, ability to summarize and critique a randomized, controlled trial, and participation in general discussions. Enrollment will be limited to approximately 10 students so the course can be offered as weekly small group discussions.
1.5 credits
Prerequisites: Students admitted prior to or in Fall 2007 - PPRA 676 Evidence-Based Medicine; Students admitted in June 2008 or thereafter - PPRA 1676 Evidence-Based Health Care
PPRA 653 Applied Microbiology for Health-care Professionals
This course is an extension of knowledge gained in microbiology. The course will focus on the application of microbiological principles in healthcare. The class will rely on lectures, workshops, and a journal review to expand basic knowledge regarding key pathogens. Topics may include, but are not limited to: an extensive review of important pathogens, antimicrobial testing and reporting, the basics of infection and clinical guideline development.
1.5 credits
Prerequisite: MICR 513 Microbiology

PPRA 655 Applied Health Care for Spanish Speaking Populations
This elective course provides an overview of basic concepts and skills required for the care of Spanish speaking patients by focusing on the patient’s perspective in the health care system. Emphasis is given to examine the barriers faced by Spanish speaking patients and potential solutions for addressing them. The course will focus on the application of bilingual and bicultural key elements in healthcare. The class will use lectures, weekly reading quizzes, workshops (case-studies, role-playing), and a literature review to expand basic knowledge regarding healthcare and cultural issues in the Latino population.
1.5 credits
Prerequisite: Conversational high school or college Spanish

PPRA 711 Pharmacological Management of Chronic Pain
The objective of this course is to provide students with a basic understanding of the differences between chronic and acute pain. Pharmacological treatment of acute pain is relatively straightforward; management of chronic pain is often complicated and rarely achieves the patient quality of life goals. Upon completion of this course students will understand how to assess pain; understand the differences between addiction, dependence and tolerance; be able to recommend appropriate medication therapies for nociceptive and neuropathic pain; understand the reasons for the multitude of available analgesic choices; understand the role of complementary and alternative medicine; and be conversant with the legal and ethical issues of pain management.
1.5 credits
Prerequisites: Students admitted prior to or in Fall 2007 - PHID 607 Integrated Sequence VII; Students admitted in June 2008 or thereafter - PHID 1607 Integrated Sequence 7

PPRA 712 Clinical Management of Patients with HIV/AIDS
Clinical Management of Patients with HIV/AIDS provides a forum for students to learn how to manage these patients using cases of real patients as a point of discussion. The course will expand on content in the integrated sequence. A brief review of the various classes of antiretrovirals will also be provided along with investigational agents currently in the pipeline. Current diagnostic procedures, guidelines, and importance of adherence will also be discussed. The last half of the course will be devoted to case discussions of a variety of patient types including naïve, stabilized, those with opportunistic infections, advanced patients with multiple resistant mutations, and those with one or more co morbidities.
1.5 credits
Prerequisite: Students admitted prior to or in Fall 2007 - completion of or concurrent enrollment in PHID 709 Integrated Sequence IX; students admitted in June 2008 or thereafter - completion of or concurrent enrollment in PHID 1609 Integrated Sequence 9

PPRA 713 Introduction to Geriatrics
This elective course is designed to enhance students’ knowledge and skills in senior care pharmacy. The course will provide an introduction to general principles of aging, the roles pharmacists have in working with geriatric patients, and an overview of geriatric syndromes. Topics include psychosocial issues, pharmacokinetic and pharmacodynamic changes, geriatric care environments such as long-term care, assisted living, and community, inappropriate medications and Beers Criteria, communication strategies, wellness and preventative topics, falls, weight disorders, and syncope. The course meets once weekly for 1.5 hours for lecture and group discussion. Students are evaluated on weekly drug regimen review assignments along with a senior care activity and comprehensive final exam.
1.5 credits
Prerequisite for students admitted prior to or in Fall 2007 - PHID 503 Integrated Sequence III; students admitted in June 2008 or thereafter - PHID 1503 Integrated Sequence 3

PPRA 714 Political Advocacy and Leadership
Political advocacy and leadership are highly valued in the profession of pharmacy. This elective course provides the requisite knowledge, develops skills, and models behaviors so students can become political advocates and leaders in the profession. The course has three core areas of interest: 1) the legislative process, 2) the advocacy process, and 3) leadership skills. To meet the learning objectives, students will complete written and verbal activities to assess knowledge, skills, and abilities.
1.5 credits
Prerequisite: Students admitted prior to or in Fall 2007 - PPRA 593 Introduction to Professional Practice III; Students admitted in June 2008 or thereafter - PPRA 1591 Introduction to Pharmacy Practice
**PPRA 715 Rare and Interesting Diseases**

This course provides a forum for students to learn how to manage patients with rare and interesting disease states. The pathophysiology, epidemiology, clinical manifestations, diagnostic tests or procedures, treatment and the pharmacist’s role in the management for each disease state/genetic abnormality/adverse drug event will be reviewed. The course simulates clinical practice, professional/respectful/civil behavior is expected of all students and professional dress is encouraged. Activities will simulate patient work up and written/oral presentations in clinical practice.

1.5 credits

Prerequisites: Students admitted prior to or in Fall 2007 – completion of or concurrent enrollment in PHID 709 Integrated Sequence IX; Students admitted in June 2008 or thereafter – completion of or concurrent enrollment in PHID 1609 Integrated Sequence 9

**PPRA 716 Risk Management and Quality Assurance**

This course is designed as an introduction to risk management and quality assurance in pharmacy and other health care settings. This course will train pharmacy students in the knowledge needed to implement, perform, and lead all colleagues in establishing a risk management system. In pharmacy today, it is critical for pharmacists to understand the concept of managing risk which includes continuous quality improvement (CQI) and is part of every health care professional’s first duty – “first do no harm.” Emphasis is placed on the history and philosophy of health care risk management; the role of the health care risk manager, the principles of health care risk management, CQI, and the connection between risk management, quality improvement and corporate compliance in various pharmacy settings. The course will examine emerging legal CQI requirements and standards that will impact pharmacy practice and quality. This course will use a number of learning techniques, including lecture, term project, peer teaching, and student presentations. Where appropriate, guest lecturers will be invited to address topics. Presentations and items discussed from guest lecturers and assigned readings will be included on assignments. The students will be expected to perform hands on use of a quality system.

1.5 credits

Prerequisites: Students admitted prior to or in Fall 2007 – PPRA 694 and PPRA 695 Introductory Community/Institutional Experiences; Students admitted in June 2008 or thereafter – PPRA 1694 and PPRA 1695 Introductory Community/Institutional Experiences; or All students – some pharmacy practice experience (community, hospital or long term care) and permission of the coordinator.

**PPRA 717 Anticoagulation in Clinical Practice**

This elective course provides students with an overview of the major topics in anticoagulation management encountered in clinical practice. Topics include prophylaxis and treatment of venous thromboembolism (VTE), anticoagulation in comorbid disease states, anticoagulation in special patient populations, and treatment plans requiring modification of anticoagulation. The course utilizes a variety of teaching methods, including focused lecture materials, case studies, required and suggested readings, and group workshops emphasizing patient interactions. Students will develop a working knowledge and skill set required to provide pharmacy-managed anticoagulation services in both the inpatient and ambulatory settings.

1.5 credits

Prerequisites: Students admitted prior to or in Fall 2007 – completion of or concurrent enrollment in PPRA 737 Disease Management II; Students admitted in June 2008 or thereafter – completion of or concurrent enrollment in PPRA 1737 Disease State Management

**PSCI 601/602 Special Project/Research**

These courses provide an opportunity for students to work with individual faculty mentors on projects of variable scope. Activities may include clinical, library, laboratory, and/or survey-type research; assistance with syllabus development for future elective courses; or other activities agreed on between the student and the mentor. All special projects/research require the approval of the appropriate department chair and Dean.

PSCI 601, 1.5 credits; PSCI 602, 3 credits

**PSCI 606 Dangerous Plants and Animals**

This course focuses on the recognition and identification of dangerous plants and animals found primarily, but not exclusively, in Arizona. Students learn to assess poisoning situations and recommend management scenarios. Lectures and workshops involving case studies and field trips are utilized.

1.5 credits

**PSCI 619 Medical Spanish**

This course provides students with the communication skills necessary to provide care to the Spanish-speaking patient. Upon completion, students will have an expanded general Spanish vocabulary (selected nouns, verbs, adjectives, phrases, etc.) plus one related specifically to the practice of pharmacy (i.e., parts of the body, drug formulations, selected disease conditions, etc.). Group interaction and role-playing are utilized. The course is directed at students not fluent in Spanish.

1.5 credits

**PSCI 623 Use and Abuse of Drugs**

This elective course provides an in-depth review of neuropharmacology of substances of abuse including stimulants, depressants and inhalants, medications for mental
disorders, ethanol, tobacco, caffeine, dietary supplements and over-the-counter drugs, opioids, hallucinogens, marijuana, anabolic steroids and other performance enhancing drugs. In addition, an overview of drug use, drug use as a social problem, drug products and their regulations, the nervous system, the mechanism of action of drugs, preventing substance abuse and substance abuse and dependence are also covered.

Prerequisites: Students admitted prior to or in Fall 2007 - PHID 503 Integrated Sequence III; Students admitted in June 2008 or thereafter - PHID 1503 Integrated Sequence 3

**PSCI 642 Introduction to Classical Homeopathy**
The use of alternative forms of medicine is rapidly growing in the U.S. Homeopathy is a system of medicine that was formalized 200 years ago. The name is derived from the Greek homeo = similar, and pathos = suffering. It is this concept of “similar suffering” that is behind the principle of “like cures like.” A substance that produces symptoms when given to a healthy person is used to heal a sick person who presents with similar symptoms. Topics include history, philosophy, research, and pharmacy. Students become familiar with 5-10 remedies that are commonly used for the treatment of acute conditions. Student participation and class discussion are strongly emphasized.

1.5 credits

**PSCI 647 Pharmaceutical Formulation and Analysis**
Pharmaceutical Formulation and Analysis is a supplement to Pharmaceutics I & II. This elective course is a hands-on, lab-based course that integrates the fundamental pharmaceutics concepts underlying drug product formulation and analysis with the practice of pharmacy compounding. This integration is critical in helping compounders understand the importance of product quality and how multiple variables may affect the quality of their products. The course is primarily designed for students interested in specializing in pharmacy compounding, completing pharmaceutics research projects, and/or completing postgraduate training in the pharmaceutical sciences.

1.5 credits

Prerequisite: Students admitted prior to or in Fall 2007 - PSCI 542 Pharmaceutics II; Students admitted in June 2008 or thereafter - PSCI 1542 Pharmaceutics II

**PSCI 652 Recent Advances in Pharmacology**
This elective course explores recent advances in pharmacodynamics published in the scientific literature. Emphasis is placed on topics related to new drug targets and the use of innovative research techniques to enhance the drug development process. The therapeutic implications of this research are discussed in relation to the pharmacotherapy of major disease states. This discussion-oriented course will offer the student opportunities to present topics to the class and lead a dialogue on cutting-edge pharmacological studies.

1.5 credits

Prerequisite: Students admitted prior to or in Fall 2007 - PHID 501 Integrated Sequence I; Students admitted in June 2008 or thereafter - PHID 1501 Integrated Sequence I

**PSCI 654 Sterile Products**
This course covers the fundamental concepts related to the formulation, manufacture, quality assurance, and clinical preparation and administration of sterile products. Topics will include formulation of sterile dosage forms, compatibility issues with admixtures, sterility assurance and aseptic technique, packaging, unit operations, such as filtration, sterilization, and lyophilization, routes of administration, and therapeutic issues including large volume injectable preparation, fluids and electrolytes, and parenteral nutrition. Information on biotechnological parenteral products and advances in parenteral technologies will also be provided. An associated laboratory session will focus on aseptic technique and familiarization with equipment used to prepare and administer parenteral medications.

1.5 credits

Prerequisite: Students admitted prior to or in Fall 2007 - PSCI 542 Pharmaceutics II; Students admitted in June 2008 or thereafter - PSCI 1542 Pharmaceutics II

**PSCI 710 Advanced Endocrine Toxicology**
This course is an extension of knowledge gained in physiology and the Integrated Sequence series. The course will focus on the integration of principles of toxicology, pharmacology and physiology so that the students will understand 1) why endocrine organs and cells are particularly susceptible to chemical toxicity, 2) what kinds of damage can be expected as a result of the unique metabolism and cellular makeup of those tissues, 3) what types of animal or cell line models should be used when evaluating toxic potential of drugs to endocrine tissues and to what extent can results from animal studies be extrapolated to human risk, and 4) how endocrine function is assessed when determining toxic effects. The class will utilize lectures, discussion groups, and on individual student analysis, presentation, and discussion of a manuscript involving a particular endocrine toxicity. Topics may include, but are not limited to: an extensive review of how the chemical design of drugs, changes in endocrine function throughout life, and gender differences play an important role in determining the type and severity of toxicity resulting from chemical exposure.

1.5 credits

Prerequisite: Students admitted prior to or in Fall 2007 - PHID 503 Integrated Sequence III; Students admitted in June 2008 or thereafter - PHID 1503 Integrated Sequence 3
STUDENT ACADEMIC POLICIES
The following academic policies apply to all MWU-CPG students who matriculate during the academic year of this catalog publication. These policies will apply throughout the entire time a student is enrolled in the College. In the event that these policies need to be revised as the result of new accreditation requirements, mandates by the Department of Education, or other unforeseen circumstances, students will be notified in writing prior to the effective date of the new policy.

STUDENT PROMOTION AND GRADUATION COMMITTEE
The Student Promotion and Graduation Committee (SPGC) is composed of members of the College faculty and a representative of the Dean’s Office. This Committee is responsible for enforcing the published academic and professional standards established by the faculty and for assuring that they are met by all students. As such, this Committee establishes the criteria, policies, and procedures for student advancement, deceleration, academic probation, dismissal, and graduation. This Committee meets at a minimum at the end of each academic quarter to review the academic progress and performance of students in relation to institutional academic policies. At the end of the academic year, the Committee assesses the academic progress and performance of students enrolled in the program in relation to College academic policies. Additionally, the Committee will recommend revisions of academic and professional standards, and criteria for student advancement, deceleration, academic probation, dismissal, and graduation to the faculty for adoption. Finally, the Committee also identifies and recommends candidates for graduation to the MWU Faculty Senate.

If the student’s progress is satisfactory, the student is promoted to the next academic year, provided all tuition and fees have been paid. If a student fails to make satisfactory progress in completing the prescribed course of study, the Committee shall recommend to the Dean appropriate action to correct the deficiency(ies). In instances involving failure of a student to maintain satisfactory academic/professional progress, the Committee may recommend dismissal.

Academic Standards for the Pharm.D. Program
An annual didactic grade point average will be used as the primary measure of academic performance. It is calculated from all didactic courses for a particular professional year. Grades earned for courses prior to matriculation in the professional program and grades earned for courses taken at another institution while enrolled in the professional program are not included in the calculation of this annual grade point average.

Academic Policies
A student must maintain an annual grade point average of 2.00 in their professional program to remain in good academic standing.

A student is placed on academic probation for any of the following reasons:
1. A student’s annual grade point average is below 2.00;
2. A student earns a grade of F in one or more courses;
3. A student earns a grade of D in two or more courses in an academic year.

A student is notified, in writing, that he/she is being placed on academic probation for the remainder of the academic year. Academic probation represents notice that continued inadequate academic performance may result in dismissal from the College. Additionally, he/she will be remanded to the SPGC. The SPGC will make a recommendation on a course of action. The recommendation may include, but not be limited to remediation, an extended program of study or dismissal.

If the student enters an extended program of study, he/she must repeat all courses in that year in which grades of D or F are received. A student is allowed to go through an extended program only once. Placement of a student on the extended program does not modify or limit the Committee’s actions for dismissal. Thus, the student may be dismissed for academic reasons while on an extended program. If the student does not meet the criteria for successful academic performance at the end of the extended program, the Committee will recommend dismissal. To be returned to good academic standing after completion of an extended track year, a student must raise his/her annual grade point average to 2.00 or above at the end of the repeated year. Such a student re-enters the next professional year curriculum and resumes a normal course load. A re-entering student who earns a grade of F in any course, or D in two or more courses in an academic year or an annual grade point average of less than 2.00 will be dismissed from the College.

The following policies also guide decisions made by the Committee:
1. Students must successfully resolve all I (incomplete) grades before beginning experiential rotations.
2. To proceed to rotations, a student must have earned a passing grade in all didactic courses with an annual grade point average of 2.00 or above. Eligibility for introductory experiential rotations is determined by the annual grade point average calculated from all courses in the PS-1 year. Eligibility for advanced pharmacy practice experiences is determined by the annual grade point average calculated from all courses in the PS-3 fall quarter for students admitted prior to or in Fall 2007; or by the annual grade point average calculated from all courses in the PS-3 summer quarter for students admitted in June 2008 or thereafter.
**Academic Standards for Experiential Rotations**

If a student fails to earn a grade of C or better on an experiential rotation, he/she must petition the SPGC within 30 calendar days after the last day of the rotation to retake the same type of rotation. After consideration of the circumstances, the SPGC may grant the re-take with additional requirements which may include having the student:

1. complete additional coursework to correct knowledge deficiencies;
2. undergo a period of directed independent study to correct knowledge deficiencies; or
3. wait a defined time period before repeating the rotation.

Actions of the SPGC are not limited to the above and recommendations will be determined on a case-by-case basis. The time of the re-take will be as early as possible once the student has satisfied the Committee’s requirements and is subject to availability of sites as determined by the Office of Experiential Education. The re-take, if granted, must be completed within 12 calendar months of the date the petition is received by the Dean’s Office. Students are allowed only one re-take of a rotation while enrolled at MWU-CPG. Failure to earn a C or better on a second rotation will result in a recommendation for dismissal.

**Academic Probation**

As stated above, students must maintain an annual GPA of 2.00 in a particular professional year to remain in good academic standing.

If a student’s annual grade point average is less than 2.00 or if the student earns an F in one or more courses or a D in two or more courses in a particular professional year, the student is notified in writing that he/she is being placed on academic probation. Academic probation represents notice that continued inadequate academic performance may result in dismissal from the College.

**Class Standing**

To achieve the status of a second year student in the professional program (PS-II), students must have successfully completed all requisite first-year courses and earned an annual didactic GPA of 2.00. To achieve the status of a third-year student in the professional program (PS-III), students must have successfully completed all requisite PS-II courses, the two introductory rotations, and earned an annual didactic GPA of 2.00.

**Course Withdrawal**

Unless there are exceptional circumstances, a student will not be allowed to withdraw from a course after the end of the 8th week of the quarter. In the event of exceptional circumstances, the student who withdraws from a course will get a W or WF based on performance.

**Dean’s List**

Following each quarter, the College of Pharmacy—Glendale recognizes students for the Dean’s List who have distinguished themselves by achieving a GPA of 3.50 or better for the quarter. This applies for full-time didactic coursework only and applies to all students who matriculate in fall 2007 and thereafter.

**Dismissal**

A student may be dismissed from the College for academic reasons upon the recommendation of the SPGC. The dismissal is based on the determination by the Committee that the student has not satisfactorily demonstrated that he or she possesses the aptitude to successfully achieve the standards and requirements set forth in the academic policies and professional expectations for the program. Students dismissed for poor academic performance may reapply for admission to the College.

**Extended Program**

Problems may arise that may necessitate a restructuring of a student’s academic course load. Accordingly, an individual’s academic course load may be reduced so that the student enters what is termed an extended track repeat year program. Such a program rearranges the course schedule so that the normal time period for the program is extended, usually by one additional year. Only enrolled students may enter an extended program. To enter an extended program, either one or both of the following conditions must be met:

1. **Personal hardship.** If a student is experiencing unusual stresses in life and a decreased academic load could alleviate added stress, the student may petition the SPGC for an extended program. This petition is not automatically granted and is approved only in exceptional circumstances. The Committee is responsible for evaluating the petition and submitting a recommendation concerning a student’s request for an extended program to the Dean. The Dean is responsible for reviewing and assessing the Committee’s recommendation, then notifying the student of a decision.
2. **Academic.** As described above, a student ending an academic year with an annual GPA of less than 2.00 will be required to repeat courses from that year in which D or F grades were received. A student may be placed on an extended program for academic reasons at the discretion of the SPGC. A student placed on an extended program for academic reasons is automatically placed on academic probation and may not be returned to good academic standing until the extended program is completed.

If a student is placed on an extended program, such action does not modify or limit the Committee’s actions for
dismissal. Thus, the student may be dismissed for academic reasons while on an extended program.

A student placed on an extended program for academic reasons will be returned to good academic standing when he/she reenters the prescribed academic program and completes all courses that were unsatisfactory and are required for graduation.

Grade Appeal Policy

I. Appeal of Non-failing Course Grades
A student who wishes to appeal a non-failing course grade must make the appeal to the course coordinator within one week following receipt of the grade. The course coordinator must act upon the student’s appeal within one week following receipt of that appeal. A narrative explaining the basis of the appeal must accompany the request. An appeal must be based on one of the following premises:
1. Factual error in course assessment tools;
2. Mathematical error in calculating the final grade; or
3. Bias.

If the appeal is denied, the student has the right to appeal the decision to the course coordinator’s immediate supervisor within one week of receipt of the course coordinator’s denial. The course coordinator’s supervisor should notify the student of his/her decision within one week following receipt of the student’s reappeal. The decision of the course coordinator’s supervisor is final and must occur prior to the start of the subsequent quarter.

II. Appeal of Course Grades Subject to Review by the Student Promotion and Graduation Committee
A student whose academic progress will be subject to review by the College’s SPGC and who wishes to appeal a grade must do so in an expedited manner prior to the scheduled meeting of the Committee. In this case, an appeal of a course grade must be submitted within 24 hours following receipt of the grade and must be based on one of the premises stated above. The course director must act on this appeal within 24 hours. Any appeal of this decision will be addressed by the course coordinator’s supervisor. The student is responsible for notifying the chair of the SPGC that a grade appeal has been filed prior to the meeting of the Committee.

All appeals and decisions must be communicated in written form.

Appeal Process (for dismissals or extended program actions)
Following notification of a decision for dismissal or extended program, a student may appeal, in writing, the decision within 3 working days to the Dean. The Dean makes the final decision on all appeals. The Dean may grant an appeal only if a student can demonstrate one of the following:

1. Material information not available to the Committee at the time of its initial decision;
2. Procedural error; or
3. Bias of one or more Committee members.

Students appealing dismissal must attend classes while awaiting the outcome of their appeal.

Grades
The following includes all grading options and corresponding definitions that may be issued within MWU-CPG for students admitted prior to or in Fall 2007.

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<th>Grade</th>
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<tr>
<td>I</td>
<td>Incomplete course work</td>
</tr>
<tr>
<td>IP</td>
<td>In Progress</td>
</tr>
<tr>
<td>P</td>
<td>Pass</td>
</tr>
<tr>
<td>AP</td>
<td>Advanced Placement</td>
</tr>
</tbody>
</table>

The following includes all grading options and corresponding definitions that may be issued within MWU-CPG for students admitted in Summer 2008 or thereafter.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4.00</td>
</tr>
<tr>
<td>A-</td>
<td>3.67</td>
</tr>
<tr>
<td>B+</td>
<td>3.33</td>
</tr>
<tr>
<td>B</td>
<td>3.00</td>
</tr>
<tr>
<td>B-</td>
<td>2.67</td>
</tr>
<tr>
<td>C+</td>
<td>2.33</td>
</tr>
<tr>
<td>C</td>
<td>2.00</td>
</tr>
<tr>
<td>D</td>
<td>1.00</td>
</tr>
<tr>
<td>F</td>
<td>0.00</td>
</tr>
<tr>
<td>W</td>
<td>Withdrawal with no penalty and no credit</td>
</tr>
<tr>
<td>W/F</td>
<td>Withdrawal/Failing</td>
</tr>
<tr>
<td>W/P</td>
<td>Withdrawal/Passing</td>
</tr>
<tr>
<td>I</td>
<td>Incomplete course work</td>
</tr>
<tr>
<td>IP</td>
<td>In Progress</td>
</tr>
<tr>
<td>P</td>
<td>Pass</td>
</tr>
<tr>
<td>AP</td>
<td>Advanced Placement</td>
</tr>
</tbody>
</table>

Grades & Grade Point Average
Courses are recorded in terms of quarter hour(s) of credit. Multiplication of the credits for a course by the numeric value for the grade awarded gives the number of quality points earned for a course. Dividing the total number of quality points earned in courses by the total number of credits in those courses gives the grade point average. Class rank is reported at the end of spring quarter based on the
cumulative GPA at that time. Academic rank is available online at the end of the quarter.

Grades reported as W and WF are recorded on a student’s permanent record but are not used in the calculation of a student’s grade point average. Similarly, a grade of I may be assigned and is used only when special/extenuating circumstances exist (i.e., prolonged illness, family crisis, etc.), which prevent a student from completing the necessary course requirements on time, in order to receive a grade. Under such circumstances, the student is responsible for providing the department with a written request notifying the department of the circumstances, documenting the problem(s), and asking for authorization to extend the period allotted to complete the unfinished coursework.

Any request for an extension to complete required course or rotation requirements must be approved first by the course coordinator responsible for the course or rotation. Unless otherwise specified, a grade of I must be resolved within 10 days from the end of the quarter or rotation or the incomplete grade is automatically converted into a grade of F, which signifies failure of the course. It is the responsibility of the student when receiving an incomplete grade to complete all of the course requirements within this time, unless otherwise specified.

If a student receives a failing grade (F) in a course, that grade will be recorded on his/her transcript. This deficiency may be corrected as recommended by the Student Promotion and Graduation Committee in 1 of 2 ways: repetition or remediation of the course. The decision to permit a student to repeat or remediate the course rests with the department offering the course and the Committee. Following either successful remediation or repetition of the course, the permanent record of the student will be updated to indicate that the failing grade has been successfully corrected.

If course remediation was completed, a grade of D is registered in place of the F, and the student’s cumulative grade point average will reflect the change. If a student is unsuccessful at remediation, the grade of F will remain. If a student repeats a course, the course is entered twice in the permanent record of the student. The grade earned each time in the course is recorded, but only the most recent grade is used in the computation of the student’s cumulative grade point average.

A student’s academic standing is determined on the basis of his/her grade point average. Inclusion on the Dean’s List, honors at graduation, placement on probation, and dismissal depend directly on the grade point average.

**Graduation Honors**

Graduation honors are awarded to candidates for the Doctor of Pharmacy degree who have distinguished themselves by virtue of high academic achievement while enrolled in a professional program of the College. Only grades from didactic courses taken at the College will be included in determining graduation honors. Degrees with honor are awarded based on the level of academic achievement as follows:

<table>
<thead>
<tr>
<th>Grade Point Average</th>
<th>Graduation Honor</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥ 3.90</td>
<td>Summa cum laude</td>
</tr>
<tr>
<td>3.75 – 3.89</td>
<td>Magna cum laude</td>
</tr>
<tr>
<td>3.50 – 3.74</td>
<td>Cum laude</td>
</tr>
</tbody>
</table>

**Graduation Walk-Through Policy**

A student who has not satisfied academic requirements for a particular degree may seek permission to participate in a graduation ceremony for his/her program/college if the student will complete all academic requirements for the degree within the one quarter immediately following the official scheduled end of the academic program for his/her class.

To seek permission, the student must submit a formal, signed letter of request to participate in the graduation ceremony. The letter should be addressed to the Dean of the College. The letter must state the reason for the request, a timeline for completion of all academic requirements for the degree which shows that all degree requirements will be met within one quarter immediately following the official scheduled end of the academic program. The letter should be submitted no later than eight weeks prior to the official graduation date for his/her program/college.

The Dean is responsible for verifying that all of the requisite information is in the letter, and that the information is correct. The Dean then forwards the letter to the SPGC for consideration.

The SPGC is responsible for reviewing the student’s request. Each request is considered based on its individual merits. If approved, the Committee will add the student to the proposed list of candidates for graduation, denote on the listing that the student will not have completed the academic requirements by the official graduation date, and then forward the list of candidates to the Dean.

The Dean will then forward the list of candidates for graduation to the MWU Faculty Senate for review and approval at an appropriately scheduled meeting, prior to the official graduation date.

The Senate will forward the list of approved candidates for degrees to the University President for review and approval by the Board of Trustees.

**Re-examination (Retest)**

Re-examination occurs when a student fails a course, but qualifies for a re-examination. It is the prerogative of the course director to offer or not offer a re-examination for a course failure and to determine the eligibility criteria for a re-
examination. If a course director has a re-examination policy, it should be stated in the course syllabus.

If a student qualified for a re-examination, a grade of “I” should be submitted to the Registrar at the end of the quarter. The re-examination(s) must be completed within 10 working days beginning from the first Monday following the end of the quarter. If the student passes the re-examination, a grade of “I” will be converted to the minimal passing grade of the college/program. If the student fails the re-examination, the grade of “I” will be converted to a grade of “F.”

Retake
Retake occurs when formal repetition of an entire course or a portion of the course is required due to course failure, or in some programs when a D letter grade has been earned. A course may be retaken when:
1. No re-examination is offered by the department.
2. The student has failed the re-examination.
3. The student fails to meet eligibility criteria for re-examination, if offered by the course director.

It is the decision of the Student Promotion and Graduation Committee to recommend a Retake of a course. The Committee following department approval will determine the nature of the Retake and the time frame for completion of the repeated course. The course may be repeated at MWU or at an outside institution. The options for repeating a course at MWU may include a directed remedial course with examinations to repeating the course in its entirety the next academic year. In either case, the student must be registered for the course and will be charged the appropriate tuition. A repeated course at an outside institution must be approved by the department/program as a satisfactory replacement for the failed course. A student must earn a minimum grade of C (not C-) in a replacement course completed at an outside institution in order to apply the credit toward MWU degree requirements. Students are responsible for all costs associated with repeating a failed course at another institution.

STUDENT ADMINISTRATIVE POLICIES

Absence Reporting Procedure
In the event of serious illness, personal emergency, personal incapacitation, or other exceptional problem of a serious nature that causes a student to be absent from a session requiring mandatory attendance or class, a student must notify one of the following: MWU-CPG Dean’s Office, MWU-CPG department head, or course coordinator. To be excused from a rotation, the student must notify his/her preceptor and the Office of Experiential Education. Failure to notify the Office of Experiential Education will result in an unexcused absence and policies detailed in the Experiential Education Manual will apply. Assuming that there is a legitimate reason for a student’s absence, the MWU-CPG Dean’s Office will contact by e-mail or telephone the coordinators of courses in which the student will miss an examination, quiz, or graded assignment, or will send a letter to all appropriate course coordinators that confirms in writing that the student will be absent, the reason for the absence, the courses from which the student will be absent, and the date(s) of the student’s absence. This will be done as soon as possible (within 24 hours) after the student has called in. It is the student’s responsibility to contact the course coordinator immediately upon his/her return for instructions regarding how the missed session can be made up. If a student fails to follow this procedure, the student is held responsible for the policies stated in course syllabi regarding unexcused absences. Unexcused absences may result in course failure.

Requesting an Excused Absence for Personal/Professional Reasons
The College recognizes that a student may need to be excused from class or rotations for non-illness, non-emergency-related reasons. An Absence Request Form must be completed at least 2 weeks prior to the day the student wishes to be excused. Forms are available in the Dean’s office. Completion of the form by the student does not imply the student is excused from classes until the faculty of the affected courses approve the request.

Advanced Standing
All requests for advanced standing by newly admitted, transfer, or enrolled students are processed on a course-by-course basis by the Office of the Dean. To request such consideration, a student must submit a letter of request and the request form to the Office of the Dean in which the student lists a course(s) previously taken, which might be similar in content to a professional course(s) that he/she is scheduled to take. The student must also provide an official course description(s) and a syllabus (syllabi) of the course(s) previously taken. All requests must be submitted at least 3 weeks prior to the start of the course being considered. Advanced standing will be considered for coursework taken in which a letter grade of C or better has been earned. A C–letter grade is not acceptable for advanced standing consideration.

Attendance and Student Employment
Upon acceptance to MWU-CPG, students are expected to devote their entire efforts to the academic curriculum. The College actively discourages employment that will conflict with a student’s ability to perform while courses/rotations are in session and will not take outside employment or activities into consideration when scheduling classes, examinations, reviews, field trips, or individual course, rotation or College functions. Required activities, as well as team project meetings, can be scheduled outside of class time, including weekends, and students are expected to attend these activities/meetings. Class attendance is mandatory for all
students during experiential rotations. Refer to student rotation manual for specific details regarding this policy.

**Course Credit**
Course credits are generally determined according to the following formula: 1 credit is assigned to a course for 3 laboratory contact hours per week; 2 case discussion or workshop contact hours per week; 1 contact hour of formal lecture per week; or 3 contact hours of other activities per week. 1.5 credits are assigned for 1 week of introductory or advanced practice experiences.

**Course Prerequisites**
Prerequisites for courses may be established by the department that administers the course. Prerequisites are recommended to the Curriculum Committee for approval and are listed with the course description in the University catalog.

On a case-by-case basis, prerequisites may be waived upon approval by the chair of the department that delivers the course.

**Dress Code for Rotations and College Functions**
Dress requirements for experiential rotations are delineated in the experiential program manual. Students are advised that professional attire is required. Students will be notified if professional attire is required for college functions and/or courses. Course syllabi will state if professional attire or a dress code is in effect for the course.

**Faculty Advisor Program**
MWU-CPG assigns a faculty advisor to students in each entering class. In addition to these faculty advisors, the MWU-CPG Dean, Assistant/Associate Dean and the Dean of Students, as well as other faculty members and professional staff, are also available to assist students with academic advising, counseling, and enrichment. Students are assigned a faculty advisor selected from the faculty of MWU-CPG.

Students are placed into groups upon entry into the College. Each group of students is assigned a faculty advisor who will mentor them throughout the program. MWU-CPG faculty advisors act as liaison between the faculty and students.

Their responsibilities include:
1. Serve as the student’s advisor and academic/professional counselor;
2. Oversee and monitor the academic progress and professional growth of the student;
3. Assist the student in seeking academic and personal counseling services provided by the institution;
4. Serve as an advocate for the student; and
5. Counsel the student during his/her selection of a career within the pharmacy profession.

**Transportation and Housing for Experiential Education**
It is the student’s responsibility to assure that he/she has appropriate arrangements for transportation to/from rotation sites throughout the curriculum. Rotations begin in the first quarter of the professional program. Transportation is not provided by the College. Students are not considered an agent or an employee of the University and are not insured for any accidents or mishaps that may occur during any traveling that is done as part of the student’s professional program. The College does not guarantee that all required rotations will take place in the Phoenix metropolitan area and students may be required to complete rotations in other cities in Arizona or states. Transportation and housing costs are the student’s responsibility.

**AWARDS**
Availability of awards is subject to continued support by the sponsoring organization.

**APhA Academy of Students of Pharmacy Mortar and Pestle Professionalism Award**
A wooden mortar and pestle is presented annually to a graduating student who exhibits the ideals of professionalism and excellence in patient care in all aspects of their academic pharmacy career. The winner is eligible to compete in an essay competition to receive a monetary award to be used for professional development activities.

**APhA-ASP Senior Recognition Certificate**
The Academy of Students of Pharmacy Chapter presents this certificate each year to a senior who has made outstanding contributions to the chapter.

**ASHP Student Leadership Award**
Each year the American Society of Health-Systems Pharmacists provides a leadership award to a student who has demonstrated qualities of leadership through involvement with ASHP activities. The student receives a monetary award and a copy of the ASHP Drug Information reference.

**College Awards for Excellence**
Each year plaques are presented to outstanding students in the areas of medicinal chemistry, pharmaceutics, pharmacology, therapeutics, and pharmacy administration.

**Facts and Comparisons Award of Excellence in Clinical Communication**
A set of reference texts and marble bookends are presented to the graduating student who has demonstrated superior verbal and written clinical communication skills.

**GlaxoSmithKline Patient Care Award**
A plaque and a selection of reference texts are presented to the graduating student exhibiting excellent patient care skills.
Henry J. Goeckel Kappa Psi – Grand Council Scholarship Key and Certificate
Kappa Psi Pharmaceutical Fraternity provides a Grand Council Scholarship Key and Certificate to a graduating Kappa Psi brother that graduates with first honors. The student receives a 14K-gold scholarship key and certificate from the Kappa Psi Council in recognition of his/her academic achievement.

Lilly Achievement Award
The award is given for superior scholastic and professional achievement. Leadership qualities as well as professional attitude are considered along with academic performance in selecting the graduating student for this honor.

Mylan Excellence in Pharmacy Award
A reference text is presented to the graduating student who has demonstrated outstanding achievement in the provision of drug information services.

National Community Pharmacist Association (NCPA) Outstanding Student Member Award
A plaque is presented each year by the NCPA in recognition of a student’s entrepreneurial spirit and commitment to advancing independent community pharmacy practice.

Natural Medicines Comprehensive Database Award
A plaque and reference text are presented to a graduating student who has demonstrated an interest in the area of natural medicines.

Perrigo Award of Excellence in Nonprescription Medication Studies
A plaque and a monetary award are presented to the graduating student who has excelled in courses involving over-the-counter medications.

Roche Pharmaceuticals Communications Award
A plaque is presented to the graduating student who has demonstrated effective communication skills during his/her experiential rotations.

The Robert C. Johnson Leadership Award
This named award recognizes a graduating student who has been active in a leadership role and maintains an acceptable scholastic level. The student shall have actively participated in one or more student professional associations or demonstrated leadership in other capacities. The student is expected to undertake a project that contributes to patient care and/or for the advancement of the profession.

Scholarships
Availability of scholarships is subject to continued support by the sponsoring organization

Albertsons Sav-On SUPERVALU Scholarships
The Albertsons Stores Foundation provides scholarships to students with a desire to enter community pharmacy practice.

CVS Charitable Trust, Inc. Scholarship
The CVS Charitable Trust, Inc. provides scholarships to students interested in entering community pharmacy practice.

The Kmart Scholarship
A scholarship is awarded annually to an outstanding student interested in community pharmacy practice.

J.M Long Foundation Scholarships
The J.M. Long Foundation presents scholarships to students interested in entering community pharmacy practice.

The MWU–CPG Heritage of Pharmacy Scholarships
One scholarship is presented each year to a student who has demonstrated academic achievement and professionalism.

National Association of Chain Drug Stores Foundation Scholarship
Monetary awards are presented to students who are interested in pursuing a career in community pharmacy.

Pharmacists Mutual Companies Scholarship
A scholarship is provided to a student who has demonstrated academic achievement.

Walgreen Pharmacy Scholarship
The Walgreen Company provides scholarships to students who have demonstrated strong leadership and communication skills. These students must also have an interest in community pharmacy practice.

Wal-Mart Pharmacy Scholarship
Wal-Mart provides scholarships to students with strong leadership qualities and a desire to enter community pharmacy practice.

FACULTY PHARMACY PRACTICE
Kim Cauthon, Pharm.D., CGP
St. Louis College of Pharmacy
Assistant Professor

Stephanie J. Counts, Pharm.D.
University of Arizona
Associate Professor

Michael A. Dietrich, Pharm.D., BCPS
Xavier University of Louisiana
College of Pharmacy
Associate Professor and Assistant Dean of Professional Programs

Shareen El-Ibiary, Pharm.D., BCPS
University of South Carolina
College of Pharmacy
Associate Professor

Karen Gallus, Pharm.D., BCPS
University of Minnesota
College of Pharmacy
Assistant Professor
Mary Gurney, Ph.D.
University of Wisconsin-Madison
School of Pharmacy
Assistant Professor

Stacy L. Haber, Pharm.D.
South Carolina College of Pharmacy
Associate Professor

Erin Johanson, MEd
Northern Arizona University
Assistant Director
Office of Experiential Education

Samantha Karr, Pharm.D., BCPS
University of Florida
College of Pharmacy
Assistant Professor

Dawn S. Knudsen, Pharm.D., CGP
Drake University
College of Pharmacy and Health Sciences
Assistant Professor

Sam Mahrous, Ph.D.
Northeast Louisiana University
Associate Professor

Dennis J. McCallian, Pharm.D., FACA
Purdue University
School of Pharmacy and Pharmaceutical Sciences
Dean and Professor

Danny McNatty, Pharm.D., BCPS
State University at Buffalo
School of Pharmacy and Pharmaceutical Sciences
Assistant Professor

Lynn R. Patton, MS, RPh, BCNSP
St. John’s University
College of Pharmacy and Allied Health Professions
Professor and Department Chair

Elizabeth Pogge, Pharm.D., BCPS
University of Nebraska Medical Center
College of Pharmacy
Assistant Professor

Erin C. Raney, Pharm.D., BCPS
University of Arizona
College of Pharmacy
Associate Professor

Michael T. Rupp, Ph.D.
Ohio State University
College of Pharmacy
Professor

Luz Dalia Sanchez, MD, Ph.D.
University of Minnesota
College of Pharmacy
Assistant Professor

Melinda J. Throm, Pharm.D., BCPS
University of Missouri-Kansas City
School of Pharmacy
Assistant Professor

Ronald Woodbeck, BS, RPh
Long Island University
Arnold and Marie Schwartz College of Pharmacy
Director
Office of Experiential Education

FACULTY PHARMACEUTICAL SCIENCES

Hugo Arias, BS, MS, Ph.D.
National Southern University
Associate Professor

Bill J. Bowman, Ph.D.
University of the Sciences of Philadelphia
Philadelphia College of Pharmacy
Associate Professor

Tamer Elbayoumi, M.S., Ph.D.
Northeastern University
Assistant Professor

Mitchell R. Emerson, Ph.D.
University of Kansas Medical Center
School of Medicine
Associate Professor and Assistant Dean of Academic Programs

Craig A. Johnston, Ph.D.
Michigan State University
College of Human Medicine
Professor and Department Chair

Melanie A. Jordan, Ph.D.
Virginia Commonwealth University
Medical College of Virginia
Assistant Professor

Mark Olsen, Ph.D.
University of Texas
Associate Professor

Joie C. Rowles, Ph.D.
University of Texas Southwestern Medical School
Assistant Professor

Volkmar Weissig, BS, MS, Ph.D., ScD
Martin Luther University -Halle
College of Advanced Technology
Associate Professor
MISSION
The College of Health Sciences is dedicated to the highest standards of excellence in the education of professionals who will meet the health care and service needs of the community in a wide range of academic and practice settings. This mission is expressed in the education, scholarship, and service objectives of the programs of the College of Health Sciences.

ACADEMIC POLICIES
The following academic policies apply to all College of Health Sciences (CHS) students who matriculate during the academic year of this catalog publication. These policies will apply throughout the entire time a student is enrolled in the College. In the event that these policies need to be revised as the result of new accreditation requirements, mandates by the Department of Education, or other unforeseen circumstances, students will be notified in writing prior to the effective date of the new policy.

ACADEMIC REVIEW AND PROGRESSION

Academic Monitoring
All students enrolled in the College are expected to:
1. Maintain satisfactory academic progress in their course of study; and
2. Meet all academic and professional standards established by the faculty of their program and the College.

Students enrolled in the CHS professional education programs are responsible for:
1. Understanding and meeting all established program academic requirements and standards as described in the course syllabi, University catalog, and Student Handbook;
2. Self-monitoring their academic performance in all required courses;
3. Completing all course-related requirements in a timely and satisfactory manner;
4. Seeking assistance if encountering academic difficulty;
5. Contacting the appropriate Program Director and/or course coordinator when performance has been unsatisfactory; and
6. Regularly checking home or campus mailbox and e-mail at least twice a week and daily, respectively, for information concerning educational programs. This is particularly important at the end of the quarter when information concerning academic performance may be distributed.

The academic progress of each student enrolled in the College is regularly monitored to determine whether he/she is making satisfactory academic progress in his/her program of study based on stated criteria established by the program/College. The academic review process occurs at three levels: the program-based Student Academic Review Committee, the college-based CHS Student Promotion and Graduation Committee, and the CHS Dean.

Student Academic Review Committee for Each Program
This committee is appointed annually by the University Faculty Senate with the recommendation of the Program Director. Membership consists of three or more program faculty members and the Program Director (or his/her designee) who is the Chair of this committee. The CHS Dean, a representative of the Department of Student Services, and the Registrar are ex officio members without vote.

At the end of each quarter, this committee reviews and acts upon the academic progress of each student enrolled in the program. If satisfactory, the committee recommends promotion of the student at the end of each academic year. If unsatisfactory, a prescribed course of action is determined by the committee. The committee recommends whether a student is placed on academic warning, academic probation, administrative probation, academic leave of absence, or academic dismissal. The CHS Dean is responsible for reviewing all recommendations for consistency with stated College academic policies and practices and for resolving any incongruities.

The committee also recommends for graduation all students who have satisfactorily completed all degree requirements specified by the program. These recommendations are forwarded to the CHS Student Promotion and Graduation Committee for review. Minutes of each meeting must be filed with the appropriate Program Director and the CHS Dean.
CHS Student Promotion and Graduation Committee
This committee is appointed annually by the University Faculty Senate. Members include the CHS Program Directors, two faculty members from each program within CHS and four faculty members from the basic science departments (2 representatives from each campus). The Registrar, the Dean of Students, and the CHS Dean are ex officio members without vote. The CHS Dean appoints the co-chairs, one from each campus, of this committee. Each campus will have a subcommittee that is chaired by the co-chair from each respective campus.

At the end of each academic quarter, the subcommittees will review student appeals from their respective campus. A subcommittee reviewing a student appeal must have three or more CHS Promotion and Graduation Committee members from the respective campus where the student resides. Additionally, a majority of faculty members on each subcommittee must be from outside the program from which the student is appealing. At the end of each academic year, each subcommittee reviews the recommendations from the individual Program Student Academic Review Committees and assesses the academic and professional progress and performance of each student. If satisfactory, the committee recommends promotion of the student. In addition, the subcommittees meet each spring and fall to initiate a recommendation for graduation for all students who have satisfactorily completed all degree requirements specified by their program. Its recommendations are forwarded to the CHS Dean and the University Faculty Senate for approval. This committee is also responsible for formulating the criteria for promotion and graduation of students and policies for student appeals which are published in this catalog. The co-chairpersons of the committee are responsible for submitting minutes of each meeting to the CHS Dean.

Satisfactory Academic Progress
Undergraduate Degree Programs: The academic standing of a student is determined by the student’s cumulative grade point average. A student enrolled in an undergraduate degree program must pass all courses and maintain a cumulative grade point average of 2.25 or higher to have made satisfactory academic progress.

Professional Graduate Degree Programs: The academic standing of a student is determined by the student’s cumulative grade point average. Unless otherwise indicated, a student enrolled in a graduate degree program must pass all courses and maintain a cumulative grade point average of 2.75 or higher to have achieved satisfactory academic progress.

Arizona Podiatric Medicine Program (AZPod): The academic standing of a student is determined by the student’s cumulative grade point average. A student enrolled in AZPod must pass all courses and maintain a cumulative grade point average of 2.00 or higher to have achieved satisfactory academic progress.

Clinical Psychology Program: The academic standing of a student is determined by the student’s cumulative grade point average. A student enrolled in the Clinical Psychology Program must pass all courses and maintain a cumulative grade point average of 3.00 or higher to have achieved satisfactory academic progress.

Nurse Anesthesia Program: The academic standing of a student is determined by the student’s cumulative grade point average. A student enrolled in the Nurse Anesthesia Program must pass all courses and maintain a cumulative grade point average of 3.00 or higher to have achieved satisfactory academic progress. In addition, a student must achieve a “B” or higher in all clinical anesthesia courses including, NAAP 432, 433, 434, 444, 520, 521, 522, 523, and 524.

### Academic Progress

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Usual Action*</th>
<th>Transcript Notation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfactory professional behavior; no course failures; and cumulative GPA ( \geq 3.00 ) (Nurse Anesthesia, Clinical Psychology) or ( \geq 2.75 ) (graduate programs) or ( \geq 2.25 ) (undergrad. programs) or ( \geq 2.00 ) (AZPod)</td>
<td>Allowed to progress to the next quarter</td>
<td>—</td>
</tr>
<tr>
<td>Satisfactory professional behavior; no course failures; and one quarter of cumulative GPA &lt; 3.00 (Nurse Anesthesia, Clinical Psychology) or &lt; 2.75 (graduate programs) or &lt; 2.25 (undergrad. programs) or &lt; 2.00 (AZPod)</td>
<td>Academic warning or academic probation for the subsequent quarter</td>
<td>Academic warning and academic probation are not noted on the transcript.</td>
</tr>
</tbody>
</table>
### Unsatisfactory Academic Progress

If a student fails to make satisfactory progress in completing his/her prescribed course of study, he/she is placed on academic warning, academic probation, administrative probation, academic leave of absence, extended course of study, or academic dismissal.

Students will be notified by the Dean when they are placed on academic warning. Any student with academic deficiencies to be addressed by the Program Student Academic Review Committee shall be notified in writing with a delivery confirmation (i.e., express mail, e-mail, certified US mail, hand-delivery) by the Chair of the Program Student Academic Review Committee at least 2 working days in advance of the scheduled meeting in which the student’s case will be heard. The student may request and shall be permitted to appear before the Program Student Academic Review Committee in order to present his/her case. In such instances, the student shall inform the Chair of the Program Student Academic Review Committee, in writing, of his/her desire to appear before the committee or his/her intent to waive this right. If the student chooses to appear before the committee, this prerogative extends to only the involved student and not to any other individuals.

In all instances, the Chair of the Program Student Academic Review Committee shall be responsible for informing the CHS Dean, in writing, as to the basis and specifics of each recommendation made by the committee. The CHS Dean is responsible for reviewing all recommendations for consistency with stated College academic policies and practices and for resolving any incongruities.

The Chair of the Program Student Academic Review Committee is responsible for providing notification in writing with a delivery confirmation (i.e., express mail, e-mail, certified US mail, hand-delivery) to the involved student, informing him/her of the recommendation of the committee. Notice of dismissal must be delivered in writing with a delivery confirmation (i.e., express mail, e-mail, certified US mail, hand-delivery) within two working days following the decision of the committee. Absent an appeal, the recommendation of the committee shall be final. Once the course of action to be followed has been finalized, the Dean shall be responsible for providing written notification of the action taken to all appropriate academic support offices (i.e., Registrar, Student Financial Services, etc.).

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Usual Action*</th>
<th>Transcript Notation</th>
</tr>
</thead>
</table>
| Satisfactory professional behavior; one course failure**; and/or two quarters of cumulative GPA < 3.00 (Nurse Anesthesia, Clinical Psychology) or < 2.75 (graduate programs) or < 2.25 (undergrad. programs) or < 2.00 (AZPod) | Academic probation for the subsequent quarter and one of the following:  
  a) Retake of the failed course if eligible and/or if the course is required  
  b) Academic leave of absence for up to one year until course is retaken or any requirements for re-entry established by the program have been met  
  c) Administrative probation  
  d) Extended course of study if offered  
  Note: Students already on an extended course of study or administrative probation may be subject to academic LOA or dismissal after one course failure or failure to maintain the required cumulative GPA. | “F” grade is listed on transcript and is counted toward GPA calculation.  
 Following successful retake of the course, the original “F” grade remains on the transcript as an “F” but is no longer factored into the GPA calculation. The new grade will be factored into the GPA.  
 |  
| Satisfactory professional behavior; two course failures**; and/or three quarters of cumulative GPA < 3.00 (Nurse Anesthesia, Clinical Psychology) or < 2.75 (graduate programs) or < 2.25 (undergrad. programs) or < 2.00 (AZPod) | a) Academic leave of absence*** and academic probation, or  
  b) Administrative probation and academic probation, or  
  c) Extended course of study if offered and academic probation, or  
  d) Dismissal  
  Note: Two or more course failures will typically result in dismissal. | Academic leave of absence, administrative probation, and dismissal are noted on transcript.  
 |  

* May be modified by the Program Student Academic Review Committee or the CHS Student Promotion and Graduation Committee.  
** W/F may be considered as a course failure by a Program Student Academic Review Committee.  
***May or may not be preceded by academic warning/probation.
**Academic Warning**
Academic warning is a formal notification of substandard academic performance, and cautions the student that continued performance at this level might result in academic probation. An academic warning is issued when a student earns a cumulative GPA below the minimum GPA required by their program for one quarter and/or when the student fails to meet any other established program academic requirements. An academic warning is in effect for one quarter. When a student is placed on academic warning, it is not noted in the student’s transcript but is noted in the student’s academic file that is kept in the program office. If the student achieves the minimum standard of academic performance required by their program during the quarter of academic warning, the student is returned to good academic standing. This is also noted in the student’s file.

**Academic Probation**
Academic probation represents notice of unsatisfactory academic progress, which, if continued, will necessitate an academic leave of absence, administrative probation, extended course of study, or dismissal from the program and the College. Academic probation typically occurs when the student fails a class during his/her academic program and/or obtains a cumulative GPA below the minimum required by his/her respective program for a second quarter. When a student is placed on academic probation, it is not noted on the student’s transcript but is noted in the student’s academic file in the program office. To return to good academic standing, a student must correct deficiencies and incur no further failures. Subsequently, when the student is returned to good academic standing, this is also noted in the student’s file.

A second course failure during the probationary period and/or a third quarter in which the cumulative GPA is below the minimum required by the program will typically result in dismissal. The course failures and/or the three-quarters with less than the required minimum cumulative GPA do not have to be consecutive.

**Administrative Probation**
Administrative probation may occur when a student is not allowed to progress in the standard program curriculum due to course failures and/or failure to maintain the required cumulative GPA for two or more quarters. When students are placed on administrative probation by the Program Student Academic Review Committee, they will be permitted to take elective courses or to retake courses in which they have received a grade of "C" or less. Students will be able to resume the standard program curriculum upon successful completion of all programmatic requirements.

Administrative probation is noted on the student’s transcript. Administrative probation/leave of absence will be noted on the transcript for periods of non-enrollment during the administrative probation period.

**Academic Leave of Absence**
Academic leave of absence may occur when a student has failed one or more courses or has accumulated two or more quarters when the cumulative GPA is less than required by his/her program. Academic leave of absence may or may not be preceded by academic probation. This action entails the removal of the student from all academic courses for a period of up to one year, or until all program requirements for re-entry have been fully met. A mandatory academic leave of absence is noted on the student’s transcript.

The student who has been placed on a mandatory academic leave of absence does not have to re-apply for admission and is guaranteed reentry into his/her academic program upon successful completion of all deficient courses and/or when all programmatic requirements are met. Upon reentry to the academic program, the student is routinely placed on academic probation for the following quarter.

**Extended Course of Study**
Problems may arise that may necessitate a restructuring of a student’s academic course load. If a program offers an extended course of study, it may be possible to decelerate an academic course load if there are extraordinary circumstances. Accordingly, an individual’s academic course load may be reduced so that the student enters what is termed an extended course of study. Such a program rearranges the course schedule so that the normal time period for the program is extended, usually not to exceed 150% of the normal time-to-completion of the program (i.e., a program normally of two years’ duration ordinarily will not be extended beyond three years). The formulation of the extended course of study is the responsibility of the Program Student Academic Review Committee in consultation with the Registrar and must be approved by the CHS Dean. Courses from two different academic years cannot be scheduled in the same quarter. Once the CHS Dean has authorized this change in status, the student is immediately placed in this track. In addition, the CHS Dean is responsible for notifying all academic support areas affected by this status change (e.g., Registrar, Office of Student Financial Services, etc.). Only enrolled students may enter an extended program. To enter an extended program, either one or both of the following conditions must be met.

**Personal Hardship:** Students experiencing unusual stresses in life are advised to consult with the Program Director to ascertain whether an extended course of study is offered by that program and, if available, may petition the Program Director for an extended course of study. This petition is not automatically granted and is approved only in exceptional circumstances. The Program Director is responsible for evaluating the petition and submitting a recommendation concerning a student’s request for an extended course of study to the Program Student Academic Review Committee. If recommended for approval, this recommendation is submitted to the CHS Dean. The CHS Dean is responsible...
for reviewing and assessing the Committee’s recommendation, then notifying the student of a decision.

*Academic Reasons:* A student may be placed on an extended program for academic reasons at the discretion of the Program Student Academic Review Committee. A student placed on an extended program for academic reasons is automatically placed on academic probation and may not be returned to good standing until the extended program is completed. If a student is placed on an extended program, such action does not modify or limit the Program Student Academic Review Committee’s actions, and the student may be subject to an academic leave of absence or dismissal after one course failure or failure to maintain the required cumulative GPA. A student placed on an extended program for academic reasons will be returned to good academic standing when he/she re-enters the prescribed academic program and completes all courses or clinical rotations that were unsatisfactory and are required for graduation.

*Academic Dismissal*
A student may be dismissed from the College for academic reasons upon the recommendation of the Student Academic Review Committee. The dismissal is based on the determination that the student has not satisfactorily demonstrated that he or she possesses the aptitude to successfully achieve the standards and requirements set forth in the academic policies and professional expectations for the program.

Students who accumulate two or more failures or three quarters below the minimum required grade point average usually receive a recommendation for dismissal. The Student Academic Review Committees reserve the right to change its usual actions for reasons of additional consideration. All recommendations of the Program Academic Review Committee can be appealed to the CHS Student Promotion and Graduation Committee in accordance with policies found in this catalog. This committee submits their recommendation on the appeal to the Dean, and the Dean makes the final decision.

*Re-examination (Retest)*
Re-examination occurs when a student fails a course, but qualifies for a re-examination. It is the prerogative of the course director to offer or not offer a re-examination for a course failure and to determine the eligibility criteria for a re-examination. If a course director has a re-examination policy, it should be stated in the course syllabus.

If a student qualifies for a re-examination, a grade of "I" should be submitted to the Registrar at the end of the quarter. The re-examination(s) must be completed within 10 working days beginning from the first Monday following the end of the quarter. If the student passes the re-examination, the grade of "I" will be converted to a minimal passing grade of the college/program. If the student fails the re-examination, the grade of "I" will be converted to a grade of "F." If the Registrar does not receive a change of grade form within 10 working days, the "I" will automatically be changed to a grade of "F."

*Retake*
Retake occurs when formal repetition of an entire course or a portion of the course is required due to course failure, or in some programs when a "D" letter grade has been earned. A course may be retaken when:
1. no re-examination is offered by the course director.
2. the student has failed the re-examination.
3. the student fails to meet eligibility criteria for re-examination, if offered by the course director.

It is the decision of the Student Academic Review Committee of each program to recommend retake of a course. The Academic Review Committee following department approval will determine the nature of the retake and the time frame for completion of the repeated course. The course may be repeated at MWU or at an outside institution. The options for repeating a course at MWU may include a directed readings remedial course with examinations to repeating the course in its entirety the next academic year. In either case, the student must be registered for the course and will be charged the appropriate tuition. A repeated course at an outside institution must be approved by the department/program as a satisfactory substitute for the failed course. A student must earn a minimum grade of "C" (not C-) in a substitute course completed at an outside institution in order to apply the credit toward MWU degree requirements. Students are responsible for all costs associated with repeating a failed course at another institution.

If the student passes a repeated course, the original failure remains on the transcript as an "F" and is included in the total number of accumulated failures in the student’s academic record. The grade from the original failed course is no longer used in the computation of the GPA following repeat of the course. The new grade will be factored into the overall GPA.

Under exceptional circumstances, such as academic probation or administrative probation, a student may retake a course in which they have received a grade of "C." The Program Director and CHS Dean must approve this retake option. The original "C" grade will remain on the transcript but will not be used in the computation of the GPA following the completion of the repeated course. The new grade will be factored into the overall GPA.

*Advanced Placement/Exemption from Coursework*
A student may request exemption from coursework based on previous coursework and/or experience. All requests for advanced standing by newly admitted, transfer, or enrolled students are processed on a course-by-course basis. The
student must submit a written request to the course director responsible for the course in which advanced standing is requested, and must have earned a grade of "C" or better. All requests must be submitted prior to the start of the course being considered. Any appeal of a decision not to exempt the student is made to the CHS Dean.

**Appeal Process**

Following notification of a recommendation from the Program Student Academic Review Committee, a student may appeal the recommendation. He/she has three working days to submit a formal written appeal of the recommendation to the CHS Student Promotion and Graduation Committee. The appeal must be submitted in writing and delivered to the appropriate campus co-chair of the CHS Student Promotion and Graduation Committee and the Office of the Dean within this 3-day period. A narrative explaining the basis for the appeal should accompany the request. An appeal must be based on one of the following premises:

1. Bias of one or more members of the Program Student Academic Review Committee.
2. Material, documentable information not available to the committee at the time of its initial decision.
3. Procedural error.

The CHS Student Promotion and Graduation campus subcommittees will review student appeals from their respective campus. A majority of faculty members on each subcommittee must be from outside the program from which the student is appealing. The subcommittee will review and assess the student’s appeal. Any student requesting an appeal shall be notified in writing with a delivery confirmation (i.e., express mail, e-mail, certified US mail, hand-delivery) by the Chair of the subcommittee at least two working days in advance of the scheduled meeting in which the student’s case will be heard. The student may request and shall be permitted to appear before the subcommittee in order to present his/her case. In such instances, the student shall inform the Chair of the subcommittee, in writing (i.e., express mail, e-mail, certified US mail, hand-delivery), of his/her desire to appear before the subcommittee or his/her intent to waive this right. If the student chooses to appear before the subcommittee, this prerogative extends to only the involved student and not to any other individuals. The subcommittee Chair submits the recommendation to the Dean. The Program Student Academic Review Committee may also appeal the recommendation of the Student Promotion and Graduation Subcommittee to the CHS Dean. Upon receipt of the subcommittee’s recommendation, the Dean makes the final decision, typically within 10 working days, and then notifies the student, the Program Student Academic Review Committee and the CHS Student Promotion and Graduation Subcommittee. The student must attend all didactic classes in which they are registered until the appeal process is complete. Students registered in a clinical course (rotation, practicum, etc.) may be placed on a mandatory academic leave of absence until the appeal process is finalized.

**Auditing a Course for Remedial Purposes**

The Program Student Academic Review Committee may determine at their discretion that a student who has not satisfactorily completed all required course work from the previous academic quarter may be recommended for enrollment in previously taken course work on a temporary, audit basis. Status as a temporary, course-auditing student under these circumstances enables a student to attend classes, receive handouts, and participate in various course activities; however, the student may do so only on a non-graded basis. So long as the student remains in the course as an auditing student, he/she is not eligible to participate in formal evaluations with respect to learning or other outcome measures. No course credits or grades may be earned for an audited course. In addition, the student may not be eligible to receive any financial aid disbursements. Depending on course load, students may be charged additional tuition for audited courses. The tuition rate for audited courses is normally half of the regular hourly tuition rate.

**Class Standing**

To achieve the status of a second-, third-, or fourth- year student in a professional program of the College, students must have completed all academic requirements for the preceding year (i.e., first, second, or third year) of the professional program curriculum.

**Course Credit**

Course credits are generally determined according to the following formula: one credit is assigned to a course for 2–4 laboratory contact hours per week; two contact hours per week involving interactive group problem-solving or discussion sessions; or one contact hour of formal lecture per week. One credit is given for each week of clinical rotations.

**Course Prerequisites**

Prerequisites for courses may be established by the department that administers the course. Prerequisites are recommended to the Curriculum Committee for approval and are listed with the course description in the University catalog. On a case-by-case basis, prerequisites may be waived upon approval by the chair of the department that delivers the course.

**Criminal Background Checks**

It is the policy of Midwestern University that all accepted students must submit to a criminal background check prior to matriculation. In addition, students who remain enrolled must submit to a criminal background check as needed to remain eligible for continued participation. Criminal background checks are conducted through the Office of
Faculty Mentor Program

The CHS academic programs assign a faculty mentor to students in each entering class. The faculty mentor assists with academic and non-academic problems. In addition to these faculty mentors, the CHS Dean and the Dean of Students are also available to assist students with academic advising, counseling, enrichment, and non-academic problems. The faculty members volunteer their time and their effort to the success of this program. It is, however, the student who determines the amount of interaction.

CHS faculty mentors act as liaisons between the faculty and students. Their responsibilities include:

1. Serving as the student’s advisor and academic/professional counselor;
2. Overseeing and monitoring the academic progress and professional growth of the student;
3. Assisting the student in seeking academic and personal counseling services provided by the institution;
4. Serving as an advocate for the student;
5. Counseling the student during his/her selection of a career within the profession.

Grades

Grading System

Students receive letter grades corresponding to the level of achievement in each course, based on the results of examinations, required course work, and, as applicable, other established criteria. The letter grades, percent ranges, and quality points per credit are as follows for all students admitted prior to or in Summer Quarter 2007:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percent (%)</th>
<th>Quality Points (per credit)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>93–100</td>
<td>4.000</td>
<td>—</td>
</tr>
<tr>
<td>A–</td>
<td>90–92</td>
<td>3.750</td>
<td>—</td>
</tr>
<tr>
<td>B+</td>
<td>87–89</td>
<td>3.250</td>
<td>—</td>
</tr>
<tr>
<td>B</td>
<td>83–86</td>
<td>3.000</td>
<td>—</td>
</tr>
<tr>
<td>B–</td>
<td>80–82</td>
<td>2.750</td>
<td>—</td>
</tr>
<tr>
<td>C+</td>
<td>77–79</td>
<td>2.250</td>
<td>—</td>
</tr>
<tr>
<td>C</td>
<td>70–76</td>
<td>2.000</td>
<td>—</td>
</tr>
<tr>
<td>D</td>
<td>60–69</td>
<td>1.000</td>
<td>“D” grades are only given in the Bachelor of Biomedical Science program.</td>
</tr>
<tr>
<td>F</td>
<td>&lt; 60</td>
<td>0.000</td>
<td>Only for Bachelor of Biomedical Science program.</td>
</tr>
<tr>
<td>F</td>
<td>&lt; 70</td>
<td>0.000</td>
<td>For professional programs</td>
</tr>
<tr>
<td>I</td>
<td>—</td>
<td>0.000</td>
<td>An Incomplete (I) grade may be assigned by a course director when a student’s work is of passing quality but incomplete, or if a student qualifies for re-examination. It is the responsibility of the student to request an extension from the course director. By assigning an “I” grade, it is implied that a course director agrees that the student has a valid reason and should be given additional time to complete required coursework. To resolve an incomplete grade, a course director must fill out and submit a Change of Grade form to the Registrar. All incomplete grades must be resolved within 10 working days starting from the first Monday following the end of the quarter unless there is written authorization by the Dean to extend the deadline. If an incomplete grade remains beyond the 10 days, it may be converted to a grade of “F,” which signifies failure of the course.</td>
</tr>
</tbody>
</table>

Please refer to the Midwestern University Student Handbook for a complete description of the criminal background check policy.
<table>
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<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP</td>
<td>—</td>
<td>0.000</td>
<td>An In-Progress (IP) grade may be assigned when extenuating circumstances make it necessary to extend the grade completion period past 10 days (e.g., illness, family death). Authorization by the Dean is required, and the completion period should not exceed one quarter with notification to the Registrar. This grade notation applies exclusively to the Glendale Campus Programs.</td>
</tr>
<tr>
<td>P</td>
<td>—</td>
<td>0.000</td>
<td>Pass (for a pass/fail course); designation indicates that the student has made satisfactory progress or completed required coursework satisfactorily. Grade of 'P' is counted toward credit hour accruals for graduation but is not counted in any GPA calculations.</td>
</tr>
<tr>
<td>F</td>
<td>—</td>
<td>0.000</td>
<td>Fail (for a pass/fail course); designation indicates that the student has not made satisfactory progress or completed required coursework satisfactorily. Grade of &quot;F&quot; is counted toward credit hour accruals as attempted but not completed. Grade of &quot;F&quot; is calculated into the GPA (quality points are lowered due to unsuccessful course completion).</td>
</tr>
<tr>
<td>W</td>
<td>—</td>
<td>0.000</td>
<td>Withdrawal is given between the start of the third week and the end of the eight week of the quarter if the work completed up to the time of withdrawal was satisfactory. This grade is not counted in any GPA calculation and is not counted in credit hour accruals for graduation.</td>
</tr>
<tr>
<td>W/F</td>
<td>—</td>
<td>0.000</td>
<td>Withdrawal/Failing is given between the start of the third week and the end of the eight week of the quarter if the work completed up to the time of withdrawal is below a &quot;C&quot; level (&quot;D&quot; for Bachelor of Biomedical Science students). This grade is not counted in any GPA calculation and is not counted in credit hour accruals for graduation. W/F may be considered as a failure by a Program Student Academic Review Committee. Multiple F's and W/F's can be grounds for dismissal. Unless there are exceptional circumstances, students are not allowed to withdraw from a course after the end of the eighth week of the quarter. Withdrawal after the eighth week requires approval of the Dean.</td>
</tr>
<tr>
<td>AU</td>
<td>—</td>
<td>0.000</td>
<td>This designation indicates an audited course, that is, a student registered for a course with the understanding that neither academic credit nor a grade is earned. The status of the course cannot be changed from audit to full credit after the start of the quarter. The designation AU is not counted in the GPA calculation.</td>
</tr>
<tr>
<td>AP</td>
<td>—</td>
<td></td>
<td>This designation indicates the decision of a college to award academic credit that precludes a student from taking required course work. The designation of Advanced Placement (AP) is applied toward credit hour accruals, but is not counted in the GPA calculation.</td>
</tr>
</tbody>
</table>

The letter grades, percent ranges, and quality points per credit are as follows for all students admitted in Summer Quarter 2008 or thereafter:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percent (%)</th>
<th>Quality Points (per credit)</th>
<th>Comments</th>
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<tbody>
<tr>
<td>A</td>
<td>93–100</td>
<td>4.000</td>
<td>—</td>
</tr>
<tr>
<td>A–</td>
<td>90–92</td>
<td>3.670</td>
<td>—</td>
</tr>
<tr>
<td>B+</td>
<td>87–89</td>
<td>3.330</td>
<td>—</td>
</tr>
<tr>
<td>B</td>
<td>83–86</td>
<td>3.000</td>
<td>—</td>
</tr>
<tr>
<td>B–</td>
<td>80–82</td>
<td>2.670</td>
<td>—</td>
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<td>—</td>
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<td>This designation indicates an audited course, that is, a student registered for a course with the understanding that neither academic credit nor a grade is earned. The status of the course cannot be changed from audit to full credit after the start of the quarter. The designation AU is not counted in the GPA calculation.</td>
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</tr>
</tbody>
</table>

Grade Point Average

The grade point average (GPA) is a weighted average computed using the number of credits assigned to each course and the quality points corresponding to the letter grade earned in each course. It is determined by calculating the total number of quality points earned and dividing them by the total number of credits carried. The total quality points earned for each course is determined by multiplying the quality points earned per credit (corresponding to the letter grade) by the number of credits assigned to the course. The student’s cumulative grade point average is computed and recorded by the Office of the Registrar. It is calculated beginning at the end of the first quarter of enrollment and
Grade Appeal Policy

Appeal of Non-Failing Course Grades
A student who wishes to appeal a non-failing course grade must make the appeal to the course director within one week following reporting of the grade. The course director must act upon the student’s appeal within one week following receipt of that appeal. A narrative explaining the basis of the appeal must accompany the request. An appeal must be based on one of the following premises:

1. Bias.
2. Mathematical error in calculating the final grade.
3. Factual errors in course assessment tools.

If the appeal is denied, the student has the right to appeal the decision to the course director’s immediate supervisor within one week of receipt of the course director’s denial. The course director’s supervisor should notify the student of his/her decision within one week following receipt of the student’s reappeal. The decision of the course director’s supervisor is final.

Appeal of Course Grades Subject to Academic Review
A student whose academic progress will be subject to review by his/her Program Student Academic Review Committee and who wishes to appeal a grade must do so in an expedited manner prior to the scheduled meeting of the committee. In this case, an appeal of a course grade must be submitted within 24 hours following reporting of the grade and must be based on one of the premises stated above. The course director must act on this appeal within 24 hours. Any appeal of this decision will be addressed by the course director’s supervisor. The student is responsible for notifying the chair of the Program Student Academic Review Committee that a grade appeal has been filed prior to the meeting of the committee.

All appeals to and decisions by the Program Student Academic Review Committee must be communicated in a written form (i.e., express mail, e-mail, certified US mail, hand-delivery).

Graduation

The degrees of Master of Medical Science in Physician Assistant Studies, Doctor of Physical Therapy, Master of Arts in Clinical Psychology, Doctor of Psychology in Clinical Psychology, Master of Occupational Therapy, Master of Science in Biomedical Sciences, Bachelor of Biomedical Science, Master of Biomedical Science, Master of Arts in Biomedical Science, Master of Arts in Bioethics, Master of Health Professions Education, Master of Cardiovascular Science, Master of Science in Nurse Anesthesia, and Doctor of Podiatric Medicine will be conferred upon candidates who have completed all academic requirements, satisfied all financial obligations, and completed all graduation requirements.

Graduation Honors
Graduation honors are awarded to candidates for all undergraduate degrees who have distinguished themselves by virtue of high academic achievement while enrolled in a professional program at Midwestern University. Only grades from academic courses taken at the University will be included in determining graduation honors. Degrees with honor are awarded based on the level of academic achievement as follows:

<table>
<thead>
<tr>
<th>Grade Point Average</th>
<th>Graduation Honor</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;3.75</td>
<td>Summa cum laude</td>
</tr>
<tr>
<td>3.50–3.74</td>
<td>Magna cum laude</td>
</tr>
<tr>
<td>3.25–3.49</td>
<td>Cum laude</td>
</tr>
</tbody>
</table>

Graduation Walk-Through Policy
A student who has not satisfied academic requirements for a particular degree may seek permission to participate in a graduation ceremony for his/her program/College if the student will complete all academic requirements for the degree within one quarter immediately following the official scheduled end of the academic program for his/her class.

To seek permission, the student must submit a formal, signed letter of request in writing to participate in the graduation ceremony. The letter should be addressed to the CHS Dean. The letter must state the reason for the request, a timeline for completion of all academic requirements for the degree which shows that all degree requirements will be met within one quarter immediately following the official scheduled end of the academic program. The letter should be submitted no later than eight weeks prior to the official graduation date for his/her program/College.

The CHS Dean is responsible for verifying that all of the requisite information is in the letter, and that the information is correct. The CHS Dean then forwards the letter to the Program Student Academic Review/Student Promotion and Graduation Committee for consideration.

The Program Student Academic Review/Student Promotion and Graduation Committee is responsible for reviewing the student’s request. Each request is considered based on its individual merits. If approved, the committee will add the student to the proposed list of candidates recommended for graduation, denote on the listing that the student will not
have completed the academic requirements by the official graduation date, and then forward the list of candidates to the CHS Dean.

The CHS Dean will then forward the list of candidates for graduation to the MWU Faculty Senate for review and approval at an appropriately scheduled meeting, prior to the official graduation date. The Faculty Senate will forward the list of approved candidates for degrees to the University President for review and approval by the Board of Trustees.

In all cases, students who walk through will not receive a diploma.

**Immunization Policy**

Full-time students enrolled in a program with a clinical component are required to have all immunizations as outlined in the general policy section of the Student Handbook. Full-time students enrolled in a program without a clinical component are required to have all immunizations but are not required to have titters. Part-time and at-large students enrolled in a program without a clinical component are not required to have immunizations or titters.

**Leave of Absence**

Leaves of absence consist of two types: mandatory and voluntary. Mandatory leaves of absence include four types: medical, maternity, personal, and military. Mandatory leaves of absence include three types: academic, medical, and administrative probation.

Students requesting a voluntary leave of absence must comply with the following:

1. Make an appointment with the appropriate Program Director and the Dean’s Office to discuss the leave of absence;
2. A student must provide written notification and documentation, if applicable, to the Dean stating the reason for the leave of absence from MWU.

For mandatory leaves of absence, students must make an appointment with the appropriate Program Director and the Dean’s Office to discuss the implications of the leave of absence and a revised program of study if applicable.

If the leave of absence is granted in the midst of an academic quarter, the student is withdrawn from all courses. A grade of W (Withdrawal) or W/F (Withdrawal Failing) appears on the official transcript. Please refer to the course withdrawal policy for details.

All leaves of absence are granted for specific periods of time and require that the student submit written notification of an intention to return prior to the end of the leave period. If an individual fails to return to MWU at the agreed-upon date, the student is considered to have withdrawn from the University and must reapply for admission. Typically, a leave of absence will not exceed twelve months. This time limit is cumulative and applies to either consecutive or multiple, interrupted leave periods. Please refer to the Midwestern University Student Handbook for a complete description of the Leave of Absence Policy.

**Professional Conduct**

Students are expected to emulate the legal, moral, and ethical standards expected of professionals in their respective areas and display behavior that is consistent with these qualities. A Code of Responsibilities and Rights of the Students of Midwestern University is included in Appendix 1 of the MWU Student Handbook. This code clearly states the mode of behavior that is expected of students in a number of areas and covers both on-campus and off-campus activities. Students are expected to read and follow this code.

Unsatisfactory professional behavior, as defined in Appendices 2 and 4 of the MWU Student Handbook, is subject to disciplinary sanctions that may preclude a student’s academic progress in their program of study. Issues concerning student conduct may be resolved utilizing the Office of the Dean of Students. A student who is found to have engaged in improper conduct is subject to disciplinary action which includes, but is not limited to, disciplinary probation, disciplinary suspension, or disciplinary dismissal. Disciplinary probation is not noted on the transcript but is kept in the student’s disciplinary file. Disciplinary suspension and disciplinary dismissal are noted on the student’s transcript. Disciplinary information may be shared with clinical sites that are affiliated with Midwestern University educational programs.

**Transfer Policy**

Students are expected to complete their degree requirements at the campus to which they originally matriculated. Transfer between campuses is permitted only under extenuating and specific circumstances in accordance with the procedures described below.

Intercampus transfer requests will be considered only if the addition of a student to the class at the corresponding campus will not cause enrollment to exceed the capacity and enrollment limit established for that campus. To be eligible for intercampus transfer consideration, the student must be in good academic standing at the time of the request. Prior to accepting a transfer request for consideration, the student shall be required to document that he/she has sought and received financial aid counseling about the implications of a campus transfer.

No request for transfer shall be considered if the request is received by the program after clinical placement assignments have been completed for that student. Any approved transfer that is executed by the student is final; requests to return to the original campus will not be considered. Approved transfers may be executed only at the conclusion of an
academic quarter; however, it is strongly recommended that they occur at the end of academic year, rather than during the academic year.

**Procedure**

1. A student seeking an intercampus transfer is encouraged to submit his/her written transfer request and supporting documentation to the Program Director prior to January 15th. The request must specify the intended date of the transfer. The supporting documentation must also include evidence of financial aid counseling and understanding of any financial aid implications of a transfer. Students must meet with the Program Director to discuss their intent to request a transfer prior to doing so.
2. All requests will be reviewed and acted upon within 10 working days of receipt.
3. The Program Director shall inform the CHS Dean of the intercampus transfer request.
4. The Program Director shall review and assess the merits and advisability of the transfer based on the governing principles of this policy.
5. The Program Director shall present his/her findings and conclusions to the CHS Dean and submit a written response to the student within this 10-day period.
6. All approved requests will be signed by the Program Director and countersigned by the CHS Dean prior to distribution to the student.
7. Denial of an intercampus transfer request may be appealed to the CHS Dean, only if the existence of an enrollment vacancy at the intended campus can be demonstrated.
8. Following receipt of the letter from the Program Director informing the student of the decision to deny the transfer request, the student has 5 working days to submit a written appeal to the CHS Dean.
9. To be considered, an appeal must be based on substantial new information, documentable evidence of bias, or procedural error by the program.
10. The CHS Dean shall review and act upon appeal within 10 working days after receipt of the written appeal.
11. The CHS Dean shall review and assess the appeal of the intercampus transfer request based on the governing principles of this policy.
12. The CHS Dean shall prepare a written response to the student concerning the appeal decision with a copy to the Program Director.
13. The decision of the CHS Dean is final.

**Travel for Clinical Education/Fieldwork**

The professional programs of CHS require that the students receive instruction in a clinical setting. As a result, it will be necessary for students to make arrangements for transportation and lodging to clinical facilities. The University does not generally provide for the cost of transportation or lodging. Travel arrangements are the sole responsibility of the student. Students are not considered an agent or an employee of the University and are not insured for any accidents or mishaps that may occur during any traveling that is done as part of the student’s professional program. Students are responsible for all expenses associated with clinical education, such as transportation, meals, housing, professional attire, laboratory fees, etc.

**Withdrawal from Courses**

Any student who wishes to withdraw from one or more courses must first receive approval from their respective course directors. Following approval by the course directors, the withdrawal must be approved by the Program Director or the CHS Dean. The student must complete the “Course Add/Drop Form” (obtained from the Office of the Registrar or online). If the approval is granted, the student receives one of the following grades: W (withdrawal) or W/F (withdrawal failing).

If the student drops the course during the first two weeks of the quarter, the course is not recorded on the transcript. Between the start of the third week and the end of the eighth week of the quarter, if work completed up to the time of withdrawal is satisfactory, the student will receive a Withdrawal (W) grade. This grade is not counted in any GPA calculation and is not counted in credit hour accruals for graduation. Between the start of the third week and the end of the eighth week of the quarter, if work completed up to the time of withdrawal is below a “C” level (“D” for Bachelor of Biomedical Science students), the student will receive a Withdrawal/Failing (W/F) grade. This grade is not counted in any GPA calculations and is not counted in credit hour accruals for graduation. W/F may be considered as a failure by a Program Student Academic Review Committee when reviewing the academic status of a student. Multiple F’s and W/F’s can be grounds for dismissal.

Unless there are exceptional circumstances, a student will not be allowed to withdraw from a course after the end of the eighth week of the quarter. In the event of exceptional circumstances, the student who withdraws from a course will get a W or W/F based on performance.

**Withdrawal from the College/University**

The decision to withdraw from the University is a serious matter. Any student who withdraws from a college or program is dropped from the rolls of the University. As such, if he/she decides at some later date to reenter the program,
he/she must reapply for admission and, if accepted, assume the status of a new student.

Students contemplating withdrawal must inform the appropriate Program Director and CHS Dean of the decision to voluntarily withdraw and voluntarily relinquish his/her position in the program. The student must contact the Dean’s Office and must complete the appropriate clearance procedures. The withdrawal process includes the clearing of all financial obligations to MWU and an exit interview. If the withdrawal occurs before the completion of a course, the student must complete the “Course Add/Drop Form” (obtained from the Office of the Registrar or online). The student will receive one of the following grades: W (withdrawal) or W/F (withdrawal failing). If the student completes the course, a grade will be assigned. Following completion of these withdrawal procedures, the designation “Withdrawal” will be placed in the student’s permanent record. The designation “Unofficial Withdrawal” is placed in the permanent record of any student who withdraws from his/her program without complying with the above procedures. If a student voluntarily elects not to enroll in his/her program of study for three consecutive quarters, that student will be automatically withdrawn from the program.

For more information, see the Student Financial Services sections on Notification of Withdrawal and Return of Title IV Funds/MWU Refund Policy.
MISSION
The Midwestern University Physician Assistant (PA) Program in Glendale is committed to training and mentoring Physician Assistant students in an educational environment that cultivates excellence in professionalism, compassion, competence, service, and teamwork in the practice of medicine.

ACCREDITATION
The Midwestern University PA Program was previously accredited by the Committee on Allied Health Education and Accreditation and by the Commission on Accreditation of Allied Health Education Programs. It is currently accredited by its successor agency, the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA). This accreditation status enables graduating students to take the national certifying examination administered by the National Commission on Certification of Physician Assistants (NCCPA). The Midwestern University PA Program is a member of the Physician Assistant Education Association, the national organization representing PA educational programs.

DEGREE DESCRIPTION
The professional curriculum leads to a Master of Medical Science in Physician Assistant Studies. This full-time 27-month professional program offers students the opportunity to earn a graduate degree and satisfy the eligibility requirements for the PA national certifying examination. The maximum allotted time for completion of this program is 40.5 months. The roles and specific clinical duties and responsibilities that graduates can expect to experience will vary depending on their chosen career path. PA Program graduates are expected to have the ability to competently perform patient histories and physicals, gather pertinent patient data, order and interpret diagnostic studies, recognize common diseases and disorders, choose appropriate therapeutic modalities, perform minor surgical procedures, manage emergency life-threatening conditions, promote health through counseling, education, and disease prevention, and demonstrate interpersonal skills consistent with the physician assistant role. The program is a combination of didactic and clinical education with the first 12 months covering a variety of didactic courses.

The didactic coursework includes basic science coursework in anatomy, physiology, biochemistry, neuroscience, pharmacology, pharmacotherapeutics and microbiology. It also includes clinical coursework in clinical medicine, pediatrics, behavioral medicine, psychiatry, women’s health, emergency medicine and surgery. During the remaining 15 months, students rotate through eight required core clinical rotations and two master’s curriculum rotations.

The second-year clinical program is delivered at affiliated clinical sites and facilities. These sites are geographically and demographically diverse, reflecting the broad scope of practice opportunities that exist for PAs in the health care delivery system of this country. Sites include ambulatory practice settings, small and large office-based group practices, community and migrant health centers, in-patient settings involving large and small hospitals, as well as federal and state facilities. These sites are in urban, suburban, and rural communities located throughout Arizona. In addition, the program has established formal affiliations with clinical facilities and practitioners in a number of other states. As part of the clinical education phase of the program, students enrolled in the MWU PA Program will likely be assigned to clinical rotations that reflect this geographic and demographic diversity.

The master’s curriculum augments the PA professional education by providing the student with additional academic coursework. Within the M.M.S. curriculum, students may choose from among a Clinical Specialty Emphasis, a Research Emphasis, a Bioethics Emphasis, or a Health Professions Education Emphasis.

M.M.S. Clinical Specialty Track integrates academic work within a professional degree program. Students are provided the opportunity to design and complete a portfolio of activities in a chosen specialty field over the course of the clinical year, including medical presentations, continuing education, case reports, and workshops. Following successful
completion of the portfolio, the clinical master’s student enters a three-month clinical master’s practicum in his or her chosen specialty field, allowing the clinical master’s student the opportunity to apply their expertise in an advanced clinical setting.

M.M.S. Research Track is designed to broaden the student’s scientific knowledge and academic skills while creating a foundation for life-long scholarly inquiry and professional contributions to the medical literature. The Master’s Research Practicum and the Research Project are central components of the M.M.S. Research Track and require the student to complete an original research project in clinical medicine, health policy, health education, and/or basic science.

M.M.S. Bioethics Track is designed to provide the student with a deeper understanding of the ethical issues related to patient care and healthcare practice, as well as methods for addressing these issues. Graduates will receive interdisciplinary training that will expose them to a wide range of issues and perspectives.

M.M.S. Health Professions Education Track is designed to prepare the student with the background necessary to become an effective educator in the classroom, clinic, and community. The track is taught in a blended fashion using online components in combination with face-to-face classes. There are also several online elective courses offered during years 2 and 3 to allow greater flexibility in completing the track requirements.

The PA program does not offer an extended course of study beyond the usual length of the program.

**ADMISSIONS**

The Midwestern University PA Program considers applicants who possess the academic and professional promise necessary for development as competent, caring members of the health care community. The admissions environment is highly selective with more than 900 applications received each year. The application deadline is October 1st; however, applicants are encouraged to apply early.

Completed applications received on or before the application deadline are reviewed to determine applicant eligibility for interviews. Interviews are typically held between September and February. The PA Program conducts rolling admissions and admissions decisions are generally made within two weeks following an interview. Candidates are notified of their status shortly thereafter. Cumulative and science grade point averages (GPAs), Graduate Record Examination (GRE) general test scores, letters of recommendation, health care experience, knowledge of the profession, and motivation for a PA professional career will all be considered when reviewing applicant files.

**Admission Requirements**

Students seeking admission to the PA Program must submit the following documented evidence:

1. Minimum cumulative science and overall GPA of 2.75 on a 4.00 scale
2. Scores from the Graduate Record Examination (GRE) general test to the Office of Admissions by December 1st using the Midwestern University institution code 4160
   - The test must have been taken no earlier than January 1, 2005
   - Applicants are expected to achieve a score at or above the 50th percentile in each section
   - For additional information about the GRE, contact Educational Testing Services (ETS) at 866/473-4373 or visit www.gre.org
3. Completion of prerequisite courses as listed below from regionally accredited colleges or universities
   - All prerequisite courses must be completed with a grade of a C or better
   - Grades of C- are NOT acceptable for any prerequisite courses
   - Life experience credits do not count toward fulfillment of any prerequisite courses
   - Courses in which "credit" or a grade of "pass" is earned will be counted only when applicants can provide verification that the earned grades were equivalent to grades of C or better (grades of C- are not acceptable)
4. Completion of prerequisite courses prior to matriculation
5. Applicants must determine which prerequisites are missing and which courses must be taken to fulfill any outstanding prerequisites
6. Completion of a bachelor’s degree from a regionally accredited college or university before matriculation
7. Motivation for and commitment to health care as demonstrated by previous work, volunteer work, or other life experiences
8. Demonstration of service and leadership through community service or extracurricular activities
9. Oral and written communication skills necessary to interact with patients and colleagues
10. Satisfactory Midwestern University criminal background check
11. Commitment to abide by the Midwestern University Drug-Free Workplace and Substance Abuse Policy
12. Successful completion of all required immunizations prior to matriculation
**Prerequisite Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Biology with lab (must include at least 4 hours of Anatomy)</em></td>
<td>8 Sem/12 Qtr hours</td>
</tr>
<tr>
<td><em>General Chemistry with lab</em></td>
<td>8 Sem/12 Qtr hours</td>
</tr>
<tr>
<td><em>Organic Chemistry with lab</em></td>
<td>4 Sem/6 Qtr hours</td>
</tr>
<tr>
<td>Math (college algebra or above)</td>
<td>3 Sem/4 Qtr hours</td>
</tr>
<tr>
<td>English Composition</td>
<td>6 Sem/9 Qtr hours</td>
</tr>
<tr>
<td>Social and Behavioral Sciences (sociology, psychology, anthropology, etc.)</td>
<td>6 Sem/ 9 Qtr hours</td>
</tr>
<tr>
<td><em>Biochemistry (not required, but strongly recommended)</em></td>
<td>4-8 Sem/6-12 Qtr hours</td>
</tr>
</tbody>
</table>

*All science prerequisites must be courses designed for science majors. No survey courses will fulfill science prerequisites.

**International Applicants**

An international student must satisfy all of the requirements for admission to the College or Program that apply to a student who has completed all of his/her prerequisite coursework in the U.S. at a regionally accredited college or university. In addition, an international student must demonstrate proficiency in the English language. This may be accomplished by satisfying both of the following requirements:

1. The international student has completed a minimum of two full time semesters or three full time quarters of instruction at a postsecondary institution in the United States. Completed coursework must include a minimum of 50% of the prerequisite science coursework for the college or program of interest, 6 semester hours of non-remedial English composition, and 3 semester hours of public speaking/speech.

2. The international student must submit official TOEFL scores. A minimum passing score is 550 (paper version, maximum score 677) or 100 (internet version, maximum score 120). The TOEFL scores must be from an exam taken within two years of the anticipated date of matriculation into the college or program.

If the international student wishes to receive credit for prerequisite coursework completed at a college or university outside of the United States, he/she must submit an official, detailed, course-by-course evaluation of this coursework. The student must obtain this evaluation from one of the following services:

1. Educational Credential Evaluators (ECE): 414/289-3400 or Fax 414/289-3411 (www.ece.org, e-mail: info@ece.org)


3. World Education Service (WES): 212/966-6311 or Fax 212/739-6100 (www.wes.org, e-mail: info@wes.org)

Based on the official foreign transcript evaluation and the grade earned in the course(s), the college or program will decide if it will apply any of these credits toward fulfillment of its prerequisites.

**Application Process and Deadlines**

1. **CASPA Application**

   Completed applications with all required materials must be submitted to the Centralized Application Service for Physician Assistants (CASPA) at www.caspaonline.org by **October 1, 2009**. Please refer to the CASPA application instructions for specific details about completing the application, required documents, and processing time. CASPA applications are typically available beginning in June of the academic year preceding the year in which applicants plan to matriculate. Due to the large number of applications and the limited number of seats available, applicants are strongly encouraged to complete their CASPA applications early in the cycle. Applications are reviewed continuously throughout the admissions cycle.

2. **Letters of Recommendation**

   Applicants are required to submit two letters of recommendation from professionals to CASPA (www.caspaonline.org). The Office of Admissions will only accept letters of recommendation received directly from CASPA. It is preferred that one letter be written by a science professor who has actually taught the student or a prehealth advisory committee. The second letter can be written by any one of the following: prehealth advisory committee, prehealth advisor, college professor, or health care professional (preferably a PA) who knows the applicant well. Please refer to the CASPA application instructions for specific guidelines and requirements for submitting letters of recommendation. Letters of recommendation must be received by the Office of Admissions no later than December 1st, 2009.

3. **GRE Scores**

   Applicants are required to submit official GRE general test scores to Midwestern University. The MWU institutional code for submitting scores is 4160. Only test scores earned during the previous five years (no earlier than January 2005) and sent directly from the Educational Testing Service (ETS) will be accepted. Official GRE scores must be received by the Office of Admissions no later than December 1st, 2009.

4. **Completed Applications**

   The Office of Admissions will send letters verifying receipt of the CASPA application to all applicants who meet the minimum cumulative science and overall GPA requirement of 2.75. Letters will also include instructions on tracking application status online. Applicants are responsible for tracking the receipt of their application materials to ensure the submission of all required documents. Only applicants who submit all required application materials will be considered for potential entrance into the Program. Applications will only be considered when all required application materials have been received by the Office of Admissions no later than December 1st, 2009. In-progress
prerequisite courses must be completed prior to matriculation.

Please Note: Applicants are responsible for notifying the Office of Admissions of any changes in their mailing address or e-mail address. All requests for application withdrawal must be made in writing via e-mail, fax, or letter to the Office of Admissions:

Midwestern University
Office of Admissions
19555 North 59th Avenue
Glendale, AZ 85308
623/572-3215 or 888/247-9277
admissaz@midwestern.edu

Interview and Selection Process
After the Office of Admissions receives CASPA application reports, applicant files are reviewed to determine whether applicants merit an interview. The following criteria are used to select the most qualified candidates for interview invitations: GPA, GRE general test scores, letters of recommendation, health care experience, knowledge of the profession, and motivation for a PA career. Evaluation of completed applications will begin in September and continue until all seats in the class are filled. Eligible candidates are typically invited to interview during the months of September, October, November, December, January, and February. Applicant files may also be placed on an interview wait list pending possible openings toward the end of the interview cycle. Applicants selected to interview will be notified by letter or telephone of available dates and asked to contact the Office of Admissions to confirm one of the dates offered. Letters of confirmation will be sent to applicants that include travel information for visiting the MWU campus (i.e., directions to campus and local lodging information).

A typical day on campus involves participation in the following activities, which are coordinated by the Office of Admissions: a presentation by the PA Program Director, interaction with faculty members, meetings with current Midwestern University students, a campus tour, and meetings with an admissions counselor and the financial aid office. During each interview session, prospective students may be asked about their academic, personal, and professional aspirations and preparedness for admission to the Program. Prospective students will be rated on a standardized evaluation form, which are included with applicant files and forwarded to the PA Admissions Committee for review.

The PA Admissions Committee meets approximately one to two weeks after interviews have concluded. The Committee reviews complete application files for all applicants who were interviewed, formulates recommendations, and then submits recommendations to the Program Director for action. The CHS Dean, via the Office of Admissions, notifies applicants in writing of their admissions status. All applicants receive notification regarding their status by the end of March, but many will be offered seats following their interviews and subsequent Admissions Committee meetings.

Technical Standards
The Technical Standards set forth by the Physician Assistant Program establish the expectations and requisite abilities considered essential for students admitted to this Program to achieve the levels of competency stipulated for graduation by faculty, the professional program accrediting agency ARC-PA, and the state of Arizona.

A candidate must have abilities and skills in five areas: I) observation; II) communication; III) motor; IV) intellectual, conceptual, integrative, and quantitative; and V) behavioral and social. Technological compensation can be made for some limitation in certain of these areas, but a candidate should be able to perform in a reasonably independent manner.

I. Observation: The candidate must be able to accurately make observations at a distance and close at hand. Observation necessitates the functional use of the sense of vision and somatic sensation and is enhanced by the functional use of all of the other senses.

II. Communication: The candidate must be able to communicate effectively, efficiently and sensitively in both oral and written form and be able to perceive nonverbal communication.

III. Motor: Candidates must be able to coordinate both gross and fine muscular movements, maintain equilibrium and have functional use of the senses of touch and vision. The candidate must possess sufficient postural control, neuromuscular control and eye-to-hand coordination to perform profession-specific skills and tasks.

IV. Intellectual, Conceptual, Integrative and Quantitative Abilities: The candidate must be able to problem solve, measure, calculate, reason, analyze, record and synthesize large amounts of information in a timely manner. The candidate must be able to comprehend three-dimensional relationships and understand spatial relationships.

V. Behavioral and Social Attributes: The candidate must possess the emotional health required for full utilization of his/her intellectual abilities, the exercise of good judgment and the consistent, prompt completion of all responsibilities and the development of mature, sensitive and effective relationships. Candidates must be able to tolerate physically, mentally and emotionally taxing workloads and to function effectively under stress. The candidate must be able to adapt to changing environments, to display flexibility, and to learn to function in the face of uncertainties. Compassion, integrity, concern for others, effective interpersonal skills, willingness and ability to function as an effective team player, interest and motivation to learn are all personal qualities required during the educational process.
Admissions. Student must also:

1. Submit deposit monies by the date designated in their matriculation documents. Deposits are applied toward the first quarter’s tuition.

2. Submit official final transcripts from all colleges attended post-high school by the deadline of two weeks (14 calendar days) prior to the first day of classes. Students who are accepted to MWU less than one month prior to the first day of classes ill have 30 calendar days from the date of their acceptance to submit all official transcripts to the Office of Admissions. Any special circumstances or requests for exceptions to this policy must be sent to and approved by the Office of the Dean of the College. Students who fail to submit all official final transcripts by the stated deadline may jeopardize their acceptance or continued enrollment in the College.

3. Successfully complete all outstanding prerequisites with the grade of C or better. Grades of C- are NOT acceptable for prerequisite courses.

4. Submit completed medical files as requested by the Department of Student Services.

5. Submit proof of medical and disability insurance coverage. Students may select either a plan offered by an MWU-approved carrier or a comparable plan offered by an outside carrier of their choice.

6. If an international student, provide documentation verifying that sufficient funds have been deposited in a U.S. bank to cover all expenses while attending CHS (for F-1 visa students only).

7. Provide documentation that any additional coursework or service requirements stipulated by the PA Admissions Committee have been completed.

8. Submit additional documents as required by the Office of Admissions.

9. Authorize and pass Midwestern University’s criminal background check.

10. Sign and submit the MWU Drug-Free Workplace and Substance Abuse Policy Statement.

11. Complete a physical exam and submit form.

12. Sign and submit a Credit Policy Statement.

13. Provide proof of completed required immunizations.


Students who either fail to satisfy these matriculation requirements or omit or falsify information required on official admissions documents automatically forfeit their seat in the Program. Individuals accepted for admission to the PA Program who do not comply with stated timelines for submission of all required materials receive no further notification from the College regarding forfeiture of their seat.

Articulation Agreement Between Midwestern University Programs

Students enrolled in a Midwestern University program are guaranteed an admission interview with another Midwestern University program if the student:

1. is currently in good standing in the academic program in which the student is enrolled and does not have any pending misconduct charges against him/her;

2. meets all admission requirements for the professional program of interest;

3. after a minimum of two full time quarters of study, achieves a minimum Midwestern University grade point average, derived from all courses completed at Midwestern, that is equal to or greater than 3.0; AND

4. achieves a score on the professional entrance exam (if required) that is not less than one standard deviation below the mean score for students that matriculated into the professional degree program in the previous year.

A guaranteed interview does not guarantee admission into the professional program.

Reapplication Process

After receiving either denial or end-of-cycle letters, prospective students may reapply for the following year’s admissions cycle. Before reapplying, however, individuals contemplating reapplication should seek the advice of an admissions counselor. To initiate the reapplication process, prospective students must complete and submit new applications and proceed through the standard application procedures.

Graduation Requirements

Students usually complete the Master of Medical Science in Physician Assistant Studies degree in nine consecutive quarters, 27 months.
To qualify for graduation with the master’s degree, students must:
1. Follow an approved course of study leading to the completion of all master’s requirements;
2. Satisfactorily complete all professional courses with a minimum cumulative grade point average of 2.75; and no course or rotation grade below a C;
3. Satisfactorily complete the Senior Summative examinations;
4. Satisfactorily complete the required credit hours in the overall course of study;
5. Receive a favorable recommendation for master’s degree conferral from the PA Program Student Academic Review Committee and the CHS Student Promotion and Graduation Committee;
6. Be recommended for conferral of the master’s degree by the University Faculty Senate;
7. Settle all financial accounts with the University; and
8. Complete all graduation clearance requirements as instructed by the Office of the Registrar.

CERTIFICATION/LICENSURE REQUIREMENTS
To practice in most states, including Arizona, students must successfully complete a PA Program accredited by the ARC-PA. Students must also pass the certifying examination administered by the National Commission on Certification of Physician Assistants (NCCPA).

For further information regarding the certifying examination, contact: National Commission on Certification of Physician Assistants, Inc., 12000 Findley Road, Suite 200, Duluth, GA 30097-1409; [678/417-8100]; www.nccpa.net

CURRICULUM
Master of Medical Science (M.M.S.)
First Professional Year

Total Quarter Credit Hours Required: 83.5

Summer Quarter
ANAT 451 Human Anatomy/Embryology 7.0
BIOC 451 Human Biochemistry 4.0
PASS 450 Health Professionalism 1.0
PASS 451 Behavioral Medicine 2.5
PASS 456 Medical Interviewing and Documentation 2.0
PASS 476 Clinical Nutrition 1.0
PASS 561 Master’s Skills & Topics 1.0
Total 18.5

Fall Quarter
ANAT 463 Human Neurosciences 2.0
CORE 460 Interdisciplinary Health Care 0.5
BMED 429 Epidemiology & Evidence-Based Medicine 1.0
PASS 460 Clinical Medicine I 4.0
PASS 469 Physical Diagnosis 4.0
PASS 486 Pediatrics 2.0
PHAR 460 Pharmacology & Pharmacotherapeutics I 2.0
PHYS 471 Human Physiology I 4.0
Required Master’s Course 3.0
Total 22.5

Winter Quarter
CORE 470 Interdisciplinary Health Care 0.5
MICR 470 Microbiology 3.0
PASS 470 Clinical Medicine II 4.0
PASS 473 Electrocardiography 1.5
PASS 474 Clinical Laboratory Medicine I 2.0
PASS 475 Women’s Health 2.0
PHAR 470 Pharmacology & Pharmacotherapeutics II 3.0
PHYS 482 Human Physiology II 4.0
Required Master’s Course 3.0
Total 23.0

Spring Quarter
CORE 480 Interdisciplinary Health Care 0.5
PASS 461 Emergency Medicine & Surgical Principles 3.0
PASS 471 Therapeutic and Diagnostic Skills 1.5
PASS 480 Clinical Medicine III 4.0
PASS 481 ACLS 1.0
PASS 483 Psychiatric Principles 1.5
PASS 485 Clinical Laboratory Medicine II 2.0
PHAR 480 Pharmacology & Pharmacotherapeutics III 3.0
Required Master’s Course 3.0
Total 19.5

*details of Master’s curricula and tracks may be subject to change

Electives
BBSC 409 Drugs of Abuse 1.0
ELEC 400 Medical Spanish 2.0
ELEC 480 End of Life Care 2.0

Second Professional Year

Total Quarter Credit Hours Required: 63.5

During clinical years 2 and 3, students must complete 24 hours of masters’ related coursework, depending on which track the student has selected. Students register for these credits on a quarterly basis based on the timelines approved by the coordinator of their chosen track. The total credits for years 1, 2, and 3 are 159.

Summer Quarter Hrs
PASS 490 Preparation for Clinical Phase 1.5
Required Clinical Rotations 12.0
Required Master’s Coursework* 3.0
Total 16.5
Fall Quarter Hrs
Required and Elective Clinical Rotations 12.0
Required Master’s Coursework* 3.0
PASS 491 Middle of the Year Exam 1.0
Total 16.0

Winter Quarter
Required and Elective Clinical Rotations 12.0
Required Master’s Coursework* 3.0
Total 15.0

Spring Quarter
Required and Elective Clinical Rotations 12.0
Required Master’s Coursework* 3.0
PASS 492 End of the Year Evaluation 1.0
Total 16.0

Third Professional Year
Total Quarter Credit Hours Required: 12

Summer Quarter Hrs.
Required Master’s Coursework* 6.0
Required Master’s Coursework* 6.0
Total 12.0
*depending on track in the 2nd year

Master of Medical Science Specialty Tracks

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Clinical Track</th>
<th>Research Track</th>
<th>Bioethics Track</th>
<th>Health Professions Education Track</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4 Core Courses</td>
<td>4 Core Courses</td>
<td>4 Core Courses</td>
<td>4 Core Courses</td>
</tr>
<tr>
<td>Summer</td>
<td>Master’s Skills and Topics, PASS 561</td>
<td>Master’s Skills and Topics, PASS 561</td>
<td>Master’s Skills and Topics, PASS 561</td>
<td>Master’s Skills and Topics, PASS 561</td>
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<tr>
<td>Fall</td>
<td>Advanced Master’s Skills and Application, PASS 562</td>
<td>Advanced Master’s Skills and Application, PASS 562</td>
<td>Introduction to Bioethics, ETHC 501</td>
<td>Teaching and Learning Styles, MHPE 501</td>
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<tr>
<td>Winter</td>
<td>Independent Study I: Literature Review, PASS 563</td>
<td>Independent Study I: Literature Review, PASS 563</td>
<td>Foundations of Medical Ethics, ETHC 502</td>
<td>Instructional Design and Methods, MHPE 503</td>
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<tr>
<td>Spring</td>
<td>Independent Study II: Learning Plan, PASS 564</td>
<td>Independent Study II: Research Proposal, PASS 564</td>
<td>Ethical Challenges in Medicine: A Case Study Approach, ETHC 537 (3 credits)</td>
<td>Curriculum Construction, MHPE 504</td>
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<tr>
<td>Year 2</td>
<td>Non-Practice and Practice Objectives, Master’s Portfolio, PASS 665A-D (12 credits)</td>
<td>Master’s Thesis as Original Research Project, PASS 665A-D (12 credits)</td>
<td>Philosophy of Medicine ETHC 503 (3 credits)</td>
<td>Education Technology, MHPE 502 (3 credits)</td>
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<tr>
<td></td>
<td>Research Practicum Rotations, PASS 666 and PASS 667 (12 credits)</td>
<td>Required and Elective Courses, Independent Studies (9 credits)</td>
<td>Education Curriculum Plan, PASS 665A (1 credit)</td>
<td>Required and Elective Courses, Patient Education Projects (8 credits)</td>
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<tr>
<td>Year 3</td>
<td>Clinical Master’s Specialty Rotations, PASS 666 and PASS 667 (12 credits)</td>
<td>Bioethics Practicum and Portfolio, PASS 666 and PASS 667 (12 credits)</td>
<td>Education Practicum and Educational Portfolio, PASS 666 and PASS 667 (12 credits)</td>
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</tr>
</tbody>
</table>

*details of Master’s curricula and tracks may be subject to change
COURSE DESCRIPTIONS

Prerequisites are listed for those courses with such requirements. When no prerequisite is listed in a course description, it is implied that there is no prerequisite.

Year 1: Required Preclinical Courses

**ANAT 451 Human Anatomy and Embryology (with Gross Anatomy Lab)**
This course presents lectures and laboratory (human cadaver dissection, prosection, and microscopy) sessions emphasizing the embryologic development of the human body, the relationship between body structure and function, and the use of gross human anatomy in physical diagnosis.
7 credits (including laboratory sessions)

**ANAT 463 Human Neurosciences**
This course is multidisciplinary and is presented in lecture format by various faculty members of Midwestern University. The primary focus of the course is to provide the fundamental neuroscience information required for use in clinical training. Occasionally case presentations will be utilized to foster familiarity with some of the more typical presentations seen in clinical neurology, and to learn how to approach these cases from a clinical as well as a basic science perspective.
2 credits
Prerequisites: ANAT 451 Human Anatomy and Embryology (with Gross Anatomy Lab); BIOC 451 Human Biochemistry; PASS 450 Health Professionalism; PASS 451 Behavioral Medicine; PASS 456 Medical Interviewing & Documentation

**BIOC 451 Human Biochemistry**
Biochemistry is concerned with the functioning of cellular constituents at the molecular level in health and how their functions are altered in disease. Biochemistry is fundamental to understanding all branches of the life sciences. Topics include cellular energy metabolism, signal transduction, cell biology, nutrition, complete blood count, anemias, diabetes, and hemostasis tests.
4 credits
Prerequisites: ANAT 463 Human Neurosciences; CORE 460 Interdisciplinary Health Care; BMED 429 Epidemiology & Evidence-Based Medicine; PASS 460 Clinical Medicine I; PASS 469 Physical Diagnosis; PASS 486 Pediatrics; PHAR 460 Pharmacology & Pharmacotherapeutics I; PHYS 471 Human Physiology I

**CORE 460, 470, 480 Interdisciplinary Health Care**
Interdisciplinary Healthcare course involves the Colleges of Health Sciences, Osteopathic Medicine, Dentistry, Optometry, and Pharmacy, in order to teach all clinically based students cardiovascular sciences, nurse anesthesia, occupational therapy, osteopathic medicine, pharmacy, physician assistant and podiatry students together about the importance of an interdisciplinary approach to patient care. Lectures will be given in a seminar format, in conjunction with panel presentations and discussions by interdisciplinary team members.
0.5 credit per quarter

**MICR 470 Microbiology**
The course is organized by organ system and the major infectious diseases affecting each of these are discussed. Focus is on the etiology, pathogenesis, clinical manifestations and diagnosis of these selected diseases.
3 credits
Prerequisites: ANAT 463 Human Neurosciences; CORE 460 Interdisciplinary Health Care; BMED 429 Epidemiology & Evidence-Based Medicine; PASS 460 Clinical Medicine I; PASS 469 Physical Diagnosis; PASS 486 Pediatrics; PHAR 460 Pharmacology & Pharmacotherapeutics I; PHYS 471 Human Physiology I

**PASS 450 Health Professionalism**
The purpose of this course is to provide the student with a holistic understanding and perspective of the PA profession. Various topics that illustrate the challenges faced by PAs in clinical practice and the challenges PAs may encounter as they make the transition from a student to a professional will be discussed. Various topics in professionalism include communication techniques with patients, confidentiality issues, ethical issues, and cultural sensitivity. The goal of this course is to offer students a glimpse into the future to better prepare them for the PA profession.
1 credit

**PASS 451 Behavioral Medicine**
This course presents a biopsychosocial and family systems approach for understanding individual and family developmental stages throughout the life cycle. Topics covered include behavioral problems of childhood, domestic violence, clinician well-being and stress management, normal and abnormal sexuality, features and treatment of anxiety,
depression, and substance-related disorders, chronic illness, aging, and end of life care. Lectures are supplemented by video vignettes and in-class small group interaction.

2.5 credits

**PASS 456 Medical Interviewing and Documentation**
The purpose of this course is to create an awareness and understanding of the art of interviewing and communicating with patients and other health care professionals. The course focuses on creating a medical record that accurately reflects the medical interview and establishes the competency of the PA. The course also emphasizes the importance of maintaining proper medical records as a means of communicating details of patient care and as defense against claims of medical malpractice.

2 credits

**PASS 460, 470, 480 Clinical Medicine I, II, III**
The purpose of the Clinical Medicine series is to introduce students to diseases and conditions commonly encountered in ambulatory-based primary care medicine. Lectures emphasize the epidemiology, pathophysiology, usual presentation and course, plus diagnostic and treatment modalities of each disease presented. Students participate in weekly problem-based learning sessions. In these sessions, students have the opportunity to develop competence in taking histories, practice writing SOAP (Subjective, Objective, Assessment and Plan) notes and to integrate pertinent physical examination skills. Students gain experience in formulating a differential diagnosis and creating an effective management plan, including prescription writing. 4 credits per quarter

- Prerequisites for PASS 460 Clinical Medicine I: ANAT 451 Human Anatomy and Embryology (with Gross Anatomy Lab); BIOC 451 Human Biochemistry; PASS 450 Health Professionalism; PASS 451 Behavioral Medicine; PASS 456 Medical Interviewing & Documentation;
- Prerequisites for PASS 470 Clinical Medicine II: ANAT 463 Human Neurosciences; CORE 460 Interdisciplinary Health Care; BMED 429 Epidemiology & Evidence-Based Medicine; PASS 460 Clinical Medicine I; PASS 469 Physical Diagnosis; PASS 486 Pediatrics; PHAR 460 Pharmacology & Pharmacotherapeutics I; PHYS 471 Human Physiology I;
- Prerequisites for PASS 480 Clinical Medicine III: CORE 470 Interdisciplinary Health Care; MICR 470 Microbiology; PASS 470 Clinical Medicine II; PASS 473 Electrocardiography; PASS 474 Clinical Laboratory Medicine I; PASS 475 Women’s Health; PHAR 470 Pharmacology & Pharmacotherapeutics I; and PHYS 482 Human Physiology II

**PASS 461 Emergency Medicine and Surgical Principles**
This course provides the history and development of emergency medicine and surgery as a specialty, and considers some of the medicolegal issues unique to those specialties. It provides an overview of the approach and management of chest pain, abdominal pain, musculoskeletal injuries and common complaints by system.

3 credits

Prerequisites: CORE 470 Interdisciplinary Health Care; MICR 470 Microbiology; PASS 470 Clinical Medicine II; PASS 473 Electrocardiography; PASS 474 Clinical Laboratory Medicine I; PASS 475 Women’s Health; PHAR 470 Pharmacology & Pharmacotherapeutics II; and PHYS 482 Human Physiology II

**PASS 469 Physical Diagnosis**
This course is designed to teach the student the art and technique of physical assessment. Course content includes lectures and reading assignments covering normal and abnormal physical findings. In addition, there are weekly physical exam laboratory sessions designed to provide the student with hands-on practice in exam techniques. At the conclusion of the course the student will be expected to pass a written final exam and satisfactorily perform a complete physical examination.

4 credits

Prerequisites: ANAT 451 Human Anatomy and Embryology (with Gross Anatomy Lab); BIOC 451 Human Biochemistry; PASS 450 Health Professionalism; PASS 451 Behavioral Medicine; PASS 456 Medical Interviewing and Documentation

**PASS 471 Therapeutic and Diagnostic Skills**
This course emphasizes skill development in performing routine therapeutic procedures and competence in managing therapeutic interventions. Areas of skill development include (at a minimum) injections, suturing and wound care, casting, splinting, venipuncture, and intravenous therapy.

1.5 credits

Prerequisites: CORE 470 Interdisciplinary Health Care; MICR 470 Microbiology; PASS 470 Clinical Medicine II; PASS 473 Electrocardiography; PASS 474 Clinical Laboratory Medicine I; PASS 475 Women’s Health; PHAR 470 Pharmacology & Pharmacotherapeutics II; and PHYS 482 Human Physiology II

**PASS 473 Electrocardiography**
The purpose of this course is to introduce students to reading and interpreting the findings on rhythm strips and twelve-lead electrocardiograms. Students will learn how to determine heart rate, intervals, axis, chamber enlargement or hypertrophy, signs of ischemia and infarcts, and the effects of electrolyte abnormalities and medications can have on the myocardium. Additionally, students will learn to recognize
various arrhythmias, including atrial dysrhythmias, junctional dysrhythmias, ventricular dysrhythmias, ectopy, and heart block.

1.5 credits

Prerequisites: ANAT 463 Human Neurosciences; CORE 460 Interdisciplinary Health Care; BMED 429 Epidemiology & Evidence-Based Medicine; PASS 460 Clinical Medicine I; PASS 469 Physical Diagnosis; PASS 486 Pediatrics; PHAR 460 Pharmacology & Pharmacotherapeutics I; PHYS 471 Human Physiology I

PASS 474 Clinical Laboratory Medicine I
The purpose of Clinical Laboratory Medicine I is to guide the PA student through diagnostic tests and procedures associated with medical illnesses encountered in the clinical setting. This course is aligned closely with the Clinical Medicine curriculum, integrating pathophysiology and diagnosis of illness with the appropriate diagnostic studies and their interpretation. The PA student will develop critical thinking skills through the use of clinical case studies, small group application and examinations.
2 credits

Prerequisites: ANAT 463 Human Neurosciences; CORE 460 Interdisciplinary Health Care; BMED 429 Epidemiology & Evidence-Based Medicine; PASS 460 Clinical Medicine I; PASS 469 Physical Diagnosis; PASS 486 Pediatrics; PHAR 460 Pharmacology & Pharmacotherapeutics I; PHYS 471 Human Physiology I

PASS 475 Women’s Health
The purpose of this course is to introduce the first-year PA student to the principles of women’s health, including topics such as sexually transmitted infections, breast disease, menstrual abnormalities, gynecology/oncology and normal and abnormal labor and delivery. This course will provide the PA student with fundamental knowledge and skills relevant to gynecology and obstetrics.
2 credits

Prerequisites: ANAT 463 Human Neurosciences; CORE 460 Interdisciplinary Health Care; BMED 429 Epidemiology & Evidence-Based Medicine; PASS 460 Clinical Medicine I; PASS 469 Physical Diagnosis; PASS 486 Pediatrics; PHAR 460 Pharmacology & Pharmacotherapeutics I; PHYS 471 Human Physiology I

PASS 476 Clinical Nutrition
The purpose of this course is to provide the student with an introduction to the principles of clinical nutrition. Principles of nutrition assessment across the lifespan, nutritional abnormalities in specific populations and an introduction to enteral and parenteral feeding will be introduced. These concepts will introduce the student to basic concepts in clinical assessment, and prepare the future physician assistant for clinical practice in the outpatient and inpatient settings.
1 credit

PASS 481 Advanced Cardiac Life Support (ACLS)
This course teaches students how to manage patients in cardiac distress. At the completion of this course, students receive a certificate in ACLS.
1 credit

Prerequisites: CORE 470 Interdisciplinary Health Care; MICR 470 Microbiology; PASS 470 Clinical Medicine II; PASS 473 Electrocardiography; PASS 474 Clinical Laboratory Medicine I; PASS 475 Women’s Health; PHAR 470 Pharmacology & Pharmacotherapeutics II; and PHYS 482 Human Physiology II

PASS 483 Psychiatric Principles
This course is designed to introduce the PA student to the major psychopathologies encountered in clinical practice. Emphasis is placed on diagnosis and treatment. Case histories and audio-visual presentations will enhance the student’s understanding. The student is expected to read assigned text chapters in conjunction with the handouts. Key concepts of psychiatry will be discussed.
1.5 credits

Prerequisites: CORE 470 Interdisciplinary Health Care; MICR 470 Microbiology; PASS 470 Clinical Medicine II; PASS 473 Electrocardiography; PASS 474 Clinical Laboratory Medicine I; PASS 475 Women’s Health; PHAR 470 Pharmacology & Pharmacotherapeutics II; and PHYS 482 Human Physiology II

PASS 485 Clinical Laboratory Medicine II
The purpose of Clinical Laboratory Medicine II is to further guide the PA student through diagnostic tests and procedures associated with medical illnesses encountered in the clinical setting. This course is aligned closely with the Clinical Medicine curriculum, integrating pathophysiology and diagnosis of illness with the appropriate diagnostic studies and their interpretation. The PA student will develop critical thinking skills through the use of clinical case studies, small group application and examinations.
2 credits

Prerequisites: CORE 470 Interdisciplinary Health Care; MICR 470 Microbiology; PASS 470 Clinical Medicine II; PASS 473 Electrocardiography; PASS 474 Clinical Laboratory Medicine I; PASS 475 Women’s Health; PHAR 470 Pharmacology & Pharmacotherapeutics II; and PHYS 482 Human Physiology II

PASS 486 Pediatrics
This course will provide overall instruction in the evaluation and management of the common conditions seen in pediatric
patients. Well-child examinations and screenings will be addressed for neonates, toddlers, school-aged children and adolescents. The emphasis will be on problems commonly encountered in an ambulatory care pediatric setting.

2 credits
Prerequisites: ANAT 451 Human Anatomy and Embryology (with Gross Anatomy Lab); BIOC 451 Human Biochemistry; PASS 450 Health Professionalism; PASS 451 Behavioral Medicine; PASS 456 Medical Interviewing and Documentation

PASS 490 Preparation for Clinical Phase (PCP)
PCP is designed to prepare students for the 15 months of clinical training they will undergo as part of the PA Program. PCP is made up of five clinical-year sessions and a one-week symposium. Students will learn about the clinical-year and how they can actively participate in setting up their rotations. Students will work on clinical skills obtained during the didactic year. Information on professional issues, such as confidentiality of patient information, proper conduct on rotations, and documentation will also be presented.

1.5 credits
Prerequisite: Successful completion of all didactic courses

PASS 491 Mid-Year Evaluation
The mid-year evaluation is designed to evaluate students in the middle of the clinical-year of the PA program. The mid-year evaluation is a two day evaluation process comprised of an individual practical exam, SOAP write-up, end of rotation exam and a comprehensive multiple choice exam. It is designed to assess progress through the clinical year and identify potential areas of weakness. Additionally, lecture sessions are scheduled each day to enhance medical knowledge in preparation for the PANCE and for clinical practice.

1 credit
Prerequisite: Successful completion of assigned rotations

PASS 492 End-of-Year Evaluation
The end of the year evaluation is designed to evaluate students prior to graduating from the PA program. The Cumulative Review and Evaluation Week (CREW) has two components: 1) the two day EYE course, and 2) the four day BOARD REVIEW course which occurs near the end of a student’s clinical training. CREW is meant to serve as a summative evaluation of the clinical phase for each student and to assess their readiness to sit for the PANCE and to enter clinical practice.

1 credit
Prerequisite: Successful completion of assigned rotations

PHAR 460, 470, 480 Pharmacology & Pharmacotherapeutics I, II, III
The overall instructional goal of pharmacology and pharmacotherapeutics (PHAR 460) is to provide the physician assistant with a firm understanding of the effects of therapeutically important drugs in man, from a molecular to a behavioral level of organization. This course discusses therapeutic strategies, and new types of drugs, as well as the clinical implications and contraindications.
Lectures are designed on an organ system basis with emphasis on distinctive uses of drugs. Although large numbers of drugs are available on the market, only a few prototype agents have been selected for intensive study for this course.

• Prerequisites for PHAR 460, 2 credits: ANAT 451 Human Anatomy and Embryology (with Gross Anatomy Lab); BIOC 451 Human Biochemistry; PASS 450 Health Professionalism; PASS 451 Behavioral Medicine; PASS 456 Medical Interviewing and Documentation;

• Prerequisites for PHAR 470, 3 credits: ANAT 463 Human Neurosciences; CORE 460 Interdisciplinary Health Care; BMED 429 Epidemiology & Evidence-Based Medicine; PASS 460 Clinical Medicine I; PASS 469 Physical Diagnosis; PASS 486 Pediatrics; PHAR 460 Pharmacology & Pharmacotherapeutics I; PHYS 471 Human Physiology I;

• Prerequisites for PHAR 480, 3 credits: CORE 470 Interdisciplinary Health Care; MICR 470 Microbiology; PASS 470 Clinical Medicine II; PASS 473 Electrocardiography; PASS 474 Clinical Laboratory Medicine I; PASS 475 Women’s Health; PHAR 470 Pharmacology & Pharmacotherapeutics II; and PHYS 482 Human Physiology II

PHYS 471 and 482 Human Physiology I and II
In this two-quarter series, students are introduced through didactic instruction and clinical case discussions to the basic physiologic principles that underly the normal function of the various organs and organ systems. These core principles provide the foundation through which the student develops an understanding of the physiologic adaptations and transitions that occur in commonly occurring disease states. Emphasis is given to developing an understanding of health in physiologic terms and appreciation of the diverse regulatory processes that maintain the homeostasis of the human body. Topics presented include a general study of cell function, properties of excitable cells, and the function of the neuromuscular, cardiovascular, renal, respiratory, digestive, endocrine, and reproductive systems.

4 credits per quarter

• Prerequisites for PHYS 471 Human Physiology I: ANAT 451 Human Anatomy and Embryology (with Gross Anatomy Lab); BIOC 451 Human Biochemistry; PASS 450 Health Professionalism; PASS 451 Behavioral Medicine; PASS 456 Medical Interviewing and Documentation;
• Prerequisites for PHYS 482 Human Physiology
  II: ANAT 463 Human Neurosciences; CORE 460 Interdisciplinary Health Care; BMED 429 Epidemiology & Evidence-Based Medicine; PASS 460 Clinical Medicine I; PASS 469 Physical Diagnosis; PASS 486 Pediatrics; PHAR 460 Pharmacology & Pharmacotherapeutics I; PHYS 471 Human Physiology I

Required Masters Courses for Specialty Tracks

ETHC 501 Introduction to Medical Ethics
This course aims to improve critical thinking skills, introduce argumentation and argumentative writing, and to familiarize the student with some of the prominent ethical dilemmas in contemporary clinical medicine.
3 credits
Prerequisite: PASS 561 Master's Skills & Topics

ETHC 502 Foundations of Medical Ethics
This course explores the theoretical underpinnings of bioethical evaluation. Various philosophical theories are examined including consequentialism, deontological theories, principlism, ethics of care, casuistry, narrative ethics, and pragmatism, with an eye on the relationship between theory and practice.
3 credits
Prerequisite: ETHC 501 Introduction to Medical Ethics

ETHC 503 Philosophy of Medicine
This course focuses on questions about the nature and goals of medicine, as well as on concepts of health, disease and illness. The effect of value judgments on research agendas, public health, clinical decisions, and the patient–doctor experience of illness are also examined.
3 credits
Prerequisite: ETHC 502 Foundations of Medical Ethics

ETHC 537 Ethical Challenges in Medicine: A Case Study
This course utilizes cases to explore a variety of ethical dilemmas present in the day-to-day practice of health care. An emphasis is placed on developing a practical approach to identifying, understanding, and resolving ethical issues. Goals include demonstrating the relevance of ethics to everyday medicine, and providing a bridge between the systematic, theoretical concerns of ethics and the realities of clinical medicine.
3 credits
Prerequisite: PASS 561 Master's Skills & Topics

MHPE 501 Teaching and Learning Styles
This course is designed to give students a specialized knowledge and understanding of the major learning style theories and their application within educational practice. Students identify their predominant learning and teaching styles and explore how to incorporate various strategies to improve teaching effectiveness.
3 credits
Prerequisite: PASS 561 Master’s Skills & Topics

MHPE 502 Educational Technology
This course is designed to provide the student with an introduction to using educational technology in the classroom and to assist the student with developing skills in applying various educational technologies to meet instructional needs. This course includes computer-assisted instruction.
3 credits
Prerequisite: MHPE 501 Teaching and Learning Styles

MHPE 503 Instructional Design and Methods
In this course, students examine the use of instructional design models to create educational materials that focus on the needs of learners in the health professions. Students design and carry out an instructional design plan related to their health profession or area of expertise.
3 credits
Prerequisite: MHPE 501 Teaching and Learning Styles

MHPE 504 Curriculum Instruction
This course provides students with the opportunity to practice designing health-related curricula. Students examine trends and relevant research to locate appropriate resources for teaching in the health professions and design a syllabus on a health-related topic.
3 credits
Prerequisite: MHPE 503 Instructional Design and Methods

PASS 561 Master's Skills & Topics
This required course is the initial preparatory course for Master’s of Medical Science students in the Physician Assistant Program. The student will be exposed to core content appropriate to all Master’s students, such as searching the literature, critiquing web sites and professional writing.
1 credit
Prerequisite: Acceptance into Master’s Degree Program

PASS 562 Advanced Master's Skills and Application
The purpose of this course is to introduce the student to the concepts and skills in evidence-based medicine and the clinical application of these tools. This course also introduces students to topics such as clinical case series and specific case studies, and continuing medical education (CME). These tools will ultimately assist the student in the preparation for the clinical year and in the development of their Master’s thesis or portfolio.
3 credits
Prerequisite: PASS 561 Master’s Skills & Topics
PASS 563 Independent Study I: Literature Review
The purpose of this course is to help students refine their topic of study for their Master’s research thesis or clinical Master’s portfolio. The course coordinators will assist students as they work independently in the selection of a research or clinical topic of study and facilitate an in-depth approach to the topic through the annotated bibliography and literature review.
3 credits
Prerequisite: PASS 562 Advanced Master’s Skills & Topics

PASS 564 Independent Study II: Learning Plan
This independent study course is designed to allow the preparation of the final research project proposal for the students in the research MMS track or the learning plan for those students in the clinical MMS track. The students are expected to outline their master’s work that will be completed in their second year of study.
3 credits
Prerequisite: PASS 563 Independent Study I: Literature Review

PASS 665 A-D
The second-year master’s curriculum serves largely as an independent study, allowing the second-year physician assistant student to develop a portfolio of professional and scholarly activities (Clinical, Bioethics and Health Professions Education Track students) or complete their master’s thesis (Research Track students). Bioethics and Health Professions Education Track students may complete elective courses offered through their respective Biomedical Sciences Department.
Variable credits
Prerequisite: Completion of all first-year master’s courses specific to the student’s track

PASS 666-667
Following successful progress on the master’s portfolio, third-year clinical master’s students enter the 12-week master’s rotations. These students work with their chosen preceptor to develop practicum-specific learning objectives. Bioethics and Health Professions Education master’s students may take elective rotations during their third year to fulfill these credits. Research track students must collect their thesis data during their second year for PASS 666 and 667.
6 credits per rotation (12 credits total)

Year 2: Required Clinical Courses

CLRO 498 Selective Rotation
The Selective rotation is a six week training experience in an elective setting. The overall goal of the experience is for the student to develop fundamental skills in evaluating and managing patients with pathologies that require clinician intervention. Students will utilize both diagnostic and treatment modalities for various conditions that are present in the elective setting.
6 credits
Prerequisite: Successful completion of all didactic courses

EMED 491 Emergency Medicine
The Emergency Medicine rotation is a six week training experience in an emergency room or urgent care setting. The overall goal of the experience is for the student to develop fundamental skills in evaluating and managing patients with emergent pathologies. Students will utilize both diagnostic and treatment modalities for various emergent and traumatic conditions that are present in the emergency room setting.
6 credits
Prerequisite: Successful completion of all didactic courses

FMED 492 Family Medicine/Primary Care
The Family Medicine/Primary Care rotation is a six week training experience in a family medicine or primary care setting. The overall goal of the experience is for the student to develop fundamental skills in evaluating and managing patients with pathologies that require clinician intervention. Students will utilize both diagnostic and treatment modalities for various conditions that are present in the family medicine/primary care setting.
6 credits
Prerequisite: Successful completion of all didactic courses

IMED 493 Internal Medicine
The Internal Medicine rotation is a six week training experience in an internal medicine setting. The overall goal of the experience is for the student to develop fundamental skills in evaluating and managing patients with pathologies that require clinician intervention. Students will utilize both diagnostic and treatment modalities for various conditions that are present in the internal medicine setting.
6 credits
Prerequisite: Successful completion of all didactic courses

OBGY 497 Women’s Health
The Women’s Health rotation is a six week training experience in a women’s health setting. The overall goal of the experience is for the student to develop fundamental skills in evaluating and managing patients with pathologies that require clinician intervention. Students will utilize both diagnostic and treatment modalities for various obstetric and gynecologic conditions that are present in the women’s health setting.
6 credits
Prerequisite: Successful completion of all didactic courses
**PEDI 494 Pediatrics**
The Pediatrics rotation is a six week training experience in a pediatric medicine setting. The overall goal of the experience is for the student to develop fundamental skills in evaluating and managing pediatric patients with pathologies that require clinician intervention. Students will utilize both diagnostic and treatment modalities for various conditions that are present in the pediatric medicine setting.  
6 credits  
Prerequisite: Successful completion of all didactic courses

**PSYC 495 Psychiatry/Behavioral Medicine**
The Psychiatric/Behavioral Medicine rotation is a six week training experience in a psychiatric setting. The overall goal of the experience is for the student to develop fundamental skills in evaluating and managing patients with pathologies that require clinician intervention. Students will utilize both diagnostic and treatment modalities for various psychiatric conditions that are present in the psychiatric setting.  
6 credits  
Prerequisite: Successful completion of all didactic courses

**SURG 496 General Surgery**
The General Surgery rotation is a six week training experience on a surgical service, i.e., orthopedics, vascular, general, neurology or plastics. The overall goal of the experience is for the student to develop fundamental skills in evaluating and managing patients with pathologies that warrant surgical intervention. Students will utilize diagnostic and treatment modalities throughout the pre-operative, intra-operative and post-operative periods.  
6 credits  
Prerequisite: Successful completion of all didactic courses

**ELECTIVES**

**BBSC 409 Drugs of Abuse**
This elective course is designed to provide the student with an understanding of the psychological, as well as the pharmacological, effects of the common drugs of abuse. The following drugs and drug classes will be reviewed: alcohol, stimulants, nicotine, hallucinogens, sedatives and opioids. Topics covered within lectures will include routes of administration, mechanisms of action, tolerance, dependence, addiction and withdrawal. Particular emphasis will be placed on abuse potential, addictive behaviors and societal impact associated with each substance.  
1 credit

**ELEC 400 Medical Spanish**
Medical Spanish is devoted to the study of the Spanish language encountered in the provider-patient interaction and the cultural issues that arise with the Spanish-speaking patient. This course will give providers the tools to successfully navigate these patient encounters. The introduction of basic medical and language concepts and more in-depth medical and language topics specific to the different clinical specialties will be covered. Students will have the opportunity to develop competence in carrying out the medical interview and physical examination of a Spanish-speaking patient.  
2 credits

**ELEC 480 End-of-Life Care**
The purpose of “End of Life Care” is to provide current information on the optimum way of managing end-of-life issues for patients and their families. Our society has shown increased interest in caring for the terminally ill. American medical schools and PA programs, in general, have not been providing sufficient information for their students on this topic, and many physicians and PA’s in practice are uncomfortable discussing these topics with patients and their families.  
2 credits

**FACULTY**

Ilona Bleaman, MHPE, PA-C  
Midwestern University-Glendale  
College of Health Sciences  
Clinical Assistant Professor

Bettie Coplan, M.P.A.S., PA-C  
University of Nebraska  
College of Medicine  
Instructor

Alison Essary, M.H.P.E., PA-C  
Midwestern University-Glendale  
College of Health Sciences  
Associate Program Director and Associate Professor

Kevin Lohenry, M.P.A.S., PA-C  
University of Nebraska  
College of Medicine  
Program Director and Associate Professor

James Meyer, M.D., F.A.C.P.  
University of Michigan  
Medical School  
Medical Director and Associate Professor

James Roch, M.P.A.S., PA-C  
University of Nebraska  
College of Medicine  
Assistant Professor

Jacqueline Spiegel, M.S., PA-C  
Rosalind Franklin University of Medicine and Science  
College of Health Professions  
Clinical Coordinator and Assistant Professor
James Stoehr, Ph.D.
Dartmouth College
Dartmouth Medical School
Associate Director of Master’s Education and Professor

Jennifer Williams, MMS, PA-C
Midwestern University-Glendale
College of Health Sciences
Clinical Instructor
MISSION
The mission of the Occupational Therapy Program is to educate and graduate highly competent and dedicated occupational therapists who possess the skills and expertise to embrace the occupational needs of individuals and communities. The Program develops self-directed, responsive occupational therapists who are eager to advocate for their clients and the profession as a whole. To this end, the Occupational Therapy Program will:

- Support the University through teaching, scholarship, and service
- Serve others through academic, scholarly, and experiential opportunities
- Foster innovative and empathic practitioners devoted to holistic and ethical practice

ACCREDITATION
Midwestern University’s Occupational Therapy Program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 4720 Montgomery Lane, P.O. Box 31220, Bethesda, MD 20824-1220; Phone: 301/652-AOTA. Graduates of the program will be able to sit for the national certification examination for the occupational therapist administered by the National Board for Certification in Occupational Therapy (NBCOT).

DEGREE DESCRIPTION
The Occupational Therapy Program offers a curriculum leading to the Master of Occupational Therapy (M.O.T.) degree for qualified students. The full-time, continuous, entry-level master’s curriculum is designed to deliver the academic and clinical education required to prepare students for their professional role as key members of the health care team and as integral practitioners in the health care delivery system. The curriculum for the Master of Occupational Therapy degree is a continuous, full-time program, extending 27 months from matriculation to graduation. The maximum allotted time for completion of this program is 40.5 months. It is also required that all Level II fieldwork must be completed within 18 months of completion of the didactic portion of the program. The general education, professional training, experience, and personal character development of occupational therapists uniquely prepare them to respond to the needs of individuals who face challenges participating in their daily lives.

The Master of Occupational Therapy Program offers a balanced combination of foundational, clinical, and research coursework designed to foster therapists who are self-directed, thoughtful, and caring professionals. The Program provides students with a balanced complement of coursework. Approximately half of the course credits are obtained from foundational courses in the sciences, occupational therapy theory, and research. The remaining credits focus on courses related to client evaluation and interventions appropriate for various client populations (e.g., children, the elderly, etc.), specialized coursework in upper extremity intervention, and many opportunities for experiential (hands-on) learning. The critical analysis and seminar courses facilitate students’ application of content related to client evaluation and intervention using community-based and case-based learning opportunities. In addition to such preclinical learning opportunities, the fieldwork program is extensive and rich in the types of experiences offered to students. Such a strong curricular framework succeeds in preparing graduates who are ready – and able – to enter the profession of occupational therapy and to make a difference in the world.

The Occupational Therapy Program is open on a competitive admission basis to applicants who have received a bachelor’s degree in any field, but who have not completed an accredited occupational therapy program. The curriculum is designed to prepare entry-level practitioners to provide occupational therapy services in the home, community, and clinical practice settings that require independent judgment, leadership, and self-directed practice. The educational experience provides the foundation for graduates to identify and contribute to effecting solutions to the major emergent health issues of society and contribute to the academic and clinical education of future practitioners. It also is designed to prepare graduates for leadership and management roles in the profession. The graduate will be prepared to make meaningful, ongoing contributions to society, health care, and the profession through leadership activities and collaborative efforts with others in occupational therapy and interdisciplinary education, practice, and research.
Program Objectives
The Occupational Therapy Program is guided by the following educational objectives:

1. To integrate liberal arts and science foundations and professional coursework to prepare graduates to provide and manage a wide range of professional occupational therapy services in a competent, responsive, and caring manner for clients from diverse backgrounds in a wide range of health care settings;

2. To instill an appropriate professional sensibility and response to the impact of altered health and occupational performance on clients and their significant others;

3. To cultivate the fundamental ethical and moral attitudes, principles, and behaviors that are essential to acquiring and sustaining the confidence of clients and their significant others, colleagues, and other health care personnel in the professional or practice setting, and the support of the community at large;

4. To learn and apply clinical reasoning and critical thinking skills consistently to the occupational therapy process (receiving appropriate client referrals, performing appropriate client evaluations, establishing goals and client outcomes, developing treatment plans, providing appropriate treatments based on these plans and outcomes, re-evaluating the client and course of therapy, and client discharge planning);

5. To provide theoretical, analytical, and experiential foundations that prepare students to perform tasks, functions, and duties commensurate with the dynamic nature of occupational therapy and the changing role and responsibilities of the occupational therapist in a wide range of professional settings that depend on a strong clinical knowledge base but do not necessarily involve direct client care.

6. To educate practitioners who will assume leadership roles in the development and/or implementation of new and innovative approaches intended to minimize the severity and impact of physical and psychological conditions on occupational performance;

7. To develop clinical reasoning and critical thinking skills that will prepare students to design and implement preliminary research studies that evaluate clinical practice and/or service delivery;

8. To prepare practitioners who will engage in systematic and comprehensive planning of client care services leading to more cost-effective care and more efficient utilization of health care resources;

9. To provide theoretical and experiential constructs for expanded professional contributions, including enhanced management skills, advocacy, and leadership roles in occupational therapy and interdisciplinary education, practice, and research;

10. To integrate and coordinate occupational therapy skills with those of other health care service providers to meet the needs of clients within an increasingly more complex and diverse health care delivery system;

11. To instill the desire for continued personal and professional growth through the development of and active participation in continuing educational experiences; and

12. To cultivate the fundamental ethical and moral attitudes and behaviors so that graduates are knowledgeable and adhere to the occupational therapy professional code of ethics and the profession’s rules, regulations and scope of practice.

Admissions
The College of Health Sciences Occupational Therapy Program considers for admission those applicants who possess the academic and professional promise necessary for development as competent, caring members of the health care community. To select these candidates, a rolling admissions framework has been established.

Within this competitive admissions framework, multiple criteria are used to select the most qualified candidates from an applicant pool that exceeds the number of seats available. Interested individuals are advised to complete their application files as early as possible to ensure timely consideration.

Applications received are reviewed by the Director of Admissions in conjunction with the OT Program Admissions Committee to determine applicant eligibility for interviews. Admission decisions are made approximately one to two weeks after interviews have concluded.

Admission Requirements
Individuals applying for admission to the College of Health Sciences Occupational Therapy Program must submit documentation for the following minimum requirements before the academic year commences for the incoming class:

1. Completion of a baccalaureate degree from a regionally accredited college or university

2. A minimum cumulative undergraduate grade point average (GPA) of 2.75 on a 4.00 scale
   • Grades of C or better for prerequisite coursework (grades of C- are not acceptable)

3. Completion of the minimum number of prerequisite courses in the prescribed subject areas at regionally accredited colleges or universities

4. Satisfaction of the standards set forth by the Admissions Committee (including documentation of academic and professional promise in the prospective students)

5. Completion of the OT Program’s interview process; on-campus interviews are by invitation only

6. Completion of a first aid course within the three years prior to enrollment

7. Current certification in cardiopulmonary resuscitation (CPR) Level C/Health Care Provider or Basic Life Support of the American Heart Association or the
American Red Cross (students are responsible for maintaining CPR certification at this level while enrolled in the Program)

8. Demonstration of a people or service orientation through community service or extracurricular activities

9. Motivation for and commitment to health care as demonstrated by previous work, volunteer work, or other life experiences

10. Oral and written communication skills necessary to interact with clients and colleagues

11. Commitment to abide by the Midwestern University Drug-Free Workplace and Substance Abuse Policy

12. Passage of the Midwestern University criminal background check

Submission of Graduate Record Examination (GRE) general test scores is optional. The Midwestern University institutional code for the GRE is 4160. For more information about the GRE, contact Educational Testing Services (ETS) at 866/473-4373 or visit www.gre.org.

PREREQUISITE COURSES
Students must complete these courses with a grade of C or better (C- is not acceptable):

<table>
<thead>
<tr>
<th>Course</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Anatomy</td>
<td>One course*</td>
</tr>
<tr>
<td>Physiology</td>
<td>One course*</td>
</tr>
<tr>
<td>Statistics</td>
<td>One course</td>
</tr>
<tr>
<td>Human Development</td>
<td>One course†</td>
</tr>
<tr>
<td>Abnormal Psychology</td>
<td>One course</td>
</tr>
<tr>
<td>Social and Behavioral Science</td>
<td>One course</td>
</tr>
</tbody>
</table>

*The Anatomy and Physiology requirements may also be fulfilled by taking Anatomy and Physiology I and Anatomy and Physiology II, as some universities offer combined courses.

†The Human Development course requirement refers to at least one course which includes the physical, social, and psychological development throughout the lifespan. This may include child development and another course related to adulthood or the elderly.

Additional courses in the sciences and mathematics are also recommended including chemistry, physiology, physics, and biology.

General education electives are also recommended to demonstrate competency in English composition, oral communication, problem-solving skills, logic, and ethical theories.

International Applicants
An international student must satisfy all of the requirements for admission to the college or program that apply to a student who has completed all of his/her prerequisite coursework in the U.S. at a regionally accredited college or university. In addition, an international student must demonstrate proficiency in the English language. This may be accomplished by satisfying both of the following requirements:

1. The international student has completed a minimum of two full time semesters or three full time quarters of instruction at a postsecondary institution in the United States. Completed coursework must include a minimum of 50% of the prerequisite science coursework for the college or program of interest, 6 semester hours of non-remedial English composition, and 3 semester hours of public speaking/speech.

2. The international student must submit official TOEFL scores. A minimum passing score is 550 (paper version, maximum score 677) or 100 (internet version, maximum score 120). The TOEFL scores must be from an exam taken within two years of the anticipated date of matriculation into the college or program.

If the international student wishes to receive credit for prerequisite coursework completed at a college or university outside of the United States, he/she must submit an official, detailed, course-by-course evaluation of this coursework. The student must obtain this evaluation from one of the following services:

1. Educational Credential Evaluators (ECE): 414/289-3400 or Fax 414/289-3411 (www.ece.org, e-mail: info@ece.org)


3. World Education Service (WES): 212/966-6311 or Fax 212/739-6100 (www.wes.org, email: info@wes.org)

Based on the official foreign transcript evaluation and the grade earned in the course(s), the college or program will decide if it will apply any of these credits toward fulfillment of its prerequisites.

Application Process
To be considered for admission to the Occupational Therapy Program, applicants must submit the following to the Office of Admissions:

1. Completed Application
   - The application, forms, and instructions are available at www.midwestern.edu; click on the AZ Occupational Therapy Program section. For questions about the application or admissions process, the applicant may contact the Office of Admissions as noted below.
   - Applications must include a nonrefundable, nonwaivable application fee of $50.

2. Letters of Recommendation
   - Applicants must submit two signed and sealed letters of recommendation sent directly from professionals who know the applicant well. The Office of Admissions will accept letters from prehealth advisors or committees, science professors, and health professionals.
3. Official transcripts from every undergraduate, graduate, or professional school attended. Transcripts MUST be signed and sealed by the registrar of each institution.

Send application materials to:
Office of Admissions
Midwestern University
19555 N. 59th Ave.
Glendale, AZ 85308
888/247-9277
admissaz@midwestern.edu

Please Note: Applicants are responsible for notifying the Office of Admissions of any changes in their mailing address or e-mail address. All requests for application withdrawals must be made in writing via email, fax or letter to the Office of Admissions.

GPA Verification
The Office of Admissions considers grades from all nonremedial, college-level courses completed after high school. All attempts to repeat courses must be used in the calculation of the GPA. Grades of C– or below are not acceptable for any preprofessional course considered a prerequisite for admission; however, the grades must be used in the GPA calculation. Courses in which “credit” or a grade of “pass” is earned will be counted as fulfilling the prerequisite requirement when applicants provide verification that the grade earned was equivalent to a C. or better. Such courses are not included in the cumulative GPA calculation.

Interview and Selection Process
Students selected for an interview will be notified by letter or telephone of available interview dates and invited to schedule their on-campus interviews by contacting the Office of Admissions.

During each interview session, the interviewer(s) questions applicants about their academic, personal, and professional aspirations and preparedness for admission to the Program, and rate(s) the prospective students on a standard evaluation form. These evaluations are included in applicant files provided to the Occupational Therapy Admissions Committee. The Occupational Therapy Admissions Committee meets approximately one to two weeks after the interviews. The Committee reviews the full application files for applicants who were interviewed and then formulates and rates the prospective students on a standard evaluation form. These evaluations are included in applicant files and rate(s) the prospective students on a standard evaluation form.

Technical Standards
A candidate must have abilities and skills in five areas: I) observation; II) communication; III) motor; IV) intellectual, conceptual, integrative, and quantitative; and V) behavioral and social. Technological compensation can be made for some limitation in certain of these areas, but a candidate should be able to perform in a reasonably independent manner.

I. Observation: The candidate must be able to accurately make observations at a distance and close at hand. Observation necessitates the functional use of the sense of vision and somatic sensation and is enhanced by the functional use of all of the other senses.

II. Communication: The candidate must be able to communicate effectively, efficiently and sensitively in both oral and written form and be able to perceive nonverbal communication.

III. Motor: Candidates must be able to coordinate both gross and fine muscular movements, maintain equilibrium and have functional use of the senses of touch and vision. The candidate must possess sufficient postural control, neuromuscular control and eye-to-hand coordination to perform profession-specific skills and tasks.

IV. Intellectual, Conceptual, Integrative and Quantitative Abilities: The candidate must be able to problem solve, measure, calculate, reason, analyze, record and synthesize large amounts of information in a timely manner. The candidate must be able to comprehend three-dimensional relationships and understand spatial relationships.

V. Behavioral and Social Attributes: The candidate must possess the emotional health required for full utilization of his/her intellectual abilities, the exercise of good judgment and the consistent, prompt completion of all responsibilities and the development of mature, sensitive and effective relationships. Candidates must be able to tolerate physically, mentally and emotionally taxing workloads and to function effectively under stress. The candidate must be able to adapt to changing environments, to display flexibility, and to learn to function in the face of uncertainties. Compassion, integrity, concern for others, effective interpersonal skills, willingness and ability to function as an effective team player, interest and motivation to learn are all personal qualities required during the educational process.

Candidates are required to certify that they understand and meet these Technical Standards. Candidates must provide such certification prior to matriculation. Candidates who may not meet the Technical Standards must inform the Director of Admissions, who will then contact the Dean of Students. The Dean of Students, in consultation with the academic dean (and program director), will identify and discuss what accommodations, if any, the College(/Program) would need to make that would allow the candidate to complete the curriculum. The College(/Program) is not able to grant accommodations that alter the educational standards of the curriculum. Students must meet the Technical Standards for the duration of enrollment in their professional program.
Matriculation Process
The matriculation process begins after applicants receive notification of their acceptance into the Occupational Therapy Program. Students must return both a signed matriculation agreement and deposit to the Office of Admissions by the deadline date. Students must also:
1. Submit deposit monies by the date designated in their matriculation documents. Deposits are applied toward the first quarter’s tuition.
2. Submit official final transcripts from all colleges attended post-high school by the deadline of two weeks (14 calendar days) prior to the first day of classes. Students who are accepted to MWU less than one month prior to the first day of classes will have 30 calendar days from the date of their acceptance to submit all official transcripts to the Office of Admissions. Any special circumstances or requests for exceptions to this policy must be sent to and approved by the Office of the Dean of the College. Students who fail to submit all official final transcripts by the stated deadline may jeopardize their acceptance or continued enrollment in the College.
3. Complete a medical file as requested by the Office of Student Services.
4. Submit proof of medical insurance coverage. Students may select either a plan offered by an MWU-approved carrier or a comparable plan offered by an outside carrier of their choice.
5. For non-U.S. citizens/nonpermanent residents only, provide documentation verifying that sufficient funds have been deposited in a U.S. bank to cover all expenses while attending CHS.
6. Provide documentation that any additional coursework or service requirements stipulated by the Admissions Committee of the Program have been completed.
7. Submit additional documents as required by the Office of Admissions.
8. Authorize and pass the Midwestern University criminal background check.
10. Complete a physical exam and submit form.
11. Sign and submit a Credit Policy Statement.
12. Meet the Technical Standards for the Program.

Students who either fail to satisfy these matriculation requirements or omit or falsify information required on official admissions documents automatically forfeit their seat in the Program. Individuals accepted for admission to the Occupational Therapy Program who do not comply with stated timelines for submission of all required materials will not receive further notification from CHS regarding forfeiture of their seat.

Articulation Agreement Between Midwestern University Programs
Students enrolled in a Midwestern University program are guaranteed an admission interview with another Midwestern University program if the student:
1. is currently in good standing in the academic program in which the student is enrolled and does not have any pending misconduct charges against him/her;
2. meets all admission requirements for the professional program of interest;
3. after a minimum of two full time quarters of study, achieves a minimum Midwestern University grade point average, derived from all courses completed at Midwestern, that is equal to or greater than 3.0; AND
4. achieves a score on the professional entrance exam (if required) that is not less than one standard deviation below the mean score for students that matriculated into the professional degree program in the previous year.

A guaranteed interview does not guarantee admission into the professional program.

Reapplication Process
Students who receive denial or end-of-cycle letters may reapply for the following year’s admissions cycle. Before reapplying, however, individuals contemplating reapplication should seek the advice of an admissions counselor. To initiate the reapplication process, prospective students must complete and submit new applications and proceed through the standard application process.

Evaluation of Student Performance
Students in the Master of Occupational Therapy Program are formally evaluated at appropriate intervals during the curriculum to assess and document satisfactory progress and achievement of learning objectives and prescribed competencies. These evaluations occur on a regular basis at scheduled times during each course. Depending on the learning and competency outcome objectives, these evaluations are designed to assess the level of knowledge, problem-solving skills, psychomotor and clinical competencies, and behavioral performances of students during each course and/or fieldwork experience. Evaluation methods vary, depending on the course or experiential learning opportunity, and may include formal examinations, written essays, portfolio assignments, design and fabrication projects, psychomotor skill checks, or other methods of determining the extent to which each student has mastered the course content and skill competencies. Student performance in formal examinations is graded on a numerical/alphabetical system using a standard grading scale, which is published in this catalog and the Midwestern University Student Handbook. Students are customarily
provided with feedback and grade reports after each examination summarizing their performance on each test item. Students will be required to participate in competency-based evaluations at various intervals throughout their academic tenure.

Evaluations of student performance during the Fieldwork II experiences are formalized using standard evaluation tools established by American Occupational Therapy Association. In keeping with the Program’s mission to exceed national standards, the Occupational Therapy Program reserves the right to augment the performance criteria to successfully complete the Fieldwork Level II courses.

**GRADUATION REQUIREMENTS**

To qualify for graduation, students must:

1. Satisfactorily complete all courses with a minimum cumulative GPA of 2.75 or higher;
2. Satisfactorily complete the required minimum of credit hours in the curriculum;
3. Receive a favorable recommendation for master’s degree conferral from the Program faculty to the Program Student Academic Review Committee and from this committee to the CHS Student Promotion and Graduation Committee;
4. Receive a favorable recommendation for master’s degree conferral from the University Faculty Senate;
5. Settle all financial accounts with the University;
6. Complete all graduation clearance requirements as instructed by the Office of the Registrar.

**LICENSURE REQUIREMENTS**

Occupational Therapy is a registered and/or licensed profession in all 50 states. To become licensed to practice as an occupational therapist in most states (including Arizona), a student must graduate from an ACOTE-accredited or approved educational program and pass the national certification examination for the occupational therapist administered by NBCOT. Most states (including Arizona) require status as an occupational therapist registered (OTR) to become a licensed occupational therapist (OTR/L). Most states require licensure in order to practice. A prior felony conviction may affect a graduate’s ability to sit for the NBCOT Certification Exam or attain state licensure.

**CURRICULUM**

The professional master’s curriculum is composed of 46 required course credits (quarter hours) for the first calendar year, 60.5 required course credits for the second calendar year, and 25 required course credits for the third calendar year, for a total of 131.5 quarter credits. Fieldwork courses are placed in the first, second, and third years of the curriculum and include two 1-credit Level I experiences and two 12-credit Level II Fieldwork experiences. Moreover, faculty-guided and supervised learning opportunities in the community are pivotal learning experiences during the second year which reinforce and expand students’ mastery of content and skill performance related to occupational therapy evaluation and intervention.

Students’ proficiency in evaluation and intervention, independent decision-making and critical thinking are emphasized during OT Fieldwork II-A and II-B of the curriculum which occur during the spring quarter of the second professional year and the fall quarter of the third professional year (24 required credits). Fieldwork experiences are offered in clinical, community, hospital, school, and other facilities that have a legal agreement with the University and are located throughout the continental United States.

**Curriculum Structure, Course Quarter Hour Credits, and Sequencing**

**First Professional Year**

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Total Quarter Credit Hours Required:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fall Quarter</strong></td>
<td>46.0</td>
</tr>
<tr>
<td>CORE 460</td>
<td>Interdisciplinary Health Care 0.5</td>
</tr>
<tr>
<td>OTHE 505</td>
<td>Human Conditions I 3.0</td>
</tr>
<tr>
<td>OTHE 510</td>
<td>OT Foundations 2.0</td>
</tr>
<tr>
<td>OTHE 520</td>
<td>Theoretical Constructs I 3.0</td>
</tr>
<tr>
<td>OTHE 540</td>
<td>OT Analysis I 2.0</td>
</tr>
<tr>
<td>OTHE 583</td>
<td>Neuroscience I 3.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>13.5</td>
</tr>
<tr>
<td><strong>Winter Quarter</strong></td>
<td></td>
</tr>
<tr>
<td>CORE 470</td>
<td>Interdisciplinary Health Care 0.5</td>
</tr>
<tr>
<td>OTHE 502</td>
<td>Anatomy 4.0</td>
</tr>
<tr>
<td>OTHE 525</td>
<td>Human Conditions II 3.0</td>
</tr>
<tr>
<td>OTHE 541</td>
<td>OT Analysis II 2.0</td>
</tr>
<tr>
<td>OTHE 550</td>
<td>Fieldwork Foundations I 1.0</td>
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<tr>
<td>OTHE 660</td>
<td>Occupational Roles and Participation 2.0</td>
</tr>
<tr>
<td>OTHE 679</td>
<td>Neuroscience II 3.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>15.5</td>
</tr>
<tr>
<td><strong>Spring Quarter</strong></td>
<td></td>
</tr>
<tr>
<td>CORE 480</td>
<td>Interdisciplinary Health Care 0.5</td>
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<tr>
<td>OTHE 506</td>
<td>Human Conditions III 3.0</td>
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<tr>
<td>OTHE 536</td>
<td>Fieldwork I-A 1.0</td>
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<tr>
<td>OTHE 551</td>
<td>Fieldwork Foundations II 0.5</td>
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<tr>
<td>OTHE 581</td>
<td>Kinesiology 3.0</td>
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<td>OTHE 585</td>
<td>Evaluation and Treatment I: Foundations 5.0</td>
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<tr>
<td>OTHE 628</td>
<td>Research I 2.0</td>
</tr>
<tr>
<td>OTHE 629</td>
<td>OT Group Process 2.0</td>
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<tr>
<td><strong>Total</strong></td>
<td>17.0</td>
</tr>
</tbody>
</table>
Second Professional Year
Total Quarter Credit Hours Required: 60.5

Summer Quarter
OTHE 587 Evaluation and Treatment II: Children 5.0
OTHE 626 Human Conditions IV 3.0
OTHE 630 Research II 3.0
OTHE 640 OT Analysis III 2.0
OTHE 641 Orthotics I 2.0
Total 15.0

Fall Quarter
OTHE 552 Fieldwork Foundations III 0.5
OTHE 589 Evaluation and Treatment III: Adult 5.0
OTHE 591 Pediatric Practice 2.0
OTHE 635 Fieldwork I-B 1.0
OTHE 642 Orthotics II 2.0
OTHE 678 Administration & Leadership 3.0
OTHE 690 Upper Extremity Rehabilitation 4.0
Total 17.5

Winter Quarter
OTHE 631 Research III 3.0
OTHE 632 Psychosocial Practice 3.0
OTHE 634 Physical Agents 2.0
OTHE 685 Evaluation and Treatment IV: Seniors 5.0
OTHE 687 Adult Practice 3.0
Total 16.0

Spring Quarter
OTHE 795 Fieldwork II-A 12.0

Third Professional Year
Total Quarter Credit Hours Required: 25.0

Summer Quarter
OTHE 620 Theoretical Constructs II 3.0
OTHE 633 Research IV 3.0
OTHE 645 Seminar on Clinical Practice 1.0
OTHE 689 Work Rehabilitation & Health Promotion 3.0
OTHE 694 Program Development 3.0
Total 13.0

Fall Quarter
OTHE 796 Fieldwork II-B 12.0

Total Quarter Credits for Years 1, 2, and 3 131.5

Note: The Midwestern University College of Health Sciences Occupational Therapy Program reserves the right to alter its curriculum however and whenever it deems appropriate.

COURSE DESCRIPTIONS

Prerequisites are listed for those courses with such requirements. When no prerequisite is listed in a course description, it is implied that there is no prerequisite.

Core 460, 470, 480 Interdisciplinary Health Care
The Interdisciplinary Health Care course involves the colleges of Health Sciences, Osteopathic Medicine, Dental Medicine, Optometry, and Pharmacy, in order to teach all clinically based students about the importance of an interdisciplinary approach to patient care. Lectures will be given in a seminar format, in conjunction with panel presentations and discussions by interdisciplinary team members. 0.5 credits each quarter

OTHE 502 Anatomy
This course provides fundamental knowledge of normal human structure and function. The emerging theme will be the interrelationships between structural design and functional capabilities. During this course, basic components including tissues, muscles, nerves, bones and joints will be covered. The musculoskeletal system in particular will be highlighted in both lecture and laboratory formats. 4 credits

OTHE 505 Human Conditions I
This course is designed to introduce students to issues pertaining to clients with psychiatric disorders, to techniques used in psychiatry to evaluate and diagnose clients, and finally to present an overview of psychiatric conditions within the Diagnostic and Statistical Manual-IV-TR classification system. Implications for occupational therapy practice are introduced. 3 credits

OTHE 510 OT Foundations
This is an introductory course that focuses on the foundations and scope of occupational therapy practice. The philosophy of the profession, with its emphasis on occupation and adaptation will be presented from both historical and current perspectives. The characteristics of the profession, including service delivery models and settings for occupational therapy practice, role delineations and professional ethics will be included. 2 credits

OTHE 520 Theoretical Constructs I
This course is the first of a two course series that introduces the philosophical assumptions, theories, models of practice, and frames of reference within occupational therapy practice. Applications to one’s life and previous exposure to occupational therapy will be incorporated. 3 credits
OTHE 525 Human Conditions II
This course addresses the risk factors, clinical signs and symptoms, pathogenesis, medical tests and treatments, and differential diagnosis of selected diseases/problems most common to the pediatric population. The impact on function is addressed. Prevention of the diseases/problems is emphasized, and current research in etiology and treatment will be discussed.
3 credits

OTHE 526 Human Conditions III
This course addresses the risk factors, clinical signs and symptoms, pathogenesis, medical tests and treatments, and differential diagnosis of selected diseases/problems most common to the adult population. The impact on function is addressed. Prevention of the diseases/problems is emphasized, and current research in etiology and treatment will be discussed.
3 credits

OTHE 536 Fieldwork I-A
Fieldwork experience consisting of guided learning experiences in various health care and/or community settings that provides students with direct opportunities to observe and interact with clients engaged in functional living activities that are appropriate for their respective cognitive, psychosocial, and physical stage of development. Observational and documentation skills are emphasized.
1 credit

OTHE 540 OT Analysis I
This introductory course emphasizes the value and use of purposeful activities in occupational therapy. The development of occupational performance skills in work, self-care, and play/leisure is highlighted. Activity analysis, problem solving and teaching processes are emphasized.
2 credits

OTHE 541 OT Analysis II
This introductory course emphasizes the recognition, assessment, measurement, and description of normal and abnormal movement in static and dynamic activities. The development of skills necessary to accurately measure and assess joint range of motion and muscle strength is emphasized.
2 credits

OTHE 550 Fieldwork Foundations I
This course introduces the student to the clinical education program, including its goals and objectives, the types of clinical education experiences provided, and the expectations for student participation. Students will also begin to focus on increasing self-awareness through reflective exercises to foster development of professional behaviors.
1 credit

OTHE 551 Fieldwork Foundations II
This course focuses on the clinical education program, including the types of clinical education experiences recently provided, and the outcomes of student participation. The focus of this course is to facilitate student development of “therapeutic attitude” witnessed during fieldwork, and to increase self-awareness through self-reflective and experiential exercises to foster development of professional behaviors.
0.5 credit

OTHE 552 Fieldwork Foundations III
This course focuses on the clinical education program, including the types of clinical education experiences recently provided, and the outcomes of student participation. The focus of this course is to facilitate student development of “therapeutic attitude” witnessed during fieldwork, and to increase self-awareness through self-reflective and experiential exercises to foster development of professional behaviors.
0.5 credit

OTHE 581 Kinesiology
Basic biomechanical concepts are addressed in this course and their application to occupational therapy treatment in relation to force analysis and its implications on functional movement and activity. The structure and function of joints, connective tissue and muscle are addressed. Components of normal movement in the trunk and extremities are discussed in relation to static and dynamic movement and activity. The influence of task and pathology on function of the musculoskeletal system is discussed.
3 credits
Prerequisite: OTHE 502 Anatomy

OTHE 583 Neuroscience I
This is the first of two courses designed to develop the student’s knowledge base of neuroscience to a level required for clinical practice. Throughout the two courses there will be an intertwining of information about principal structural components, corresponding functions of the nervous system and the impact of neurological dysfunction on human occupation.
3 credits

OTHE 585 Evaluation and Treatment I: Foundations
This course is an introduction to the occupational therapy process, with learning opportunities designed to develop essential skills required for effective therapeutic intervention. This course emphasizes client-centered approaches to evaluation and intervention with clients throughout the lifespan. Clinical reasoning and critical thinking skill development are emphasized.
5 credits
**OTHE 587 Evaluation and Treatment II: Children**
This course emphasizes the application of selected models of practice and strategies for occupational therapy practice with children who have occupational performance dysfunction related to developmental, neuromotor, psychosocial, or medical disabilities. Therapeutic approaches and clinical skills for working with children and families within the home, community, and clinical settings will be emphasized.
5 credits
Prerequisite: OTHE 585 Evaluation and Treatment I

**OTHE 589 Evaluation and Treatment III: Adult**
This course emphasizes the application of selected models of practice and strategies for occupational therapy practice with adults who have occupational performance dysfunction related to cognitive, perceptual, psychosocial, and neuromotor disabilities. Therapeutic approaches and clinical skills for working with individuals within the home, community, and clinical settings will be emphasized.
5 credits
Prerequisite: OTHE 587 Evaluation and Treatment II

**OTHE 591 Pediatric Practice**
The focus of this course is on the application of occupational therapy evaluation and intervention to practice with children in various settings. Problem-based and case-based methodologies are utilized to facilitate students ability to generate applications to occupational therapy practice.
2 credits
Prerequisite: OTHE 587 Evaluation and Treatment II

**OTHE 620 Theoretical Constructs II**
This course focuses on the synthesis and evaluation of specific models of practice and frames of reference as related to occupational therapy practice and education. Application to fieldwork and experiential learning opportunities will be highlighted.
3 credits
Prerequisite: OTHE 520 Theoretical Constructs I

**OTHE 626 Human Conditions IV**
This course addresses the risk factors, clinical signs and symptoms, pathogenesis, medical tests and treatments, and differential diagnosis of selected diseases/problems most common to the elderly population. The impact on function is addressed. Prevention of the diseases/problems is emphasized, and current research in etiology and treatment will be discussed.
3 credits

**OTHE 628 Research I**
This course provides content foundational to understanding and applying current research that affects practice and the provision of occupational therapy services. The importance of research, analysis of current professional literature, understanding and interpreting basic research methodologies/designs will be highlighted. The process of choosing an area of research focus, developing appropriate questions, and beginning the literature review will be emphasized.
2 credits

**OTHE 629 OT Group Process**
This course provides students with opportunities to learn basic principles of group process and is presented in a laboratory format. Occupational therapy and group application, conflict resolution, problem solving, working with others, and phases of group development are emphasized.
2 credits

**OTHE 630 Research II**
Self-directed learning is emphasized in the development of beginning research skills for individual and small group research projects. The development of a research proposal, including the introduction, research questions, research design, and anticipated outcomes will result in a completed project submitted for institutional (IRB) approval.
3 credits
Prerequisite: OTHE 628 Research I

**OTHE 631 Research III**
Self-directed learning builds upon work completed in prerequisite courses to carry out research studies that evaluate clinical practice and/or service delivery. Institutional Review Board (IRB) approval initiates the processes of subject recruitment, data collection, and the initial analysis of results.
3 credits
Prerequisite: OTHE 630 Research II

**OTHE 632 Psychosocial Practice**
This course provides an in-depth analysis of the use of occupational therapy in psychosocial settings. Analysis of current models of practice, philosophical and theoretical frameworks, and occupational therapy practice are critiqued. Analytical thought, clinical reasoning, logic, and critical thinking are emphasized.
3 credits

**OTHE 633 Research IV**
This is the fourth course of four courses in the research course series. Results from the previous research coursework are subjected to descriptive or statistical analysis and integrated with the current literature in occupational therapy. Projects ultimately relate theory to practice, demonstrate synthesis of advanced knowledge in a practice area, with an
outcome of a completed manuscript appropriate for publication in a peer-reviewed journal.
3 credits
Prerequisite: OTHE 631 Research III

**OTHE 634 Physical Agents**
This course addresses the theoretical principles and physiological, neurophysiological and electrophysical changes that occur as a result of the application of selected physical modalities. Course content includes information on pain control theories, wound healing principles, and the response of tissue to the application of physical modalities. Therapeutic hydrotherapy, thermotherapy, and electrotherapy, when used as an adjunct to, or in preparation for, therapeutic occupation, is highlighted.
2 credits

**OTHE 635 Fieldwork I-B**
Fieldwork experience consisting of guided learning experiences in various health care and/or community settings that provides students with direct opportunities to observe and interact with clients engaged in functional living activities that are appropriate for their respective cognitive, psychosocial, and physical stage of development. Observational and documentation skills are emphasized.
1 credit

**OTHE 640 OT Analysis III**
This course emphasizes the use of activities to facilitate independence in functional living including performance in self-care, work, and play/leisure. Selected assessment procedures and therapeutic adaptations are emphasized.
2 credits

**OTHE 641 Orthotics I**
This course will introduce the fundamental principles involved in the application of basic orthotic devices within the practice of occupational therapy. Emphasis will be placed on anatomical and biomechanical principles as they pertain to orthotic design and utilization, principles of orthotic selection/application and the fabrication process of three basic orthoses.
2 credits

**OTHE 642 Orthotics II**
This course emphasizes the design and fabrication of complex orthotic devices and adaptive equipment to enhance an individual’s ability to perform work, self-care, and play/leisure activities. The refinement of psychomotor and reasoning skills are highlighted.
2 credits
Prerequisite: OTHE 641 Orthotics I

**OTHE 645 Seminar on Clinical Practice**
This course provides an opportunity for students who have completed Fieldwork II-A to focus on, and refine aspects of clinical practice to enhance their experience and performance in Fieldwork II-B, as well as prepare for their transition from student to entry level practitioner.
1 credit

**OTHE 660 Occupational Roles and Participation**
This course provides students with an in-depth inquiry into the essential principle of the profession – occupation – and the ways in which everyday occupation provides meaning, continuity, and perspective to our lives. Occupational engagement, experience, and performance will be addressed, and ways in which occupation contributes to well-being and participation in daily life will be highlighted.
2 credits

**OTHE 668 Administration & Leadership**
Basic management skills are emphasized, including strategic planning, business plans, legal issues, fiscal management, reimbursement, organization, personnel management, and grant writing. These applications will provide the tools for the development of occupational therapy service delivery.
3 credits

**OTHE 679 Neuroscience II**
This course continues to develop the students’ knowledge base of neuroscience to a level required for clinical practice. It provides opportunities to apply neuroscience principles to the evaluation and treatment of occupational performance. Throughout the two neuroscience courses there is an intertwining of information about principal structural components, corresponding functions of the nervous system and the impact of neurological dysfunction upon human occupation.
3 credits
Prerequisite: OTHE 583 Neuroscience I

**OTHE 685 Evaluation and Treatment IV: Seniors**
This course emphasizes the application of selected models of practice and strategies for occupational therapy practice with older adults who have occupational performance dysfunction related to cognitive, psychosocial, neuromotor, and medical disabilities. Therapeutic approaches and clinical skills for working with individuals within the home, community, and clinical settings will be emphasized.
5 credits
Prerequisite: OTHE 589 Evaluation and Treatment III

**OTHE 687 Adult Practice**
The focus of this course is on the application of occupational therapy evaluation and intervention to practice with adults in various settings. Problem-based and case-based
Methodologies are utilized to facilitate students' ability to generate advanced applications to occupational therapy practice.
3 credits
Prerequisite: OTHE 589 Evaluation and Treatment III

OTHE 689 Work Rehabilitation & Health Promotion
This course focuses on the application of occupational therapy evaluation and treatment approaches to work rehabilitation. The application of ergonomic principles and functional capacity evaluations to varied work settings is emphasized. Health promotion and prevention throughout the lifespan are also highlighted.
3 credits

OTHE 690 Upper Extremity Rehabilitation
This course focuses on advanced evaluation and intervention strategies for the remediation of physical limitations that are primarily musculoskeletal in nature. Emphasis will be placed on impairments of the upper extremity and their effect on functional performance.
4 credits

OTHE 694 Program Development
Using skills from the previous administration course, students work in small groups to develop a realistic model for occupational therapy service provision in an agency or institution not currently accessing such services. Emerging and non-traditional areas of practice are highlighted for the student groups' end product: the development of a program model for occupational therapy services.
3 credits
Prerequisite: OTHE 678 Administration & Leadership

OTHE 795 Fieldwork II-A
Three months of supervised field experience with clients and/or client groups who exhibit a variety of medical conditions, which include physical and/or psychosocial disabilities. This internship emphasizes the development of disciplined, higher-level critical thinking skills necessary to plan and provide high-quality client care. Students are supervised by registered occupational therapists with a minimum of one year of experience.
12 credits

OTHE 796 Fieldwork II-B
Three months of supervised field experience with clients and/or client groups who exhibit a variety of medical conditions, which include physical and/or psychosocial disabilities. This internship emphasizes the development of disciplined, higher-level critical thinking skills necessary to plan and provide high-quality client care. Students are supervised by registered occupational therapists with a minimum of one year of experience.
12 credits

FACULTY
Evelyn Andersson, PhD, OT
Texas Women's University
College of Health Sciences
Assistant Professor

Kimberly A. Bryze, PhD, OT
University of Illinois at Chicago
College of Education
Program Director and Associate Professor

Christine Merchant, MA, OT
The George Washington University
Graduate School of Education and Human Development
Associate Director and Assistant Professor

Katherine Schofield, OT, CHT
University of Alberta
Faculty of Rehabilitation Medicine
Department of Occupational Therapy
Instructor

Brenda K. Taubman, MA, OT
University of Phoenix
Assistant Professor
COLLEGE OF HEALTH SCIENCES

BIOMEDICAL SCIENCES PROGRAM

MASTER OF ARTS IN BIOMEDICAL SCIENCE

MISSION
The mission of the Master of Arts in Biomedical Science Program is to help students with a Bachelor’s degree improve their academic foundation in the biomedical sciences and to graduate students who are competitive applicants for admission into medical school and other professional programs in health care (e.g., dentistry, podiatry, and pharmacy).

DEGREE DESCRIPTION
The Master of Arts in Biomedical Science (MA) degree is a full-time, three-quarter, graduate level, coursework only program. This program is designed to help students with a Bachelor’s degree, preferably with a major in the sciences, improve their academic foundation in the biomedical sciences and augment their credentials for admission into medical school or other health professional program. All students take a minimum of 45 quarter hour credits in the basic sciences and medical ethics. Courses include: biochemistry, histology, human anatomy (with lab), human physiology I & II, microbiology, immunology and virology I & II, pharmacology I & II, Learning Styles and Assessments, introduction to ethics and a capstone course. The capstone course includes preparation of a scholarly, literature-based portfolio on a topic of the student’s choice (usually a disease condition) and a presentation of their topic in a research poster. In addition, the students are required to take elective credits each quarter to bring the total quarter credits to 15 credits. The elective credits, offered in a variety of disciplines, include other biomedical science courses and professional preparation courses (e.g., MCAT or PCAT Preparation, Health Career Planning, Medical Terminology, etc.). These electives improve critical thinking skills, study skills and enhance the student’s preparation for professional school application.

ADMISSIONS

Admission Requirements
To be considered for admission to the Master of Arts in Biomedical Science degree program, applicants must submit the following documented evidence:

1. Completion of a bachelor’s degree (B.A. or B.S.) or higher, preferably with a major in the sciences, from a regionally accredited college or university
2. A minimum cumulative grade point average (GPA) of 2.75 on a scale of 4.00 in all coursework completed for their bachelor’s or higher degree program
3. Two letters of recommendation (or one committee letter from the applicant’s college or university)
4. Official transcripts from each college or university attended
5. Test scores from ONE of the following: Graduate Record Examination (GRE), Medical College Admissions Tests (MCAT), Pharmacy College Admissions Test (PCAT), Dental Admissions Test (DAT), or other professional program admissions tests
6. Completion of the typical prerequisite coursework for admission into medical, dental or pharmacy schools, including biology, general chemistry, organic chemistry, physics, mathematics, and English; prospective students are responsible for determining the prerequisites for the health professional program and institution of their choice
7. Completion of the prerequisite courses with grades of C or better (grades of C- are not acceptable)
8. Passage of the Midwestern University criminal background check
9. Commitment to abide by the Midwestern University Drug-Free Workplace and Substance Abuse Policy

PREREQUISITE COURSES

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
<th>Qtr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Composition</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>General Biology with laboratory</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>General Chemistry with laboratory</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>Organic Chemistry with laboratory</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>Physics</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
A limited number of transfer credits from other institutions are allowed: 6 semester (9 quarter) hours for the Master of Arts in Biomedical Science.

**International Applicants**

An international student must satisfy all of the requirements for admission to the college or program that apply to a student who has completed all of his/her prerequisite coursework in the U.S. at a regionally accredited college or university. In addition, an international student must demonstrate proficiency in the English language.

This may be accomplished by satisfying both of the following requirements:

1. The international student has completed a minimum of two full-time semesters or three full-time quarters of instruction at a postsecondary institution in the United States. Completed coursework must include a minimum of 50% of the prerequisite science coursework for the college or program of interest, 6 semester hours of nonremedial English composition, and 3 semester hours of public speaking/speech.

2. The international student must submit official TOEFL scores. A minimum passing score is 550 (paper version, maximum score 677) or 100 (internet version, maximum score 120). The TOEFL scores must be from an exam taken within two years of the anticipated date of matriculation into the college or program. If the international student wishes to receive credit for prerequisite coursework completed at a college or university outside of the United States, he/she must submit an official, detailed, course-by-course evaluation of this coursework. The student must obtain this evaluation from one of the following services:

   1. Educational Credential Evaluators (ECE): 414/289-3400 or Fax 414/289-3411 (www.ece.org, e-mail: info@ece.org).
   3. World Education Service (WES): 212/966-6311 or Fax 212/739-6100 (www.wes.org, e-mail: info@wes.org). Based on the official foreign transcript evaluation and the grade earned in the course(s), the college or program will decide if it will apply any of these credits toward fulfillment of its prerequisites.

**Application Process and Deadlines**

Individuals interested in applying for admission to the Master of Arts in Biomedical Sciences Program must complete an application online from www.midwestern.edu.

To be considered for admission, applicants must submit an application packet that includes:

1. A completed Application for Admission to the Master of Arts in Biomedical Science Program
2. A nonrefundable, nonwaivable application fee ($50 for the Master’s degree program)
3. Two letters of recommendation (or one committee letter); the Office of Admissions will accept signed and sealed letters from prehealth advisors or committees, science professors, and health professionals
4. Official transcripts from each college or university attended. Applicants must enclose official transcripts from every undergraduate, graduate, or professional school that they have attended or are currently attending. These transcripts must be sealed and signed by the registrar at each institution.
5. Scores from the Medical College Admissions Test (MCAT), Pharmacy College Admissions Test (PCAT), Graduate Record Examination (GRE), Dental Admissions Test (DAT), or other professional program admissions tests.

The Biomedical Science Program uses a rolling admission process in which completed applications are reviewed and decisions are made at regular intervals during the admissions cycle. The Master of Arts in Biomedical Science Program begins in the Fall Quarter. Admission to the Biomedical Science Program is considered on a competitive basis for applicants who have achieved the required prerequisites. Multiple criteria are used to select the most qualified candidates, including selection of those students the Admissions Committee feels would benefit the most from the Program. Selection decisions for the Program are made by the Biomedical Science Program Admissions Committee with the approval of the Program Director and the Dean of the College of Health Sciences until the class is filled. To maximize their competitiveness within our rolling admission process, candidates are advised to submit their completed applications early in the admission cycle.

**Interview and Selection Process**

After receiving completed application packets, the information provided is verified to determine whether all prerequisite coursework has been completed satisfactorily or will be completed prior to potential matriculation and also to verify the cumulative GPAs for applicants for all completed courses. The application materials are reviewed to determine eligibility for interviews, which are offered by invitation only. A phone interview is possible for those applicants who are unable to schedule an interview in person. Completed applications and interview summaries are forwarded to the Biomedical Sciences Program Admissions Committee. Applicants will receive notification in writing of admissions decisions.

*Please Note:* Applicants may track the receipt of their application materials and the status of their files on the University’s web site with the instructions for accessing your account information that will be sent by the Office of Admissions after receipt of their applications. Applicants are responsible for notifying the Office of Admissions of any changes in their telephone number, mailing address or e-mail address.
All requests for application withdrawal must be made in writing to the Office of Admissions:

Midwestern University
Office of Admissions
19555 N. 59th Avenue
Glendale, AZ 85308
888/247-9277 or 623/572-3215
admissaz@midwestern.edu

Technical Standards
A candidate must have abilities and skills in five areas: I) observation; II) communication; III) motor; IV) intellectual, conceptual, integrative, and quantitative; and V) behavioral and social. Technological compensation can be made for some limitation in certain of these areas, but a candidate should be able to perform in a reasonably independent manner.

I. Observation: The candidate must be able to accurately make observations at a distance and close at hand. Observation necessitates the functional use of the sense of vision and somatic sensation and is enhanced by the functional use of all of the other senses.

II. Communication: The candidate must be able to communicate effectively, efficiently and sensitively in both oral and written form and be able to perceive nonverbal communication.

III. Motor: Candidates must be able to coordinate both gross and fine muscular movements, maintain equilibrium and have functional use of the senses of touch and vision. The candidate must possess sufficient postural control, neuromuscular control and eye-to-hand coordination to perform profession-specific skills and tasks.

IV. Intellectual, Conceptual, Integrative and Quantitative Abilities: The candidate must be able to problem solve, measure, calculate, reason, analyze, record and synthesize large amounts of information in a timely manner. The candidate must be able to comprehend three-dimensional relationships and understand spatial relationships.

V. Behavioral and Social Attributes: The candidate must possess the emotional health required for full utilization of his/her intellectual abilities, the exercise of good judgment and the consistent, prompt completion of all responsibilities and the development of mature, sensitive and effective relationships. Candidates must be able to tolerate physically, mentally and emotionally taxing workloads and to function effectively under stress. The candidate must be able to adapt to changing environments, to display flexibility, and to learn to function in the face of uncertainties. Compassion, integrity, concern for others, effective interpersonal skills, willingness and ability to function as an effective team player, interest and motivation to learn are all personal qualities required during the educational process.

Candidates are required to certify that they understand and meet these Technical Standards. Candidates must provide such certification prior to matriculation. Candidates who may not meet the Technical Standards must inform the Director of Admissions, who will then contact the Dean of Students. The Dean of Students, in consultation with the academic dean (and program director), will identify and discuss what accommodations, if any, the College(/Program) would need to make that would allow the candidate to complete the curriculum. The College(/Program) is not able to grant accommodations that alter the educational standards of the curriculum. Students must meet the Technical Standards for the duration of enrollment in their professional program.

Matriculation Process
The matriculation process begins after applicants receive notification of their acceptance into the Biomedical Sciences Program. Students must return both their signed matriculation agreement and an initial deposit to the Office of Admissions. Students must also:

1. Submit deposit monies by the date designated in their matriculation documents. Deposits are applied toward the first quarter’s tuition.
2. Submit official final transcripts from all colleges attended post-high school by the deadline of two weeks (14 calendar days) prior to the first day of classes. Students who are accepted to MWU less than one month prior to the first day of classes will have 30 calendar days from the date of their acceptance to submit all official transcripts to the Office of Admissions. Any special circumstances or requests for exceptions to this policy must be sent to and approved by the Office of the Dean of the College. Students who fail to submit all official final transcripts by the stated deadline may jeopardize their acceptance or continued enrollment in the College.
3. Successfully complete all outstanding prerequisites with grades of C or better (grades of C- are not acceptable for any prerequisite courses)
4. Submit proof of medical and disability insurance coverage. Students may select either a plan offered by an MWU-approved carrier or a comparable plan offered by an outside carrier of their choice.
5. Submit proof of completed required immunizations.
6. Meet the Technical Standards for the Program.
7. For non-U.S. citizens/nonpermanent residents only provide documentation verifying that sufficient funds have been deposited in a U.S. bank to cover all expenses while attending the College of Health Science.
8. Provide documentation that any additional coursework or service requirements stipulated by the Program have been completed.
9. Submit additional documents as required by the Office of Admissions.
10. Authorize and pass the Midwestern University criminal background check.

11. Sign and submit the Midwestern University Drug-Free Workplace and Substance Abuse Policy Statement.

12. Complete a physical exam and submit this form and a completed medical file as requested by the Office of Student Services.

13. Sign and submit a Credit Policy Statement.

Students who either fail to satisfy these matriculation requirements or omit or falsify information required on official admissions documents automatically forfeit their seat in the Program. Students accepted for admission who do not comply with stated timelines for submission of all required materials will not receive further notification from the College regarding forfeiture of their seat.

Articulation Agreement Between Midwestern University Programs

Students enrolled in a Midwestern University program are guaranteed an admission interview with another Midwestern University program if the student:
1. is currently in good standing in the academic program in which the student is enrolled and does not have any pending misconduct charges against him/her;
2. meets all admission requirements for the professional program of interest;
3. after a minimum of two full time quarters of study, achieves a minimum Midwestern University grade point average, derived from all courses completed at Midwestern, that is equal to or greater than 3.0; AND
4. achieves a score on the professional entrance exam (if required) that is not less than one standard deviation below the mean score for students that matriculated into the professional degree program in the previous year.

A guaranteed interview does not guarantee admission into the professional program.

Graduation Requirements

To qualify for graduation, students must:
1. Follow an approved course of study acceptable to the Biomedical Science Program Student Academic Review Committee;
2. Satisfactorily complete all courses with a minimum cumulative grade point average of 2.75 for the Master of Arts in Biomedical Science degree;
3. Satisfactorily complete the required minimum of 45 quarter hour credits for the Master of Arts in Biomedical Science degree program.
4. Receive a favorable recommendation for Master’s degree conferral from the Program faculty to the CHS Student Promotion and Graduation Committee;
5. Receive a favorable recommendation for Master’s degree conferral from the University Faculty Senate;
6. Settle all financial accounts with the University; and
7. Complete all graduation clearance requirements as instructed by the Office of the Registrar.

Curriculum Listing

Sample curriculum, course credits, and sequencing. Not all electives are offered every year.

Fall Quarter, (15 credits minimum)

Required Courses:
- BMED 502 Histology 3 credits
- BMED 500 Introduction to Capstone Course 1 credit
- BMED 550 Biochemistry 5 credits
- PHYS 471 Human Physiology I 4 credits
- MHPE 505 Learning Styles and Assessment 1 credit
Total 14 credits

Elective Course Options: 3 Elective Credits Required
- BMED 306 Health Career Planning 2 credits
- BMED 307 Medical Terminology 2 credits
- BMED 560 Biophysics 4 credits
- BMED 560L Biophysics Lab 2 credits
- BMED 404 Pre-professional Exam Preparation I 2 credits
- BMED 429 Epidemiology 1 credit
- BMED 440 Oncology 3 credits
- BMED 571 Medicinal Chemistry I 1.5 credits

Winter Quarter, (15 credits minimum)

Required Courses:
- BMED 503 Human Anatomy with Laboratory 4 credits
- BMED 522 Microbiology, Immunology and Virology I 3 credits
- BMED 574 Pharmacology I 3 credits
- PHYS 482 Human Physiology II 4 credits
Total 14 credits

Elective Course Options: 1 Elective Credit Required
- BMED 322 Issues in Bioterrorism 1 credit
- BMED 323 Medical Virology 4 credits
- BMED 341 Genetics I 3 credits
- BMED 375 Pharmacognosy 2 credits
- BMED 405 Pre-professional Exam Preparation II 2 credits
- BMED 450 Nutritional Biochemistry with Laboratory 4 credits
- BMED 570 Drug Literature Evaluation 1.5 credits
- BMED 572 Medicinal Chemistry II 1.5 credits

Spring Quarter, (15 credits minimum)

Required Courses:
- BMED 523 Microbiology, Immunology and Virology II 3 credits
- BMED 575 Pharmacology II 3 credits
- BMED 590 Capstone Course 3 credits
- ETHC 501 Introduction to Medical Ethics 3 credits
Total 12 credits
Elective Course Options: 3 Elective Credits Required

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BMED 409</td>
<td>Drugs of Addiction</td>
<td>2</td>
</tr>
<tr>
<td>BMED 504</td>
<td>Neuroanatomy</td>
<td>2</td>
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<tr>
<td>BMED 435</td>
<td>Pathophysiology</td>
<td>4</td>
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<tr>
<td>BMED 442</td>
<td>Genetics II</td>
<td>3</td>
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<tr>
<td>BMED 477</td>
<td>Dangerous Plants and Animals</td>
<td>2</td>
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<tr>
<td>BMED 511</td>
<td>Research Design and Statistics</td>
<td>3</td>
</tr>
<tr>
<td>BMED 573</td>
<td>Medicinal Chemistry III</td>
<td>1.5</td>
</tr>
</tbody>
</table>

**COURSE DESCRIPTIONS**

Prerequisites are listed for those courses with such requirements. When no prerequisite is listed in a course description, it is implied that there is no prerequisite.

**BMED 500 Introduction to Capstone Course**
This course is designed to help the student begin the necessary preparation for the Capstone course. Topics covered will include: introduction to research topics acceptable for the capstone course, the process of scientific writing, writing and reviewing case studies, literature discovery, and the format of the Capstone project.
1 credit

**BMED 502 Histology**
The purpose of histology is to acquire a basic foundation in the structure of cells, tissues, and selected organ systems. This knowledge assists the health care professional in interpreting laboratory test results and in assessing normal versus pathologic structure. The histology terminology taught is the vocabulary for continuing medical education used throughout the health care professional’s career.
3 credits

**BMED 503 Human Anatomy with Laboratory**
The aim of this course is to introduce students to the structure and formation of the human body. Structure is presented at the macroscopic level and some dissection of cadavers is involved.
4 credits
Prerequisite: BMED 502 Histology

**BMED 522, 523 Microbiology, Immunology and Virology I, II**
Two-quarter course series provides a fundamental understanding of bacteria, animal viruses, and the mammalian immune system. Concepts in microbiology are integrated to provide context for the study of interactions between organisms, from commensal to parasitic. Topics include morphology, population dynamics, genetics and control of microbes, and the components and functions of the immune system. Second quarter examines current topics.
3 credits each course
Prerequisite for BMED 523 Microbiology, Immunology and Virology II: BMED 522 Microbiology, Immunology and Virology I

**BMED 550 Biochemistry**
This course combines lectures, small group discussions (i.e. workshops) and group presentations. Lectures address structure/function relationships in major biomolecules, enzymes in biochemistry, human energy metabolism, and major pathways for human protein, carbohydrate, and lipid metabolism. They also address the regulation of metabolism, chemical signaling, and cell-cycle regulation, principles of gene expression, and basic genetics. Workshops feature clinical cases and/or problems related to buffers, enzyme function and hemostasis.
5 credits

**BMED 574, 575 Pharmacology I, II**
These courses introduce students to the general principles of drug action, drug dynamics and kinetics, toxicities, and therapeutic uses as related to humans. Students learn about common drugs affecting major organ systems of the body, namely, the autonomic nervous system, central nervous system, cardiovascular and renal systems. Specific drugs for the treatment of arrhythmias, angina, congestive heart failure, hypertension and hyperlipidemias will be discussed.
3 credits each course
Prerequisite for BMED 575 Pharmacology II: BMED 574 Pharmacology I

**BMED 590 Capstone Course**
This course represents the integrative summation of the required coursework in the Master’s curriculum. Successful completion of the course requires the preparation of a scholarly, literature-based portfolio on a topic of the student’s choice (usually a disease condition) and presentation of the topic in a research poster format. Throughout the course, the student is required to show progression on their topic through submission of outlines and drafts of their portfolio and poster presentation.
3 credits
Prerequisite: Successful completion of the first two quarters of the MA curriculum

**ETHC 501 Introduction to Medical Ethics**
This course aims to improve critical thinking skills, introduce argumentation and argumentative writing, and to familiarize the student with some of the prominent ethical dilemmas in contemporary clinical medicine.
3 credits

**MHPE 505 Learning Styles and Assessment**
In this elective course, students will identify their predominant learning styles and explore methods to improve study habits and learning effectiveness. The course will also explore barriers to learning and how they can be assessed and treated.
1 credit
PHYS 471, 482 Human Physiology I, II
In this two-quarter series, students are introduced to the basic physiological principles that underlie normal function of various organs and organ systems. Emphasis is given to developing an understanding of health in physiological terms and appreciating the diverse regulatory processes that maintain the homeostasis of the human body. Topics presented include a general study of cell function; properties of excitable cells; and the function of the neuromuscular, cardiovascular, renal, respiratory, digestive, endocrine, and reproductive systems.
4 credits each course

ELECTIVES
Not all electives are offered every year.

BMED 306 Health Career Planning
The purpose of this course is to prepare students to be highly competitive candidates for admission into postbaccalaureate programs in medicine, dentistry, pharmacy, and other health professional programs. This is accomplished by discussing the variety of healthcare professions available and assisting the student in the skills necessary to be a successful candidate (interviewing skills, writing a personal statement, creating a resume, and selecting an appropriate professional school).
2 credits

BMED 307 Medical Terminology
This course is intended to broaden the student’s understanding of the lexicon for the medical sciences. The course format includes lectures, readings, and discussions designed to facilitate an understanding of the roots of medical terms. Upon completion of the course, students are expected to describe and apply the basic principles of root words, suffixes, and prefixes of medical terms.
2 credits

BMED 322 Issues in Bioterrorism
Course examines many aspects of the bioterrorism threat, including history, agents, response preparation and incident management. Facets of bioterrorism are presented by experts in government and academia and integrated by the class in a final tabletop incident exercise.
1 credit

BMED 323 Medical Virology
This course examines the unique aspects of key virus groups and their structural, biochemical, and biophysical properties. The discussions also include viral agents of medical and economic importance, their epidemiology, pathogenesis and control.
4 credits

BMED 341, 442 Genetics I, II
These courses introduce the foundations of the normal transmission of dominant and recessive genetic traits, risk factors, and genetic mapping. Included is an introduction to human genetics and the fundamental principles of inheritance.
3 credits each course
Prerequisite for BMED 442 Genetics II: BMED 341 Genetics I

BMED 375 Pharmacognosy
Pharmacognosy is the discipline involved with the discovery, processing and formulation of drugs from natural sources. This course will cover the major classes of natural drugs including the glycosides, terpenoids, the alkaloids, proteins, antibiotics and vaccines. In addition, newer sources of natural drugs such as the dynamic marine pharmacognosy and parmacobiotechnology will be introduced.
2 credits

BMED 404, 405 Pre-Professional Exam Preparation I, II
This course serves as a preparation for health career related professional exams. Relevant equations, concepts, and material are reviewed throughout this course. Mock exams and weekly quizzes help prepare students for the actual test.
2 credits each course
Prerequisite for BMED 405 Pre-Professional Exam Preparation II: BMED 404 Pre-Professional Exam Preparation I

BMED 409 Drugs of Addiction
This course will provide students with an understanding of the psychological, as well as the pharmacological, effects of the common drugs of addiction. The following drugs and drug classes will be reviewed: alcohol, stimulants, nicotine, hallucinogenics, inhalants, sedatives, and opioids. Topics covered include preferred routes of administration, absorption, distribution, mechanisms of action, tolerance and withdrawal. Particular emphasis will be placed on abuse potential, addictive behaviors and societal impact associated with each substance.
2 credits

BMED 429 Epidemiology
This course examines the cause, spread, and control of communicable disease. Students are provided with a view of epidemiological methods, the historical content for the effects of global microbe transmission, and the evolution of public health measures in response to epidemics. Health risk factors are identified as students study preventive medicine. Students are also exposed to general epidemiological statistics and their meaning in examining health policy, public health, clinical interventions, and health outcomes.
1 credit
BMED 435 Pathophysiology
This course emphasizes the etiology, pathogenesis, and pathophysiology of selected disease states in humans. The normal and abnormal histology of each organ is also discussed. The course is designed to build on the skills learned in anatomy and physiology.
4 credits
Prerequisites: BMED 502 Histology, PHYS 471 Physiology I

BMED 440 Oncology
This course is an introduction to cancer and the biological aspects of tumor growth with emphasis on the development and progression of cancer. Selected methods of cancer diagnosis and therapy are discussed based on reviews of current literature.
3 credits

BMED 450 Nutritional Biochemistry with Laboratory
This course examines the impact of nutrition, exercise, and wellness in both healthy and debilitated patient populations. Students gain exposure to various teaching and diagnostic tools that aid in assessing wellness.
4 credits

BMED 477 Dangerous Plants and Animals
This course focuses on the recognition and identification of dangerous plants and animals found primarily, but not exclusively, in Arizona. The student will learn to assess poisoning situations and recommend management scenarios. Lectures and workshops involving case studies and field trips will be utilized.
2 credits

BMED 504 Neuroanatomy
This is an integrated, interdisciplinary course in which students learn to identify and describe the principal structural components and corresponding functions of the nervous system and correlate underlying lesions involving these structures with neurologic deficits and dysfunctions. Emphasis is given to understanding various aspects of the human neurosciences, such as the anatomy and physiology of pain and commonly occurring disease states likely to be encountered in professional practice.
2 credits
Prerequisites: BMED 502 Histology, BMED 503 Human Anatomy with Laboratory

BMED 511 Research Design and Statistics
This course provides an overview of research designs and basic statistical approaches used in basic science, applied and descriptive research. The course teaches basic research skills used in all disciplines of the health professions, lays the groundwork for each student’s master’s project, and aids in the interpretation of research presented in the literature.
3 credits

BMED 560 Biophysics
This course examines the fundamental principles underlying the study of physiology, biochemistry, and medicine. The main focus will be on the principles of fluid flow in the respiratory and cardiovascular systems. Electrophysiology, thermodynamics, and thermal regulation will also be studied.
4 credits

BMED 560L Biophysics Laboratory
Laboratory associated with BMED 560
2 credits

BMED 570 Drug Literature Evaluation
This course introduces, discusses and applies primary, secondary and tertiary references commonly encountered in medical/pharmaceutical education.
1.5 credits

BMED 571, 572, 573 Medicinal Chemistry I, II, III
These courses discuss the chemistry of therapeutic agents – drugs. BMED 571 focuses on functional chemical groups and drug metabolism. BMED 572 and BMED 573 are coupled to the two pharmacology core courses by integrating the importance of chemical structure-activity relationships on a topic per topic basis.
1.5 credits each
Prerequisite for BMED 572 Medicinal Chemistry II: BMED 571 Medicinal Chemistry I;
Prerequisite for BMED 573 Medicinal Chemistry III: BMED 572 Medicinal Chemistry II

MASTER OF BIOMEDICAL SCIENCES DEGREE PROGRAM

MISSION
The mission of the Master of Biomedical Science Program is two-fold: 1) to graduate students who are competitive applicants for admission into postbaccalaureate programs in the health sciences (medicine, dentistry, pharmacy, or other health professional programs), and 2) to graduate students who have the requisite knowledge and skills to be competitive for admission into Ph.D. programs or to pursue careers in teaching and research. Graduates will also be prepared to pursue careers in the pharmaceutical, biotechnology and biosafety industries, as well as government regulatory agencies.

DEGREE DESCRIPTION
The Master of Biomedical Science (MBS) Program is designed as a full-time, graduate-level program that provides the student with a broad background in the biomedical sciences, laboratory experiences, and research skills. The
curriculum is designed to prepare and graduate students who have extensive knowledge, technical skills, and expertise to function in a variety of biomedical professions. These include careers as technicians and supervisors in the biotechnology, biosafety, and pharmaceutical industry; research personnel in biomedical science laboratories; employees in governmental and regulatory agencies; and faculty for undergraduate teaching.

The 72-quarter-hour (minimum) master’s degree curriculum is usually completed in 21-24 months. All students must complete the program within four years of matriculation, excepting approved leaves of absence. All students are required to complete a research project approved by the student’s research committee. The required curriculum includes basic science courses in anatomy, biochemistry, histology, microbiology, immunology and virology, pharmacology, physiology, and neuroanatomy. In addition to the basic science courses, the student must take a series of research courses that prepares them for a research project and thesis that is the culmination of the degree program. The research courses include Research Topics and Methods, Research Design and Statistics, Advanced Research Design and Statistics, Good Laboratory Practice, Journal Club, Biotechnology, Ethics of Research and Experimentation, Research Literature Review, Research Protocol, Research Seminar, Laboratory Research, and Research Thesis. Finally, a series of electives and independent study courses are available to complete the 72-quarter-hour requirement. The electives allow the student to further specify an area of interest to better prepare them for a career in their chosen field.

**ADMISSIONS**

**Admission Requirements**

To be considered for admission to the Master of Biomedical Science degree program, applicants must submit the following documented evidence:

1. Completion of a bachelor’s degree (B.A. or B.S.) or higher, preferably with a major in the sciences, from a regionally accredited college or university
2. A minimum cumulative grade point average (GPA) of 2.75 on a scale of 4.00 in all coursework completed for their bachelor’s or higher degree program
3. Two letters of recommendation (or one committee letter from applicant’s college or university)
4. Official transcripts from each college or university attended
5. Test scores from one of the following: Graduate Record Examination (GRE), Medical College Admissions Test (MCAT), Pharmacy College Admissions Test (PCAT), Dental Admissions Test (DAT), or other professional program admissions exams

6. Completion of the typical prerequisite coursework for admission into medical, dental or pharmacy schools, including biology, general chemistry, organic chemistry, physics, mathematics, and English; students are responsible for determining the prerequisites for the health professional program and institution of their choice
7. Completion of the prerequisite courses with grades of C or better (grades of C- are not acceptable)
8. Passage of the Midwestern University criminal background check
9. Commitment to abide by the Midwestern University Drug-Free Workplace and Substance Abuse Policy

A limited number of transfer credits from other institutions are allowed: 6 semester (9 quarter) hours for the Master in Biomedical Science.

**Application Process and Deadlines**

Individuals interested in applying for admission to the Master of Biomedical Sciences Program must complete an application online from our website at www.midwestern.edu.

To be considered for admission, applicants must submit an application packet that includes the following:

1. A completed Application for Admission to the Master of Biomedical Science Program
2. A nonrefundable, nonwaivable application fee ($50 for the Master’s degree program)
3. Two letters of recommendation (or one committee letter); the Office of Admissions will accept signed and sealed letters from prehealth advisors or committees, science professors, and health professionals
4. Official transcripts from each college or university attended. These transcripts must be signed and sealed by the registrar at each institution.
5. Scores from the Medical College Admissions Test (MCAT), Pharmacy College Admissions Test (PCAT), Graduate Record Examination (GRE), Dental Admissions Test (DAT), or other professional program admissions tests

The Biomedical Science Program uses a rolling admission process in which completed applications are reviewed and decisions are made at regular intervals during the admissions cycle. The Master of Biomedical Science Program begins in the Fall Quarter. Admission to the Biomedical Science Program is considered on a competitive basis for applicants who have achieved the required prerequisites. Multiple criteria are used to select the most qualified candidates, including selection of those students the Admissions Committee feels would benefit the most from the Program. Selection decisions for the Program are made by the Biomedical Science Program Admissions Committee with the approval of the Program Director and the Dean of the
applications early in the admission cycle. To maximize their competitiveness within our rolling admission process, candidates are advised to submit their completed applications early in the admission cycle.

International Applicants
An international student must satisfy all of the requirements for admission to the college or program that apply to a student who has completed all of his/her prerequisite coursework in the U.S. at a regionally accredited college or university. In addition, an international student must demonstrate proficiency in the English language.

This may be accomplished by satisfying both of the following requirements:

1. The international student has completed a minimum of two full time semesters or three full time quarters of instruction at a postsecondary institution in the United States. Completed coursework must include a minimum of 50% of the prerequisite science coursework for the college or program of interest, 6 semester hours of non-remedial English composition, and 3 semester hours of public speaking/speech.

2. The international student must submit official TOEFL scores. A minimum passing score is 550 (paper version, maximum score 677) or 100 (internet version, maximum score 120). The TOEFL scores must be from an exam taken within two years of the anticipated date of matriculation into the college or program. If the international student wishes to receive credit for prerequisite coursework completed at a college or university outside of the United States, he/she must submit an official, detailed, course-by-course evaluation of this coursework. The student must obtain this evaluation from one of the following services:

   1. Educational Credential Evaluators (ECE): 414/289-3400 or Fax 414/289-3411 (www.ece.org, e-mail: info@ece.org)
   3. World Education Service (WES): 212/966-6311 or Fax 212/739-6100 (www.wes.org, e-mail: info@wes.org) Based on the official foreign transcript evaluation and the grade earned in the course(s), the college or program will decide if it will apply any of these credits toward fulfillment of its prerequisites.

Interview and Selection Process
After receiving completed application packets, the information provided is verified to determine whether all prerequisite coursework has been completed satisfactorily or will be completed prior to potential matriculation and also to verify the cumulative GPAs for all completed courses. The application materials are reviewed to determine eligibility for interviews, which are offered by invitation only. A phone interview is possible for those applicants who are unable to schedule an interview in person. Completed applications and interview summaries are forwarded to the Biomedical Sciences Program Admissions Committee. Applicants will receive notification in writing of admissions decisions.

Please Note: Applicants may track the receipt of their application materials and the status of their files on the University’s web site using instructions for accessing account information that will be sent by the Office of Admissions after receipt of their applications. Applicants are responsible for notifying the Office of Admissions of any changes in their telephone number, mailing address or e-mail address. All requests for application withdrawals must be made in writing to the Office of Admissions:

   Midwestern University
   Office of Admissions
   19555 N. 59th Avenue
   Glendale, AZ 85308
   888/247-9277 or 623/572-3215
   admisss@midwestern.edu

Technical Standards
A candidate must have abilities and skills in five areas: I) observation; II) communication; III) motor; IV) intellectual, conceptual, integrative, and quantitative; and V) behavioral and social. Technological compensation can be made for some limitation in certain of these areas, but a candidate should be able to perform in a reasonably independent manner.

I. Observation: The candidate must be able to accurately make observations at a distance and close at hand. Observation necessitates the functional use of the sense of vision and somatic sensation and is enhanced by the functional use of all of the other senses.

II. Communication: The candidate must be able to communicate effectively, efficiently and sensitively in both oral and written form and be able to perceive nonverbal communication.

III. Motor: Candidates must be able to coordinate both gross and fine muscular movements, maintain equilibrium and have functional use of the senses of touch and vision. The candidate must possess sufficient postural control, neuromuscular control and eye-to-hand coordination to perform profession-specific skills and tasks.

IV. Intellectual, Conceptual, Integrative and Quantitative Abilities: The candidate must be able to problem solve, measure, calculate, reason, analyze, record and synthesize large amounts of information in a timely manner. The candidate must be able to comprehend three-dimensional relationships and understand spatial relationships.
V. Behavioral and Social Attributes: The candidate must possess the emotional health required for full utilization of his/her intellectual abilities, the exercise of good judgment and the consistent, prompt completion of all responsibilities and the development of mature, sensitive and effective relationships. Candidates must be able to tolerate physically, mentally and emotionally taxing workloads and to function effectively under stress. The candidate must be able to adapt to changing environments, to display flexibility, and to learn to function in the face of uncertainties. Compassion, integrity, concern for others, effective interpersonal skills, willingness and ability to function as an effective team player, interest and motivation to learn are all personal qualities required during the educational process.

Candidates are required to certify that they understand and meet these Technical Standards. Candidates must provide such certification prior to matriculation. Candidates who may not meet the Technical Standards must inform the Director of Admissions, who will then contact the Dean of Students. The Dean of Students, in consultation with the academic dean (and program director), will identify and discuss what accommodations, if any, the College(Pro)gram would need to make that would allow the candidate to complete the curriculum. The College(Pro)gram is not able to grant accommodations that alter the educational standards of the curriculum. Students must meet the Technical Standards for the duration of enrollment in their professional program.

Matriculation Process
The matriculation process begins after applicants receive notification of their acceptance into the Biomedical Sciences Program. Students must return both their signed matriculation agreement and an initial deposit to the Office of Admissions. Students must also:

1. Submit deposit monies by the date designated in their matriculation documents. Deposits are applied toward the first quarter’s tuition.
2. Submit official final transcripts from all colleges attended post-high school by the deadline of two weeks (14 calendar days) prior to the first day of classes. Students who are accepted to MWU less than one month prior to the first day of classes will have 30 calendar days from the date of their acceptance to submit all official transcripts to the Office of Admissions. Any special circumstances or requests for exceptions to this policy must be sent to and approved by the Office of the Dean of the College. Students who fail to submit all official final transcripts by the stated deadline may jeopardize their acceptance or continued enrollment in the College.
3. Successfully complete all outstanding prerequisites with grades of C or better (grades of C- are not acceptable for any prerequisite course)
4. Submit proof of completed required immunizations.
5. Submit proof of medical and disability insurance coverage. Students may select either a plan offered by an MWU-approved carrier or a comparable plan offered by an outside carrier of their choice.
6. Meet the Technical Standards for the Program.
7. Provide documentation verifying that sufficient funds have been deposited in a U.S. bank to cover all expenses while attending the College of Health Sciences (for non-U.S. citizens/nonpermanent residents only).
8. Provide documentation that any additional coursework or service requirements stipulated by the Program have been completed.
9. Submit additional documents as required by the Office of Admissions.
10. Authorize and pass the Midwestern University criminal background check.
11. Sign and submit the Midwestern University Drug-Free Workplace and Substance Abuse Policy Statement.
12. Complete a physical exam and submit this form and a completed medical file as requested by the Office of Student Services.
13. Sign and submit a Credit Policy Statement.

Students who either fail to satisfy these matriculation requirements or omit or falsely information required on official admissions documents automatically forfeit their seat in the Program. Students accepted for admission who do not comply with stated timelines for submission of all required materials will not receive further notification from the College regarding forfeiture to their seat.

Articulation Agreement Between Midwestern University Programs
Students enrolled in a Midwestern University program are guaranteed an admission interview with another Midwestern University program if the student:

1. is currently in good standing in the academic program in which the student is enrolled and does not have any pending misconduct charges against him/her;
2. meets all admission requirements for the professional program of interest;
3. after a minimum of two full time quarters of study, achieves a minimum Midwestern University grade point average, derived from all courses completed at Midwestern, that is equal to or greater than 3.0; AND
4. achieves a score on the professional entrance exam (if required) that is not less than one standard deviation below the mean score for students that matriculated into the professional degree program in the previous year.

A guaranteed interview does not guarantee admission into the professional program.
GRADUATION REQUIREMENTS

To qualify for graduation, students must:

1. Follow an approved course of study acceptable to the Biomedical Science Program Student Academic Review Committee;
2. Satisfactorily complete all courses with a minimum cumulative grade point average of 2.75 for the Master of Arts in Biomedical Science degree;
3. Satisfactorily complete the required minimum of 72 quarter hour credits for the Master of Biomedical Science degree program.
4. Receive a favorable recommendation for Master's degree conferral from the Program faculty to the CHS Student Promotion and Graduation Committee;
5. Receive a favorable recommendation for Master's degree conferral from the University Faculty Senate;
6. Settle all financial accounts with the University; and
7. Complete all graduation clearance requirements as instructed by the Office of the Registrar.

CURRICULUM LISTING

Sample curriculum, course credits, and sequencing. Not all electives are offered every year.

Fall Quarter, First Year (20-23 credits)
Core Requirements
BMED 502  Histology  3 credits
BMED 455  Biotechnology  3 credits
BMED 510  Research Topics and Methods  2 credits
BMED 550  Biochemistry  5 credits
ETHC 505  Ethics of Research and Experimentation  3 credits
PHYS 471  Human Physiology I  4 credits

Elective Course Options
BMED 307  Medical Terminology  2 credits
BMED 560L  Biophysics Lab  2 credits
BMED 404  Pre-professional Exam Preparation I
BMED 421  Prion Diseases  1 credit
BMED 428  Public Health  3 credits
BMED 429  Epidemiology  1 credit
BMED 440  Oncology  3 credits
BMED 571  Medicinal Chemistry I  1.5 credits
MHPE 505  Learning Styles and Assessment  1 credit

Winter Quarter, First Year (17-23 credits)
Core Requirements
BMED 503  Human Anatomy w/Lab  4 credits
BMED 522  Microbiology, Immunology and Virology I
BMED 551  Research Literature Review  2 credits
BMED 574  Pharmacology I  3 credits
BMED 605  Journal Club  1 credit
PHYS 482  Human Physiology II  4 credits

Elective Course Options
BMED 322  Issues in Bioterrorism  1 credit
BMED 341  Genetics I  3 credits
BMED 375  Pharmacognosy  2 credits
BMED 401  Biology of Human Aging  1 credit
BMED 405  Pre-professional Exam Preparation II
BMED 450  Nutritional Biochemistry and Laboratory  4 credits
BMED 512  Information Systems for Research and Education  2 credits
BMED 572  Medicinal Chemistry II  1.5 credits

Spring Quarter, First Year (15-23 credits)
Core Requirements
BMED 504  Neuroanatomy  2 credits
BMED 511  Research Design and Statistics  3 credits
BMED 523  Microbiology, Immunology and Virology II
BMED 552  Research Protocol  2 credits
BMED 575  Pharmacology II  3 credits
BMED 580  Laboratory Research  1-10 credits
BMED 606  Journal Club  1 credit

Elective Course Options
BMED 324  Parasitology  4 credits
BMED 409  Drugs of Addiction  2 credits
BMED 414  Embryology  2 credits
BMED 424  Applied Microbiology  3 credits
BMED 435  Pathophysiology  4 credits
BMED 442  Genetics II  3 credits
BMED 448  Genomics and Proteomics  4 credits
BMED 477  Dangerous Plants and Animals  2 credits
BMED 573  Medicinal Chemistry III  1.5 credits
CVSP 552  Cardiovascular Pathology  3 credits

Summer Quarter, Second Year (12-17 credits)
Core Requirements
BMED 514  Advanced Research Design and Statistics  3 credits
BMED 520  Good Laboratory Practice  3 credits
BMED 581  Laboratory Research  1-10 credits
BMED 607  Journal Club  1 credit

Fall Quarter, Second Year (12-17 credits)
Core Requirements
BMED 582  Laboratory Research  1-10 credits
BMED 595  Research Thesis  1-4 credits
BMED 608  Journal Club  1 credit

Elective Course Options
BMED 306  Health Career Planning  2 credits
BMED 307  Medical Terminology  2 credits
BMED 360  Biophysics  4 credits
BMED 360L  Biophysics Lab  2 credits
BMED 404  Pre-professional Exam Preparation I
BMED 440  Oncology  3 credits
BMED 571  Medicinal Chemistry I  1.5 credits
MHPE 505  Learning Styles and Assessment  1 credit
Winter Quarter, Second Year (12-18 credits)

Core Requirements
- BMED 553 Research Seminar 1 credit
- BMED 583 Laboratory Research 1-10 credits
- BMED 596 Research Thesis 1-4 credits
- BMED 609 Journal Club 1 credit

Elective Course Options
- BMED 322 Issued in Bioterrorism 2 credits
- BMED 323 Medical Virology 4 credits
- BMED 341 Genetics I 3 credits
- BMED 375 Pharmacognosy 2 credits
- BMED 405 Pre-professional Exam Preparation II 2 credits
- BMED 450 Nutritional Biochemistry with Laboratory 4 credits
- BMED 513 Writing for Publication 3 credits
- BMED 572 Medicinal Chemistry II 1.5 credits

Spring Quarter, Second Year (8-16 credits)

Core Requirements
- BMED 584 Laboratory Research 1-8 credits
- BMED 597 Research Thesis 2-3 credits

Elective Course Options
- BMED 409 Drugs of Addiction 2 credits
- BMED 419 Neuroanatomy 2 credits
- BMED 435 Pathophysiology 4 credits
- BMED 442 Genetics II 3 credits
- BMED 477 Dangerous Plants and Animals 2 credits
- BMED 518 Grant Writing in the Health Sciences 3 credits
- BMED 573 Medicinal Chemistry III 1.5 credits

Electives Available Each Quarter in Year 2
- BMED 535, 536 Advances Topics I, II 3 credits each
- BMED 540, 541 Special Topics (Independent Studies) 1-3 credits each

With approval of the Program Coordinator, a limited number of electives may also be taken from the Master of Arts in Bioethics and Master of Health Professions Education curriculum.

MWU/CHS Biomedical Science Program reserves the right to alter its curriculum however and whenever it deems appropriate.

COURSE DESCRIPTIONS

Prerequisites are listed for those courses with such requirements. When no prerequisite is listed in a course description, it is implied that there is no prerequisite.

BMED 455 Biotechnology
This course covers recent biotechnical techniques and their application in the biotech industry. Recombinant DNA, monoclonal antibodies, PCR, and other techniques are discussed as well as background related to production and use.
3 credits

BMED 502 Histology
The purpose of histology is to acquire a basic foundation in the structure of cells, tissues, and selected organ systems. This knowledge assists the health care professional in interpreting laboratory test results and in assessing normal versus pathologic structure. The histology terminology taught is the vocabulary for continuing medical education used throughout the health care professional's career.
3 credits

BMED 503 Human Anatomy with Laboratory
The aim of this course is to introduce students to the structure and formation of the human body. Structure is presented at the macroscopic level and some dissection of cadavers is involved.
4 credits
Prerequisite: BMED 502 Histology

BMED 504 Neuroanatomy
This is an integrated, interdisciplinary course in which students learn to identify and describe the principal structural components and corresponding functions of the nervous system and correlate underlying lesions involving these structures with neurologic deficits and dysfunctions. Emphasis is given to understanding various aspects of the human neurosciences, such as the anatomy and physiology of pain and commonly occurring disease states likely to be encountered in professional practice.
2 credits

BMED 510 Research Topics and Methods
The course explores a variety of research and professional issues pertinent to the basic scientist such as current policy, bioethical issues, and funding issues. Fundamentals of the scientific method and its limitations, research design, descriptive statistics, and information gathering are also discussed. The format of the class includes both lecture and small group discussion. The course is intended to provide each student with a broad understanding of professional research topics and issues with a view toward stimulating ideas for the master's research project.
2 credits

BMED 511 Research Design and Statistics
This course provides an overview of research designs and basic statistical approaches used in basic science, applied and descriptive research. The course teaches basic research skills used in all disciplines of the health professions, lays the
groundwork for each student’s master’s project, and aids in the interpretation of research presented in the literature.
3 credits

**BMED 514 Advanced Research Design and Statistics**
This course follows from BMED 511 and reviews advanced statistics used in biomedical and educational research. Topics covered include two and three-way analysis of variance, multiple regression and correlation analysis, nested designs, post hoc analysis, advanced non-parametric analysis, meta analysis, survey design, etc.
3 credits
Prerequisite: BMED 511 Research Design and Statistics

**BMED 520 Good Laboratory Practice**
This course reviews requirements and regulations of the Food and Drug Administration, Environmental Protection Agency and International Organization for Economic Cooperation and Development. Compliance issues and inspection procedures are covered for organizations involved in product safety testing in animals and the environment. A historical perspective is presented as to the development of the regulations and non-traditional safety testing. Quality assurance programs and management’s responsibility will also be discussed.
3 credits

**BMED 522, 523 Microbiology, Immunology and Virology I, II**
Two-quarter course series provides a fundamental understanding of bacteria, animal viruses, and the mammalian immune system. Concepts in microbiology are integrated to provide context for the study of interactions between organisms, from commensal to parasitic. Topics include morphology, population dynamics, genetics and control of microbes, and the components and functions of the immune system. Second quarter examines current topics.
3 credits each course
Prerequisite for BMED 523 Microbiology, Immunology and Virology II: BMED 522 Microbiology, Immunology and Virology I

**BMED 550 Biochemistry**
This course combines lectures, small group discussions (i.e. workshops) and group presentations. Lectures address structure/function relationships in major biomolecules, enzymes in biochemistry, human energy metabolism, and major pathways for human protein, carbohydrate, and lipid metabolism. They also address the regulation of metabolism, chemical signaling, and cell-cycle regulation, principles of gene expression, and basic genetics. Workshops feature clinical cases and/or problems related to buffers, enzyme function and hemostasis.
5 credits

**BMED 551 Research Literature Review**
This course is an independent study course designed to give master’s students the opportunity to perform the literature research necessary for completion of the Master of Biomedical Science degree.
2 credits

**BMED 552 Research Protocol**
This course is an independent study course designed to give master’s students the opportunity to develop a specific, comprehensive research protocol that will be implemented during completion of the Master of Biomedical Science Degree.
2 credits
Prerequisite: BMED 551 Research Literature Review

**BMED 553 Research Seminar**
This course is designed to expose students to a variety of scientific disciplines and projects, accomplished by attendance at the research faculty seminar series. Additionally, each student will be expected to present a seminar to the faculty on the subject of his or her choice.
1 credit

**BMED 574, 575 Pharmacology I, II**
These courses introduce students to the general principles of drug action, drug dynamics and kinetics, toxicities, and therapeutic uses as related to humans. Students learn about common drugs affecting major organ systems of the body, namely, the autonomic nervous system, central nervous system, cardiovascular and renal systems. Specific drugs for the treatment of arrhythmias, angina, congestive heart failure, hypertension and hyperlipidemias will be discussed.
3 credits each course
Prerequisite for BMED 575 Pharmacology II: BMED 574 Pharmacology I

**BMED 580-589 Laboratory Research**
The program culminates in a research project involving laboratory or clinical research. It is the student’s responsibility to identify a research mentor and laboratory (or clinical setting) in which to conduct their research. The student is required to take one or more credits of Laboratory Research each quarter beginning the summer of the second year. The number of credits taken each quarter will depend on the research project, elective course load and the number of credits needed to retain full time status. A minimum of 10 credit hours is required for the degree. There is no limit to number of research credits that can be taken.
1-10 credits per quarter
Prerequisites: BMED 510 Research Topics and Methods, BMED 511 Research Design and Statistics, BMED 551 Research Literature Review, BMED 552 Research Protocol
This research project thesis is the culmination of the program. The thesis describes the objective of the project, the research question, design of the project, data analysis and conclusions based on the information gathered. The student’s Research Committee approves the proposal, oversees the Research Project, and approves the final Research Thesis. The number of credits taken each quarter will depend on the research project, laboratory research and elective course load and number of credits needed to retain full time status. A minimum of 4 credit hours is required for the degree. There is no limit to the number of research thesis credits that can be taken.

1-4 credits per course

Prerequisites: BMED 510 Research Topics and Methods, BMED 511 Research Design and Statistics, BMED 551 Research Literature Review, BMED 552 Research Protocol

**BMED 605-609 Journal Club**

This 5-quarter sequence consists of weekly meetings for in-depth discussions of current research articles. These classes will greatly enhance the opportunities for students to develop their critical thinking skills. In the Winter Quarter, both first-year and second-year students will be in the class, allowing interactions between advanced and beginning students.

1 credit

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**ETHC 505 Ethics of Research and Experimentation**

This class is intended to give students a broad overview of research ethics and regulation, especially as it relates to human research. Students will obtain an understanding of the moral basis of research ethics including scientific integrity, research with human subjects, informed consent, vulnerable populations, privacy and the confidentiality of records, conflicts of interest, and research on animals.

3 credits

**PHYS 471, 482 Human Physiology I, II**

In this two-quarter series, students are introduced to the basic physiological principles that underlie normal function of various organs and organ systems. Emphasis is given to developing an understanding of health in physiological terms and appreciating the diverse regulatory processes that maintain the homeostasis of the human body. Topics presented include a general study of cell function; properties of excitable cells; and the function of the neuromuscular, cardiovascular, renal, respiratory, digestive, endocrine, and reproductive systems.

4 credits each course

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**Electives**

Not all electives are offered every year.

**BMED 307 Medical Terminology**

This elective is intended to broaden the students’ understanding of the lexicon for the medical sciences. The course format includes lectures, readings, and discussions designed to facilitate an understanding of the roots of medical terms. Upon completion of the course, students are expected to describe and apply the basic principles of root words, suffixes, and prefixes of medical terms.

2 credits

**BMED 322 Issues in Bioterrorism**

Course examines many aspects of the bioterrorism threat, including history, agents, response preparation and incident management. Facets of bioterrorism are presented by experts in government and academia and integrated by the class in a final tabletop incident exercise.

1 credit

**BMED 323 Medical Virology**

This course examines the unique aspects of key virus groups and their structural, biochemical, and biophysical properties. The discussions also include viral agents of medical and economic importance, their epidemiology, pathogenesis and control.

4 credits

**BMED 324 Parasitology**

This course provides the student with an opportunity to study a series of basic concepts within the field of parasitology. This course is designed to be highly interactive.

4 credits

**BMED 341, 442 Genetics I, II**

These courses introduce the foundations of the normal transmission of dominant and recessive genetic traits, risk factors, and genetic mapping. Included is an introduction to human genetics and the fundamental principles of inheritance.

3 credits each course

Prerequisite for BMED 442 Genetics II: BMED 341 Genetics I

**BMED 375 Pharmacognosy**

Pharmacognosy is the discipline in Pharmacy involved with the discovery, processing and formulation of drugs from natural sources. This course will cover the major classes of natural drugs including the glycosides, terpenoids, the alkaloids, proteins, antibiotics and vaccines. In addition, newer sources of natural drugs such as the dynamic marine pharmacognosy and futuristic pharmacobiotechnology will be introduced.

2 credits
BMED 401 Biology of Human Aging
This course emphasizes in depth discussion of information from current research. It emphasizes the biological aspects of human aging at the molecular, cellular, and system level. Selected methods of diagnosis and therapy will be discussed.
1 credit

BMED 404, 405 Pre-Professional Exam Preparation I, II
This course serves as a preparation for the Medical College Admissions Test. Relevant equations, concepts, and material are reviewed throughout this course. Mock exams and weekly quizzes help prepare students for the actual test.
2 credits per quarter

BMED 409 Drugs of Addiction
This course provides the student with a detailed understanding of the psychological and pharmacological effects of the common drugs of addiction. The following drugs and drug classes will be reviewed: alcohol, stimulants, nicotine, hallucinogens, inhalants, sedatives, and opioids. Topics covered include preferred routes of administration, absorption, distribution, mechanisms of action, tolerance and withdrawal. Particular emphasis is placed on abuse potential, addictive behaviors, and societal impact associated with each substance.
2 credits

BMED 414 Embryology
This course is designed to introduce students to the formation of the human body. In addition to learning about the normal development, students will learn about numerous types of birth defects.
2 credits

BMED 421 Prion Diseases
In-depth discussion of information from current research on prions and prion diseases. The focus is on the cellular, biochemical, and genetic aspects of these fascinating and deadly neurodegenerative diseases.
1 credit

BMED 424 Applied Microbiology
This lecture course covers the uses of microbes in industrial applications, e.g., fermentation, foods, and pharmaceuticals.
3 credits

BMED 428 Public Health
This course looks at the protection of health and the promotion of human comfort and well-being through the management of wastewater, potable water and food sanitation. Infectious diseases transmitted by food and water are discussed as well as treatment of other wastes generated by humans such as solid and radiological wastes.
3 credits

BMED 429 Epidemiology
This course examines the cause, spread, and control of communicable disease. Students are provided with a view of epidemiological methods, the historical content for the effects of global microbe transmission, and the evolution of public health measures in response to epidemics. Health risk factors are identified as students study preventive medicine. Students are also exposed to general epidemiological statistics and their meaning in examining health policy, public health, clinical interventions, and health outcomes.
1 credit

BMED 435 Pathophysiology
This course emphasizes the etiology, pathogenesis, and pathophysiology of selected disease states in humans. It is designed to build on the skills learned in the anatomy and physiology sequence.
4 credits

BMED 440 Oncology
This course is an introduction to cancer and the biological aspects of tumor growth with emphasis on the development and progression of cancer. Selected methods of cancer diagnosis and therapy are discussed based on reviews of current literature.
3 credits

BMED 448 Genomics & Proteomics
This course details: 1) the methods used to generate and interpret genome sequence in the Human Genome Project, and 2) the applications of this new genomic data to the diagnosis and treatment of disease.
4 credits

BMED 450 Nutritional Biochemistry and Laboratory
This course examines the impact of nutrition, exercise, and wellness in both healthy and debilitated patient populations. Students gain exposure to various teaching and diagnostic tools that aid in assessing wellness.
4 credits

BMED 477 Dangerous Plants and Animals
This course focuses on the recognition and identification of dangerous plants and animals found primarily, but not exclusively, in Arizona. The student will learn to assess poisonous situations and recommend management scenarios. Lectures and workshops involving case studies and field trips will be utilized.
2 credits

BMED 512 Information Systems for Education and Research
This course is intended to expose students to information management and retrieval methods. Students gain hands-on experience in the use of various computer-based tools (CD-
ROMs, library catalogs, databases, Internet/Web, etc.) and learn the fundamental principles of library research. Students also learn how to locate and access information and how to evaluate the quality of the information retrieved.

2 credits

**BMED 513 Writing for Publication**
This elective course is designed to provide students with the tools necessary to prepare manuscripts for publication. Among the areas practiced and discussed are locating an appropriate venue, performing a literature review, writing a manuscript, and understanding reviewing techniques. The goal of this course is to provide students with the step-by-step instructions to take them from the research process through publication and dissemination.

3 credits

**BMED 518 Grant Writing in the Health Sciences**
This course is designed to teach students the process of writing a complete grant that meets requirements for federal grant applications. Each student learns to identify appropriate funding sources, plan a research project, organize data, write a research project budget, develop specific aims, and reference the most appropriate literature. The course culminates in a written grant proposal suitable for submission.

3 credits

**BMED 535, 536 Advanced Topics I, II**
The Advanced Topic Series is an opportunity for students to receive individualized or small group instruction on selected advanced topics in any of the basic science disciplines. The format for instruction includes mentoring by individual faculty, case study discussion, review of landmark publications, and class presentations. Students are expected to master major concepts specific to the discipline selected. The mentoring faculty individualizes evaluation of the students.

3 credits per quarter

**BMED 540 Special Topics**
This independent study-style course is intended to allow students to explore topics of interest not otherwise covered in the curriculum. Students must identify a faculty member to oversee and approve the independent study and meet with faculty to discuss the topic and formulate a plan of study. Students will present their findings at the end of the course. Usually, the course will involve an academic review of pertinent literature and the writing of a review paper.

1-3 credits

**BMED 560 Biophysics**
This course examines the fundamental physics principles underlying the study of physiology, biochemistry, and medicine. The main focus will be on the principles of fluid flow in the respiratory and cardiovascular systems. Electrophysiology, thermodynamics and thermal regulation will also be studied.

4 credits

**BMED 560L Biophysics Laboratory**
Laboratory associated with BMED 560

2 credits

**BMED 571, 572, 573 Medicinal Chemistry I, II, III**
This series of courses discusses the chemistry of therapeutic agents – drugs. BMED 571 focuses on functional chemical groups and drug metabolism. BMED 572 and BMED 573 are coupled to the two pharmacology core courses by integrating the importance of chemical structure-activity relationships on a topic per topic basis.

1.5 credits each

Prerequisite for BMED 572 Medicinal Chemistry II: BMED 571 Medicinal Chemistry I;
Prerequisite for BMED 573 Medicinal Chemistry III: BMED 572 Medicinal Chemistry II

**CVSP 551 Applied Cardiovascular Anatomy and Embryology**
This course focuses on the anatomical relationships germane to the cardiovascular and respiratory systems. Clinical faculty present lectures in both didactic and laboratory formats.

2 credits

**CVSP 552 Cardiovascular Pathology**
This course is designed to provide a current understanding of the range of cardiovascular disease states, both congenital and acquired, that may be encountered in health care practice. Where applicable, embryologic, genetic, and environmental factors that impact the various disorders are discussed. Presenting signs and symptoms of the most important entities as well as therapeutic strategies are reviewed.

3 credits

**MHPE 505 Learning Styles and Assessment**
In this elective course, students will identify their predominant learning styles and explore methods to improve study habits and learning effectiveness. The course will also explore barriers to learning and how they can be assessed and treated.

1 credit

**BACHELOR OF BIOMEDICAL SCIENCES DEGREE PROGRAM**

**MISSION**
The mission of the Bachelor of Biomedical Science Program is to graduate students who have the requisite knowledge to be highly competitive candidates for admission into
postbaccalaureate programs in medicine, dentistry, pharmacy, or other professional programs in the health sciences. In addition, our graduates will have the technical skills to function and excel as research technicians in bioindustry or government agencies.

**DEGREE DESCRIPTION**

The undergraduate degree program at the MWU Glendale Campus is a full-time, structured degree completion program offering a baccalaureate degree in biomedical sciences. The Bachelor of Biomedical Science (B.B.S.) degree requires four years of study: the first two years must be completed at another accredited college or university to satisfy the prerequisite courses and the final two years are completed at MWU. The curriculum is designed to prepare and graduate students who have demonstrated the requisite knowledge, technical skills, and expertise to be able to function as a laboratory technician, a supervisor in the biotechnology or pharmaceutical industry, or be a competitive candidate for admission to postbaccalaureate professional schools offering degrees in the health sciences or research. The professional role of a researcher, the laboratory worker or future health care professional involves a wide range of responsibilities and skills, the ability to relate to people, to deal with stressful situations, and to display sound judgment, intellectual honesty, and an adherence to ethical standards. The intent of this program is to foster and nurture both the cognitive and non-cognitive skills of the student.

**ADMISSIONS**

The Bachelor of Biomedical Science Program will no longer be offered. The college accepted its last class in fall 2008

**Technical Standards**

A candidate must have abilities and skills in five areas: I) observation; II) communication; III) motor; IV) intellectual, conceptual, integrative, and quantitative; and V) behavioral and social. Technological compensation can be made for some limitation in certain of these areas, but a candidate should be able to perform in a reasonably independent manner.

I. Observation: The candidate must be able to accurately make observations at a distance and close at hand. Observation necessitates the functional use of the sense of vision and somatic sensation and is enhanced by the functional use of all of the other senses.

II. Communication: The candidate must be able to communicate effectively, efficiently and sensitively in both oral and written form and be able to perceive nonverbal communication.

III. Motor: Candidates must be able to coordinate both gross and fine muscular movements, maintain equilibrium and have functional use of the senses of touch and vision. The candidate must possess sufficient postural control, neuromuscular control and eye-to-hand coordination to perform profession-specific skills and tasks.

IV. Intellectual, Conceptual, Integrative and Quantitative Abilities: The candidate must be able to problem solve, measure, calculate, reason, analyze, record and synthesize large amounts of information in a timely manner. The candidate must be able to comprehend three-dimensional relationships and understand spatial relationships.

V. Behavioral and Social Attributes: The candidate must possess the emotional health required for full utilization of his/her intellectual abilities, the exercise of good judgment and the consistent, prompt completion of all responsibilities and the development of mature, sensitive and effective relationships. Candidates must be able to tolerate physically, mentally and emotionally taxing workloads and to function effectively under stress. The candidate must be able to adapt to changing environments, to display flexibility, and to learn to function in the face of uncertainties. Compassion, integrity, concern for others, effective interpersonal skills, willingness and ability to function as an effective team player, interest and motivation to learn are all personal qualities required during the educational process.

Candidates are required to certify that they understand and meet these Technical Standards. Candidates may not meet the Technical Standards must inform the Director of Admissions, who will then contact the Dean of Students. The Dean of Students, in consultation with the academic dean (and program director), will identify and discuss what accommodations, if any, the College(//Program) would need to make that would allow the candidate to complete the curriculum. The College(//Program) is not able to grant accommodations that alter the educational standards of the curriculum. Students must meet the Technical Standards for the duration of enrollment in their professional program.

**Articulation Agreement Between Midwestern University Programs**

Students enrolled in a Midwestern University program are guaranteed an admission interview with another Midwestern University program if the student:

1. is currently in good standing in the academic program in which the student is enrolled and does not have any pending misconduct charges against him/her;
2. meets all admission requirements for the professional program of interest;
3. after a minimum of two full time quarters of study, achieves a minimum Midwestern University grade point...
average, derived from all courses completed at Midwestern, that is equal to or greater than 3.0; AND
4. achieves a score on the professional entrance exam (if required) that is not less than one standard deviation below the mean score for students that matriculated into the professional degree program in the previous year.

A guaranteed interview does not guarantee admission into the professional program.

**GRADUATION REQUIREMENTS**

To qualify for graduation, students must:

1. Follow an approved course of study acceptable to the Biomedical Science Program Student Academic Review Committee;
2. Satisfactorily complete all courses with a minimum cumulative grade point average of 2.25 for the Bachelor of in Biomedical Science degree;
3. Satisfactorily complete the required minimum number of 90 quarter hour credits.
4. Receive a favorable recommendation for Bachelor’s degree conferral from the Program faculty to the CHS Student Promotion and Graduation Committee;
5. Receive a favorable recommendation for Bachelor’s degree conferral from the University Faculty Senate;
6. Settle all financial accounts with the University; and
7. Complete all graduation clearance requirements as instructed by the Office of the Registrar.

**CURRICULUM LISTING**

Sample curriculum, course credits, and sequencing. Not all electives are offered every year.

**Fall Quarter, First Year (12 credits)**

**Core Requirements**
- BMED 307 Medical Terminology 2 credits
- BMED 309 Bioethics 3 credits
- BMED 312 Histology 2 credits
- BMED 330 Physiology I 4 credits
- MHPE 505 Learning Styles and Assessment 1 credits

**Electives**
- BMED 321 Emerging Diseases 1 credit
- BMED 428 Public Health 3 credits
- BMED 429 Epidemiology 1 credit
- BMED 455 Biotechnology 3 credits

**Winter Quarter, First Year (12 credits)**

**Core Requirements**
- BMED 316 Human Anatomy w/ Lab 4 credits
- BMED 331 Physiology II 4 credits
- BMED 351 Molecular Cell Biology 4 credits

**Electives**
- BMED 308 Introduction to Hospice Care 1 credit
- BMED 322 Issues in Biotechnology 1 credit
- BMED 323 Medical Virology 4 credits

**Spring Quarter, First Year (12 credits with electives)**

**Core Requirements**
- BMED 306 Health Career Planning 2 credits
- BMED 350 Biochemistry 4 credits
- BMED 425 Immunology 2 credits
- BMED 511 Research Design and Statistics 3 credits

**Electives**
- BMED 303 Understanding Cancer 1 credit
- BMED 414 Embryology 2 credits
- BMED 419 Neuroanatomy 2 credits
- ETHC 505 Ethics of Research and Experimentation 3 credits

**Summer Quarter, First Year**

**Electives**
- BMED 514 Advanced Research Design and Statistics 3 credits
- BMED 520 Good Laboratory Practice 3 credits

**Fall Quarter, Second Year (12 credits with electives)**

**Core Requirements**
- BMED 320 Microbiology I 4 credits
- BMED 360 Biophysics 4 credits
- BMED 474 Pharmacology I 3 credits

**Electives**
- BMED 360L Biophysics Laboratory 2 credits
- BMED 404 Pre-Professional Exam Prep I 2 credits
- BMED 421 Prion Diseases 1 credit
- BMED 440 Oncology 3 credits
- BMED 510 Research Topics and Methods 3 credits

**Winter Quarter, Second Year (12 credits with electives)**

**Core Requirements**
- BMED 325 Microbiology II 4 credits
- BMED 341 Genetics I 3 credits
- BMED 475 Pharmacology II 3 credits

**Electives**
- BMED 401 Biology of Human Aging 1 credit
- BMED 402 Medical Spanish 1.5 credits
- BMED 405 Pre-Professional Exam Preparation II 2 credits
- BMED 422 Current Topics in Infectious Disease 1 credit
- BMED 450 Nutritional Biochemistry with Lab 4 credits
- BMED 512 Information Systems for Research and Education 2 credits
- CVSP 551 Applied Cardiovascular Anatomy and Embryology 2 credits

**Spring Quarter, Second Year (12 credits with electives)**

**Core Requirements**
- BMED 408 Research Seminar 1 credit
- BMED 435 Pathophysiology 4 credits
- BMED 442 Genetics II 3 credits
Electives
BMED 324  Parasitology  4 credits
BMED 409  Drugs of Addiction  2 credits
BMED 424  Applied Microbiology  3 credits
BMED 448  Genomics & Proteomics  4 credits
BMED 477  Dangerous Plants & Animals  2 credits
CVSP 552  Cardiovascular Pathology  3 credits
PASS 473  Basic Electrocardiography  1 credit

Electives Available Every Quarter
BMED 488  Research/Special Projects  1–3 credits
BMED 497  Advanced Topics  1–3 credits
BMED 499  Externship  1–3 credits

The MWU/CHS Biomedical Science Program reserves the right to alter its curriculum however and whenever it deems appropriate.

Course Descriptions
Prerequisites are listed for those courses with such requirements. When no prerequisite is listed in a course description, it is implied that there is no prerequisite.

BMED 306 Health Career
The purpose of this course is to prepare students to be highly competitive candidates for admission into postbaccalaureate programs in medicine, dentistry, pharmacy, and other health professional programs. This is accomplished by discussing the variety of healthcare professions available and assisting the student in the skills necessary to be a successful candidate (interviewing skills, writing a personal statement, creating a resume, and selecting an appropriate professional school). 2 credits

BMED 307 Medical Terminology
This course is intended to broaden the student’s understanding of the lexicon for the medical sciences. The course format includes lectures, readings, and discussions designed to facilitate an understanding of the roots of medical terms. Upon completion of the course, students are expected to describe and apply the basic principles of root words, suffixes, and prefixes of medical terms. 2 credits

BMED 309 Bioethics
This course aims to improve critical thinking skills, introduce argumentation and argumentative writing, and to familiarize the student with some of the prominent ethical dilemmas in contemporary clinical medicine. 3 credits

BMED 312 Histology
The purpose of histology is to acquire a basic foundation in the structure of cells, tissues, and selected organ systems. This knowledge assists the health care professional in interpreting laboratory test results and in assessing normal versus pathologic structure. The histology terminology taught is the vocabulary for continuing medical education used throughout the health care professional’s career. 2 credits

BMED 316 Human Anatomy with Laboratory
The aim of these courses is to introduce students to the structure and formation of the human body. Structure is presented at the macroscopic level and some dissection of cadavers is involved. 4 credits
Prerequisite: BMED 312 Histology

BMED 320, 325 Microbiology I, II
This didactic course covers basic clinical microbiology, pathogenic mechanisms, and antimicrobial agents relating to the understanding, rational management, and control of infectious agents. The course includes hands-on laboratory sessions in clinical microbiology laboratory procedures. Students receive instruction on staining techniques, growth requirements, identification criteria, and antibiotic therapy for commonly occurring infectious agents. Students are introduced to diagnostic tests currently available for rapid diagnosis of infectious disease. 4 credits each course
Prerequisite for BMED 325 Microbiology II: BMED 320 Microbiology I

BMED 330, 331 Physiology I, II
In this two-quarter series, students are introduced to the basic physiologic principles that underlie the normal function of various organs and organ systems. Topics presented include a general study of cell function, properties of excitable cells, and the function of the neuromuscular, cardiovascular, renal, respiratory, digestive, endocrine, and reproductive systems. 4 credits each course

BMED 341, 442 Genetics I, II
These courses introduce the foundations of the normal transmission of dominant and recessive genetic traits, risk factors, and genetic mapping. Included is an introduction to human genetics and the fundamental principles of inheritance. 3 credits each course
Prerequisite for BMED 442 Genetics II: BMED 341 Genetics I

BMED 350 Biochemistry
This course covers the structures, properties, chemistry, and functions of proteins, nucleic acids, carbohydrates and lipids. The synthesis and degradation of these biomolecules are covered in detail, including an in-depth discussion of the
thermodynamics and kinetics of enzyme-catalyzed reactions within these metabolic pathways. The regulation and integration of metabolism at the cellular and tissue levels within the human body will be emphasized. Critical thinking and problem solving skills are developed during the weekly problem sessions.

4 credits

BMED 351 Molecular Cell Biology
This course is designed to provide students with a comprehensive overview of the function of eukaryotic cells at the molecular level. Topics covered include transcription, translation, regulation of gene expression, DNA replication, cell signaling, regulation of cell growth and differentiation, the innate and cellular immune systems, and the molecular tools available to investigate these aspects of biology. Critical thinking and problem solving skills are developed during the weekly problem sessions.

4 credits

BMED 360 Biophysics
This course examines the fundamental physics principles underlying the study of physiology, biochemistry, and medicine. The main focus will be on the principles of fluid flow in the respiratory and cardiovascular systems. Electrophysiology, thermodynamics and thermal regulation will also be studied.

4 credits

BMED 408 Research Seminar
This course is designed to expose students to a variety of scientific disciplines and projects, accomplished by attendance at the research faculty seminar series. Additionally, each student will be expected to present a seminar to the faculty on the subject of his or her choice.

1 credit

BMED 425 Immunology
This didactic course introduces students to the fundamental principles of immunology and host defense mechanisms and considers them in relation to defense against common viral, bacterial, fungal, and parasitic agents of disease, immunologic abnormalities, immune-deficiency disorders, immunoprophylaxis, and therapy.

2 credits

BMED 435 Pathophysiology
This course emphasizes the etiology, pathogenesis, and pathophysiology of selected disease states in humans. The normal and abnormal histology of each organ is also discussed. The course is designed to build on the skills learned in anatomy and physiology.

4 credits

BMED 474 Pharmacology I
This course covers principles of pharmacology including pharmacodynamics, pharmacokinetics, pharmaceutics, and toxicology. Students learn about common drug classes affecting major organ systems of the body, namely, the autonomic nervous system, the central nervous system, the cardiovascular and renal systems, and the gastrointestinal and genitourinary systems. Chemotherapy of microbial and parasitic organisms, the chemotherapy of neoplastic disease, drug action on blood-forming organs, and the role of hormones and vitamins are presented.

3 credits

BMED 475 Pharmacology II
This course introduces the major drugs used to treat cardiac conditions. The focus will be on the treatment of arrhythmias, angina, congestive heart failure, hypertension and disorders of coagulation.

3 credits

BMED 511 Research Design and Statistics
Provides an overview of research designs and basic statistical approaches used in basic science, applied and descriptive research. The course teaches basic research skills used in all disciplines of the health professions and aids in the interpretation of research presented in the literature.

3 credits

MHPE 505 Learning Styles and Assessment
In this elective course, students will identify their predominant learning styles and explore methods to improve study habits and learning effectiveness. The course will also explore barriers to learning and how they can be assessed and treated.

1 credit

ELECTIVES

Not all electives are offered every year.

BMED 303 Understanding Cancer
This course is an introduction to cancer and the biological aspects of tumor growth. Emphasis will be on the development and progression of cancer. Selected methods of cancer diagnosis and therapy will be discussed based on reviews of current literature. Registered students will receive directions by e-mail the first week of class for accessing the current course materials.

1 credit

BMED 308 Introduction to Hospice Care
This course explores the history and philosophy of hospice care. Interventions to promote symptom control and family coping during end-stage of life are covered with emphasis on
volunteer functions and opportunities. Research, legal, ethical issues and implications are discussed.
1 credit

BMED 321 Emerging Diseases
This in-depth review of information from current research emphasizes the biological aspects of emerging and re-emerging diseases at the molecular, organ, and population level. Selected methods of diagnosis and therapy will be discussed.
1 credit

BMED 322 Issues in Bioterrorism
Course examines many aspects of the bioterrorism threat, including history, agents, response preparation and incident management. Facets of bioterrorism are presented by experts in government and academia and integrated by the class in a final tabletop incident exercise.
1 credit

BMED 323 Medical Virology
This course examines the unique aspects of key virus groups and their structural, biochemical, and biophysical properties. The discussions also include viral agents of medical and economic importance, their epidemiology, pathogenesis and control.
4 credits

BMED 324 Parasitology
This course provides the student with an opportunity to study a series of basic concepts within the field of parasitology. This course is designed to be highly interactive.
4 credits

BMED 360L Biophysics Laboratory
Laboratory associated with BMED 360
2 credits

BMED 375 Pharmacognosy
Pharmacognosy is the discipline involved with the discovery, processing and formulation of drugs from natural sources. This course will cover the major classes of natural drugs including the glycosides, terpenoids, the alkaloids, proteins, antibiotics and vaccines. In addition, newer sources of natural drugs such as the dynamic marine pharmacognosy and futuristic pharmacobiotechnology will be introduced.
2 credits

BMED 401 Biology of Human Aging
This course emphasizes in depth discussion of information from current research. Emphasizes the biological aspects of human aging at the molecular, cellular, and system level. Selected methods of diagnosis and therapy will be discussed.
1 credit

BMED 402 Medical Spanish
This course provides the student with communication skills necessary to provide care to Spanish-speaking patients. Students will learn an expanded general Spanish vocabulary (selected nouns, verbs, adjectives, phrases, etc.) plus one related specifically to the practice of clinically oriented health care professionals (i.e., parts of the body, SOAP note notation, selected disease conditions, etc.). Group interaction and role-playing are utilized. This course is for students not fluent in Spanish, but with prior Spanish education.
1.5 credits

BMED 404, 405 Pre-Professional Exam Prep I, II
The aim of this course is to help prepare the student to take the pre-professional exam required for graduate school. This includes MCAT, PCAT, DAT, and GRE. The course includes mock exams, which simulate an actual professional exam as closely as possible.
2 credits per quarter
Prerequisite for BMED 405 Pre-Professional Exam Preparation II: BMED 404 Pre-Professional Exam Preparation I

BMED 409 Drugs of Addiction
This course will provide students with an understanding of the psychological, as well as the pharmacological, effects of the common drugs of addiction. The following drugs and drug classes will be reviewed: alcohol, stimulants, nicotine, hallucinogens, inhalants, sedatives, and opioids. Topics covered include preferred routes of administration, absorption, distribution, mechanisms of action, tolerance and withdrawal. Particular emphasis will be placed on abuse potential, addictive behaviors and societal impact associated with each substance.
2 credits

BMED 414 Embryology
This course is designed to introduce students to the formation of the human body. In addition to learning about the normal development, students will learn about numerous types of birth defects.
2 credits

BMED 419 Neuroanatomy
This is an integrated, interdisciplinary course in which students learn to identify and describe the principal structural components and corresponding functions of the nervous system and correlate underlying lesions involving these structures with neurologic deficits and dysfunctions. Emphasis is given to understanding various aspects of the human neurosciences, such as the anatomy and physiology of pain and commonly occurring disease states likely to be encountered in professional practice.
2 credits
Prerequisites: BMED 312 Histology; BMED 316 Human Anatomy with Laboratory
BMED 421 Prion Diseases
This course is an in-depth discussion of information from current research on prions and prion diseases. The focus is on the cellular, biochemical, and genetic aspects of these fascinating and deadly neurodegenerative diseases.
1 credit

BMED 422 Current Topics in Infectious Disease
To improve your knowledge of biomedical science (particularly your area of interest) and communication skills. Students will typically write, edit and submit a work in the format of a journal publication. It provides students with a capstone experience to bring prior knowledge together.
1 credit

BMED 424 Applied Microbiology
This lecture course covers the uses of microbes in industrial applications, e.g., fermentation, foods, and pharmaceuticals.
3 credits

BMED 428 Public Health
This course looks at the protection of health and the promotion of human comfort and well-being through the management of wastewater, potable water and food sanitation. Infectious diseases transmitted by food and water are discussed as well as treatment of other wastes generated by humans such as solid and radiological wastes.
3 credits

BMED 429 Epidemiology
This course examines the cause, spread, and control of communicable disease. Students are provided with a view of epidemiological methods, the historical content for the effects of global microbe transmission, and the evolution of public health measures in response to epidemics. Health risk factors are identified as students study preventive medicine. Students are also exposed to general epidemiological statistics and their meaning in examining health policy, public health, clinical interventions, and health outcomes.
1 credit

BMED 440 Oncology
This course is an introduction to cancer and the biological aspects of tumor growth with emphasis on the development and progression of cancer. Selected methods of cancer diagnosis and therapy are discussed based on reviews of current literature.
3 credits

BMED 448 Genomics & Proteomics
This course details the methods used to generate and interpret genome sequence in the Human Genome Project and the applications of this new genomic data to the diagnosis and treatment of disease.
4 credits

BMED 450 Nutritional Biochemistry and Lab
This course examines the impact of nutrition, exercise, and wellness in both healthy and debilitated patient populations. Students gain exposure to various teaching and diagnostic tools that aid in assessing wellness.
4 credits

BMED 455 Biotechnology
This course covers some of the most recent biotechnical techniques and their applications to the biotech industry. Recombinant DNA, monoclonal antibodies, PCR, and other techniques are discussed as well as their relation to production and use.
3 credits

BMED 477 Dangerous Plants and Animals
This course focuses on the recognition and identification of dangerous plans and animals found primarily, but not exclusively, in Arizona. The student will learn to assess poisonous situations and recommend management scenarios. Lectures and workshops involving case studies and field trips will be utilized.
2 credits

BMED 488 Research/Special Project
This course provides an opportunity for students to work with individual faculty mentors on projects of variable scope. Included activities could be library, laboratory, and/or survey-type research; or other activities agreed upon between the student and the mentor. A maximum of 6 credits can be applied toward degree.
1-3 credits (repeatable)

BMED 497 Advanced Topics
The Advanced Topics Series is an opportunity for students to receive individualized or small group instruction on selected advanced topics in any of the basic science disciplines. Format for instruction includes mentoring by individual faculty, case study discussion, review of landmark publications, and class presentations. Students will be expected to master major concepts specific to the discipline selected. The mentoring faculty will individualize evaluation of the student.
1-3 credits (repeatable)

BMED 499 Externship
This program provides students with hands-on experience in the workplace. Work-to-study opportunities are available in health-related organizations within the local community.
1-3 credits (repeatable)
BMED 510 Research Topics and Methods
The course explores a variety of research and professional issues pertinent to the basic scientist such as current policy, bioethical issues, and funding issues. Fundamentals of the scientific method and its limitations, research design, descriptive statistics, and information gathering are also discussed. The format of the class includes both lecture and small group discussion. The course is intended to provide each student with a broad understanding of professional research topics and issues with a view toward stimulating ideas for a research project.
3 credits

BMED 512 Information Systems for Research and Education
This course is intended to expose students to information management and retrieval methods. Students gain hands-on experience in the use of various computer-based tools (CD-ROMs, library catalogs, databases, Internet/Web, etc.) and learn the fundamental principles of library research. Students also learn how to locate and access information and how to evaluate the quality of the information retrieved.
2 credits

BMED 514 Advanced Research Design and Statistics
This course follows from BMED 511 and reviews advanced statistics used in biomedical and educational research. Topics covered include two and three-way analysis of variance, multiple regression and correlation analysis, nested designs, post hoc analysis, advanced non-parametric analysis, meta analysis, survey design, etc.
3 credits
Prerequisite: BMED 511 Research Design and Statistics

BMED 520 Good Laboratory Practice
This course reviews the requirements and regulations of the Food and Drug Administration, Environmental Protection Agency and the International Organization for Economic Cooperation and Development. Compliance issues and inspection procedures are covered for organizations involved in product safety testing in animals and the environment. A historical perspective will be presented as to the development of the regulations and non-traditional safety testing. Development of quality assurance programs and management’s responsibility will be discussed.
3 credits

CVSP 551 Applied Cardiovascular Anatomy and Embryology
This course focuses on the anatomical relationships germane to the cardiovascular and respiratory systems. Clinical faculty present lectures in both didactic and laboratory formats.
2 credits

CVSP 552 Cardiovascular Pathology
This course is designed to provide a current understanding of the range of cardiovascular disease states, both congenital and acquired, that may be encountered in health care practice. Where applicable, embryologic, genetic, and environmental factors that impact the various disorders are discussed. Presenting signs and symptoms of the most important entities as well as therapeutic strategies are reviewed.
3 credits

ETHC 505 Ethics of Research and Experimentation
This class is intended to give students a broad overview of research ethics and regulation. Students gain an understanding of the moral basis of scientific ethics including scientific integrity, research with human subjects, informed consent, vulnerable populations, privacy and the confidentiality of records, conflicts of interest, and research on animals.
3 credits

PASS 473 Basic Electrocardiography
This course provides instruction in the basic biophysical and physiological principles that provide the foundation for the clinical application and interpretation of the electrocardiogram. Special emphasis is placed on terminology and the ability to perform a systematic analysis of the electrocardiogram. Students are expected to acquire the necessary analytical and problem-solving skills required to distinguish, analyze, and interpret multi-lead electrocardiograms and identify common arrhythmias and conduction disturbances.
1 credit

MASTER OF ARTS IN BIOETHICS
DEGREE PROGRAM AND CERTIFICATE IN BIOETHICS PROGRAM

MISSION
The mission of the Master of Arts Degree and Certificate in Bioethics Program is to augment the professional experience and skills of students by providing substantial training in the theory and practice of ethical decision-making within the health care arena. The program should also provide the graduate with credentials needed for increased opportunities and advancement within their current career.

The Master of Arts degree should not be viewed as a terminal degree or a means to secure a job in a subspecialty of health care. Rather, this program is designed to enhance the ongoing career and/or practice of those already involved in providing therapeutic, legal, and spiritual care to patients.
DEGREE DESCRIPTION
The curriculum leading to the Master of Arts in Bioethics is designed to provide the student with a deeper understanding of the ethical issues related to patient care and health care practice, as well as methods for addressing these issues. Students come from a wide variety of backgrounds, including physicians, nurses, chaplains, lawyers, administrators, social workers, pharmacists, physician assistants, allied health personnel, health professions students, and other interested professionals. Applicants usually have a bachelor’s level or higher degree from a regionally accredited college or university, though some individuals with significant undergraduate coursework and relevant professional experience may be admitted.

The 42-quarter-hour curriculum can be completed in as little as 18 months and must be completed within a period of 60 months, excepting approved leaves of absence. The course instruction includes 12 credit hours of required courses, including: Introduction to Medical Ethics, Foundations of Bioethics, Philosophy of Medicine, and Ethics of Research and Experimentation. Beyond these required courses students select a research or didactic track. In the research track, the student is required to perform an approved research project (12 credits). Prerequisite to the research project are two independent studies (one credit each) that enable the student to develop a proposal for the project. The proposal includes the specific objectives and methods of the project. Sixteen additional credits must be taken as electives. In the didactic track, there is no research project and the student is required to take 30 elective hours in addition to the required courses. Students in the Master of Arts in Bioethics program interested in acquiring additional educational skills may take approved electives in the Master of Health Professions Education degree program as well.

CERTIFICATE IN BIOETHICS
The curriculum leading to the professional Certificate in Bioethics is designed to provide the student with a deeper understanding of the ethical issues related to patient care and health care practice, as well as methods for addressing these issues. Students come from a wide variety of backgrounds including physicians, nurses, chaplains, lawyers, administrators, social workers, pharmacists, physician assistants, dietitians, and other interested professionals. There is no degree requirement for entry into this program.

The 30-quarter-hour curriculum may be completed in as little as 12 months, and must be completed within a period of 60 months, excepting approved leaves of absence. To complete the 30-credit hour requirement, students may take any of the required or elective courses in the bioethics curriculum, except for research project credits. Students wishing to switch to an M.A. in Bioethics after completing courses in the certificate curriculum will be required to reapply to the Biomedical Sciences Program and meet all admission requirements for the Master of Arts in Bioethics program. Successful completion of the Certificate in Bioethics curriculum does not automatically qualify the student for admission into the Master of Arts in Bioethics program.

ADMISSIONS
The Bioethics degree program uses a rolling admissions process. Completed applications are reviewed and decisions are made at regular intervals during the admissions cycle. Bioethics students may enter their programs during any academic quarter. Admission to the Bioethics Program is considered on a competitive basis for prospective students who hold a bachelor’s level or higher degree from a regionally accredited undergraduate college or university (see admissions criteria for applicants not holding bachelor’s degrees). Multiple criteria are used to select the most qualified candidates. In addition, the Biomedical Science Program Admissions Committee carefully considers applicant interests, aptitude, and capacity for graduate study, interpersonal skills, honors and awards. Selection decisions for the Program are made by the Biomedical Sciences Program Admissions Committee with the approval of the Program Director and the Dean of the College of Health Sciences. Decisions for acceptance are made until the maximum enrollment is reached.

Individuals may take one or more classes in the Bioethics Program without applying for admission by registering as “non-degree seeking” students. Tuition is per credit and financial aid is not available for such students.

Admission Requirements
To be considered for admission to the Master of Arts or Certificate in Bioethics programs, applicants must submit the following documented evidence:

1. Completion of a bachelor’s degree (or its equivalent, i.e., 120 undergraduate hours including the professional program) or higher degree from regionally accredited colleges or universities (not required for the Certificate in Bioethics). Exceptions to this requirement may be made by the Bioethics Program Admissions Committee for applicants who have:
   a. Successfully completed accredited professional programs, such as physician assistant, nursing, dental hygienist, etc.,
   b. Completed a minimum of 100 semester hours of undergraduate training (including professional program), 20 of which are in general education courses including humanities, fine arts, social sciences, computer sciences, or business
   c. Five or more years of experience in a health care-related profession
d. Demonstrated a record of continuous professional development, and
e. Submitted one additional letter of reference (i.e., three total) attesting to their ability to perform at a graduate level

2. A minimum cumulative grade point average (GPA) of 2.75 on a scale of 4.00 for their bachelor’s or higher degree program
3. Official transcripts verifying completion of a bachelor’s degree or higher level degree program from a regionally accredited college or university
4. Two letters of recommendation
5. Passage of the Midwestern University criminal background check
6. Commitment to abide by the Midwestern University Drug-Free Workplace and Substance Abuse Policy

International Applicants
An international student must satisfy all of the requirements for admission to the college or program that apply to a student who has completed all of his/her prerequisite coursework in the U.S. at a regionally accredited college or university. In addition, an international student must demonstrate proficiency in the English language.

This may be accomplished by satisfying both of the following requirements:
1. The international student has completed a minimum of two full time semesters or three full time quarters of instruction at a postsecondary institution in the United States. Completed coursework must include a minimum of 50% of the prerequisite science coursework for the college or program of interest, 6 semester hours of non-remedial English composition, and 3 semester hours of public speaking/speech.
2. The international student must submit official TOEFL scores. A minimum passing score is 550 (paper version, maximum score 677) or 100 (internet version, maximum score 120). The TOEFL scores must be from an exam taken within two years of the anticipated date of matriculation into the college or program.

If the international student wishes to receive credit for prerequisite coursework completed at a college or university outside of the United States, he/she must submit an official, detailed, course-by-course evaluation of this coursework. The student must obtain this evaluation from one of the following services:
1. Educational Credential Evaluators (ECE): 414/289-3400 or Fax 414/289-3411 (www.ece.org, e-mail: info@ece.org).
3. World Education Service (WES): 212/966-6311 or Fax 212/739-6100 (www.wes.org, e-mail: info@wes.org) Based on the official foreign transcript evaluation and the grade earned in the course(s), the college or program will decide if it will apply any of these credits toward fulfillment of its prerequisites.

Application and Selection Process
Individuals interested in applying for admissions to the Master of Arts in Bioethics degree program may download their application from the University’s web site at www.midwestern.edu or obtain an application packet by writing or calling:
Office of Admissions
Midwestern University
19555 N. 59th Avenue
Glendale, AZ 85308
623/572-3215
888/247-9277

To be considered for admission, applicants must also:
1. Submit their completed Bioethics Program Application for Admission form.
2. Submit their nonrefundable, nonwaivable application fee of $50 (the application fee is waived for dual degree students).
3. Complete the Bioethics Program’s interview process (by invitation only).
4. Submit two signed and sealed letters of recommendation.
5. Submit official transcripts verifying completion of a bachelor’s degree or higher level degree program from a regionally accredited college or university.

After receiving completed application packets, the information provided is verified to determine whether all prerequisite coursework has been completed satisfactorily or will be completed prior to potential matriculation and also to verify the cumulative GPAs for all completed courses. Applications meeting all established standards for admission are forwarded to the Bioethics Program Admissions Committee. Applicants will receive written notification of Admissions Committee decisions.

Please Note: Applicants may track the receipt of their application materials and the status of their files on the Midwestern University web site using instructions for accessing account information that will be sent by the Office of Admissions after receipt of their applications. Applicants are responsible for notifying the Office of Admissions of any changes in their mailing address and e-mail address. All requests for application withdrawals must be made in writing.

The Bioethics Program uses a rolling admissions process. Completed applications are reviewed and decisions are made at regular intervals during the admissions cycle. Bioethics students may enter their programs during any academic quarter.
Technical Standards
A candidate must have abilities and skills in five areas: I) observation; II) communication; III) motor; IV) intellectual, conceptual, integrative, and quantitative; and V) behavioral and social. Technological compensation can be made for some limitation in certain of these areas, but a candidate should be able to perform in a reasonably independent manner.

I. Observation: The candidate must be able to accurately make observations at a distance and close at hand. Observation necessitates the functional use of the sense of vision and somatic sensation and is enhanced by the functional use of all of the other senses.

II. Communication: The candidate must be able to communicate effectively, efficiently and sensitively in both oral and written form and be able to perceive nonverbal communication.

III. Motor: Candidates must be able to coordinate both gross and fine muscular movements, maintain equilibrium and have functional use of the senses of touch and vision. The candidate must possess sufficient postural control, neuromuscular control and eye-to-hand coordination to perform profession-specific skills and tasks.

IV. Intellectual, Conceptual, Integrative and Quantitative Abilities: The candidate must be able to problem solve, measure, calculate, reason, analyze, record and synthesize large amounts of information in a timely manner. The candidate must be able to comprehend three-dimensional relationships and understand spatial relationships.

V. Behavioral and Social Attributes: The candidate must possess the emotional health required for full utilization of his/her intellectual abilities, the exercise of good judgment and the consistent, prompt completion of all responsibilities and the development of mature, sensitive and effective relationships. Candidates must be able to tolerate physically, mentally and emotionally taxing workloads and to function effectively under stress. The candidate must be able to adapt to changing environments, to display flexibility, and to learn to function in the face of uncertainties. Compassion, integrity, concern for others, effective interpersonal skills, willingness and ability to function as an effective team player, interest and motivation to learn are all personal qualities required during the educational process.

Candidates are required to certify that they understand and meet these Technical Standards. Candidates must provide such certification prior to matriculation. Candidates who may not meet the Technical Standards must inform the Director of Admissions, who will then contact the Dean of Students. The Dean of Students, in consultation with the academic dean (and program director), will identify and discuss what accommodations, if any, the College( Program) would need to make that would allow the candidate to complete the curriculum. The College( Program) is not able to grant accommodations that alter the educational standards of the curriculum. Students must meet the Technical Standards for the duration of enrollment in their professional program.

Matriculation Process
The matriculation process begins after applicants receive notification of their acceptance into the Bioethics Program. Students must return both their signed matriculation agreement and an initial deposit to the Office of Admissions. Students must also:

1. Submit deposit monies by the date designated in their matriculation documents. Deposits are applied toward the first quarter's tuition.
2. Submit official final transcripts verifying completion of a bachelor's degree or higher level degree program from regionally accredited colleges or universities by the deadline of two weeks (14 calendar days) prior to the first day of classes. Students who are accepted to MWU less than one month prior to the first day of classes will have 30 calendar days from the date of their acceptance to submit all official transcripts to the Office of Admissions. Any special circumstances or requests for exceptions to this policy must be sent to and approved by the Office of the Dean of the College. Students who fail to submit all official final transcripts by the stated deadline may jeopardize their acceptance or continued enrollment in the College.
3. Submit proof of immunization against measles, mumps, rubella, oral polio (opv), and diphtheria.
4. Submit proof of medical and disability insurance coverage. Students may select either a plan offered by an MWU-approved carrier or a comparable plan offered by an outside carrier of their choice.
5. Meet the Technical Standards for the Program.
6. Provide documentation verifying that sufficient funds have been deposited in a U.S. bank to cover all expenses while attending the College of Health Sciences (for non-U.S. citizen/nonpermanent residents only).
7. Submit additional documents as required by the Office of Admissions.
8. Authorize and pass the Midwestern University criminal background check
10. Complete a physical exam and submit this form and a completed medical file as requested by the Office of Student Services.
11. Sign and submit a Credit Policy Statement.

Students who either fail to satisfy these matriculation requirements or omit or falsify information required on official admissions documents automatically forfeit their seat in the program.
Articulation Agreement Between Midwestern University Programs

Students enrolled in a Midwestern University program are guaranteed an admission interview with another Midwestern University program if the student:
1. is currently in good standing in the academic program in which the student is enrolled and does not have any pending misconduct charges against him/her;
2. meets all admission requirements for the professional program of interest;
3. after a minimum of two full time quarters of study, achieves a minimum Midwestern University grade point average, derived from all courses completed at Midwestern, that is equal to or greater than 3.0; AND
4. achieves a score on the professional entrance exam (if required) that is not less than one standard deviation below the mean score for students that matriculated into the professional degree program in the previous year.

A guaranteed interview does not guarantee admission into the professional program.

Dual Admission Program

The Bioethics Program offers an educational opportunity to current and incoming physician assistant (PA), occupational therapy (OT), cardiovascular science (M.C.S.), nurse anesthetist (CRNA), biomedical science, podiatric medicine (D.P.M.) and osteopathic medical (D.O.) students. Students accepted into these programs may apply to the Bioethics Program as dual-degree candidates in bioethics. The following policies apply:
1. Applicants must apply and be accepted into the clinical program and Bioethics Program separately. Only applicants meeting minimum entrance requirements for both degree programs will be given an option for admission to the dual degree program.
2. The clinical degree program will be considered the primary degree program and the Bioethics Program the secondary degree program. Continuity of the primary degree program must be maintained.
3. The length of the secondary program will be extended for a duration of time sufficient to complete the secondary degree program. This is usually three to six months (for OT, CRNA and M.C.S. students) and may be individualized to accommodate availability of desired courses, academic proficiency, type of tract desired in the Bioethics Program (i.e., research or didactic), and student preferences. The Bioethics Program degree must be completed within a total of 60 months from initial matriculation.
4. Students must maintain the minimum cumulative GPA requirements of each program. Failure to maintain the minimum cumulative GPA in either program will result in students receiving academic warnings or placement on academic probation. This may result in deceleration or temporary suspension from the secondary degree program.
5. The number of credits required for completion of the Bioethics Program is degree-specific (see degree descriptions). Some courses from the clinical degree programs of students may be deemed suitable for credit in the Bioethics Program degree program. If approved, these courses may be substituted for elective credit in the Bioethics Program up to a maximum of six (6) credits. No Bioethics Program tuition will be charged for these credits.
6. In addition to the established quarterly tuition for the clinical degree program, students enrolled in a dual degree shall pay tuition to the Bioethics Program on a per credit basis. Dual degree students accepted into the Bioethics Program at any time before graduation shall receive a 30% discount on the normal Bioethics Program per credit hour charge during their matriculation in the primary degree program and for up to 12 months following completion of their primary degree program. Quarterly Bioethics Program tuition is determined by the number of credits for which students are registered.

Graduation Requirements

To qualify for graduation from the Master of Arts in Bioethics degree program, the student must:
1. Follow an approved course of study acceptable to the Biomedical Science Program Student Academic Review Committee;
2. Satisfactorily complete all courses with a minimum cumulative grade point average of 2.75 with no course grade below a C;
3. Satisfactorily complete the required 42 minimum number of quarter hour credits in their programs (dual-degree applicants should discuss the credit load needed for their degree with the Program Director);
4. Receive a favorable recommendation for master’s degree conferral from the program faculty to the CHS Student Promotion and Graduation Committee;
5. Receive a favorable recommendation for master’s degree conferral from the University Faculty Senate;
6. Settle all financial accounts with the University; and
7. Submit a properly completed and signed graduation clearance form to the Office of the Registrar.

Curriculum Listing

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHC 501</td>
<td>Introduction to Medical Ethics</td>
<td>3 credits</td>
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<tr>
<td>ETHC 502</td>
<td>Foundations of Medical Ethics</td>
<td>3 credits</td>
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<tr>
<td>ETHC 503</td>
<td>Philosophy of Medicine</td>
<td>3 credits</td>
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<tr>
<td>ETHC 505</td>
<td>Ethics of Research and Experimentation</td>
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Elective Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BMED 510</td>
<td>Research Topics and Methods</td>
<td>2 credits</td>
</tr>
<tr>
<td>BMED 511</td>
<td>Research Design and Statistics</td>
<td>3 credits</td>
</tr>
</tbody>
</table>
BMED 512 Information Systems for Research and Education 2 credits
BMED 513 Writing for Publication 3 credits
ETHC 504 Medical Ethics and the Law 3 credits
ETHC 516 Communication Skills for Health Care Professionals 3 credits
ETHC 517 Foundations of Managed Care Systems 3 credits
ETHC 520 Ethics of Death and Dying 3 credits
ETHC 521 Health Care Allocation and Justice 3 credits
ETHC 522 Ethical Issues of Human Reproduction 3 credits
ETHC 523 Bioethics, Culture and Identity 3 credits
ETHC 524 Religion and Bioethics 3 credits
ETHC 525 Ethical Relationships and the Health Care Team 3 credits
ETHC 526 Bioethics Committees and Consulting 3 credits
ETHC 527 Ethical Issues in Genetics 3 credits
ETHC 528 Sexuality and Health Care 3 credits
ETHC 529 Ethics and Pediatric Medicine 3 credits
ETHC 530 Teaching Medical Ethics 2 credits
ETHC 531 Clinical Ethics Rotations 3 credits
ETHC 533 Christianity and Bioethics 3 credits
ETHC 534 Judaism and Bioethics 3 credits
ETHC 535 Eastern Religions and Bioethics 3 credits
ETHC 536 Literature and Medicine 3 credits
ETHC 537 Ethical Challenges in Medicine: A Case Study Approach 3 credits
ETHC 540 Special Topics 1–3 credits
ETHC 542 Contemporary Readings in Bioethics 3 credits
ETHC 550 Independent Study 1–3 credits
ETHC 551 Research Literature Review: Independent Study 1 credit
ETHC 552 Research Project Proposal: Independent Study 1 credit
ETHC 595-599 Research Thesis 12 credits

ETHC 502 Foundations of Medical Ethics
This course explores the theoretical underpinnings of bioethical evaluation. Various philosophical theories are examined including consequentialism, deontological theories, principlism, ethics of care, casuistry, narrative ethics, and pragmatism, with an eye on the relationship between theory and practice. 3 credits

ETHC 503 Philosophy of Medicine
This course focuses on questions about the nature and goals of medicine, as well as on concepts of health, disease and illness. The effect of value judgments on research agendas, public health, clinical decisions, and the patient–doctor experience of illness are also examined. 3 credits

ETHC 505 Ethics of Research and Experimentation
This class is intended to give students a broad overview of research ethics and regulation. Students gain an understanding of the moral basis of scientific ethics including scientific integrity, research with human subjects, informed consent, vulnerable populations, privacy and the confidentiality of records, conflicts of interest, and research on animals. 3 credits

ELECTIVES
With permission from the Program Coordinator, Bioethics students can substitute up to nine credits of electives offered through the Master of Health Professions Education degree program.

Not all electives are offered every year.

BMED 510 Research Topics and Methods
This course explores current topics and established research methods pertinent to the health professional, health educator, and clinical ethicist. Current policy, bioethical and funding issues, and the scientific method are discussed. The format of the class includes both lecture and small group discussion. The course is intended to provide the student with a broad understanding of professional research topics and issues with a view toward stimulating ideas for the master’s research project. 2 credits

BMED 511 Research Design and Statistics
This course is an overview of research designs and basic statistical approaches used in basic science, applied, and descriptive research. The course is intended to teach research skills used in all disciplines of the health professions, lay the groundwork for the student’s master’s project, and aid in interpretation of research presented in the literature. 3 credits
Prerequisite: BMED 510 Research Topics and Methods
BMED 512 Information Systems for Research and Education
This course is intended to expose students to information management and retrieval methods. Students gain hands-on experience in the use of various computer-based tools (CD-ROMs, library catalogs, databases, Internet/Web, etc.) and learn the fundamental principles of library research. Students also learn how to locate and access information and how to evaluate the quality of the information retrieved.
2 credits

BMED 513 Writing for Publication
This elective course is designed to provide students with the tools necessary to prepare manuscripts for publication. Among the areas practiced and discussed are locating an appropriate venue, performing a literature review, writing a manuscript, and understanding reviewing techniques. The goal of this course is to provide students with the step-by-step instructions to take them from the research process through publication and dissemination.
3 credits

ETHC 504 Medical Ethics and the Law
This course examines the relationship between ethics and the law. It also provides students with knowledge of relevant legal statutes concerning ethical issues such as advanced directives, proxy decision-making, breaching confidentiality, withholding and withdrawing care, the definition of death, and others.
3 credits

ETHC 516 Communication Skills for Health Care Professionals
Good communication skills are an essential medical tool. This class helps improve participants’ communication abilities by teaching a wide range of active listening skills including behavior description, projective listening, story construction, dealing with emotions, direct expression of feeling, dealing with criticism, neurolinguistic programming, and more. Class time focuses on the active practice and integration of these skills.
3 credits

ETHC 517 Foundations of Managed Care Systems
This elective course is designed to provide students with an understanding of the evolution of managed health care. Key structures, processes, and outcomes of managed care systems will be discussed in depth. The goal of this course is to give students the tools necessary to analyze health systems in order to lead improvements within their respective disciplines.
3 credits

ETHC 520 Ethics of Death and Dying
This course explores the ethical issues associated with care of the terminally ill and of death. Topics covered include right-to-life/right-to-die, euthanasia, physician-assisted suicide, pain management, quality of life, etc.
3 credits

ETHC 521 Health Care Allocation and Justice
This course focuses on the idea of a “right” to health care and on various ways of understanding the demands of justice on an institutional system such as health care. It also provides students with an understanding of the various models of paying for health care services and the ethical issues inherent in such systems.
3 credits

ETHC 522 Ethical Issues of Human Reproduction
This course looks at the ethical issues dealing with human reproduction including genetic engineering, reproductive technologies, cloning, right-to-life, the concept of family, etc. The intent of the course is to provide insight into differing philosophic and ethical positions relating to human reproduction.
3 credits

ETHC 523 Bioethics, Culture, and Identity
This course examines how various features of personal and social identity such as culture, ethnicity, race, gender, and class, affect and should be taken into account in ethical judgments in medicine.
3 credits

ETHC 524 Religion and Bioethics
This course looks at philosophical and ethical considerations of different religious views. The similarities and differences between religious faith and reasoned justification, the role of faith in ethics, and the relationship of certain faith traditions to particular issues in medicine are examined.
3 credits

ETHC 525 Ethical Relationships and the Health Care Team
This course examines the role of and relationships between different members of the health care team, considering how such roles affect ethical decision making and communication. The course also explores appropriate ways to resolve difficulties such as challenging a superior, reporting or stopping inappropriate behavior, and expressing moral judgments.
3 credits

ETHC 526 Bioethics Committees and Consulting
This course looks at the workings of bioethics committees, institutional review boards, and bioethics consultants. Students are provided with an understanding of the purpose and possible structure of such committees, and of the ethicist’s role.
3 credits
ETHC 527 Ethical Issues in Genetics
This course explores the ethical issues present in the rapidly developing area of genetic technology including genetic testing and selection, genetic engineering, cloning, and the concept of genetic disease.
3 credits

ETHC 528 Sexuality and Health Care
This course presents a broad examination of the many ways in which sexuality impacts health care providers and patients. Possible topics include physician–patient sexual attraction, caring for HIV-infected patients, gender dynamics, sexual harassment, and sexual issues involving minors.
3 credits

ETHC 529 Ethics and Pediatric Medicine
This course looks at the ethical issues involved in caring for children. These include parental rights, when can children make their own decisions, patient confidentiality, and experimentation with children.
3 credits

ETHC 530 Teaching Medical Ethics
This course looks at pedagogic considerations related to teaching medical ethics. Teaching about issues that have no “absolute correct answers” can be challenging. This course is designed to give the student insight into the varying subject matters in the discipline of bioethics.
2 credits

ETHC 531 Clinical Ethics Rotations
This course provides the student an opportunity to make and discuss ethical decisions in a clinical environment.
3 credits

ETHC 532 Christianity and Bioethics
This course looks at Christian philosophical–ethical considerations. Students interested in Christian theology are given further insight into the relationship between Christianity and the issues of medical ethics.
3 credits

ETHC 533 Judaism and Bioethics
This course looks at Judaic philosophical–ethical considerations. Students interested in Judaic theology are provided further insight into the relationship between Judaism and the issues of medical ethics.
3 credits

ETHC 534 Eastern Religions and Bioethics
This course looks at the philosophical–ethical considerations of various Eastern religions. Students interested in Eastern religion are provided further insight into the relationship between these religions and the issues of medical ethics.
3 credits

ETHC 535 Literature and Medicine
This course examines the experience and humanistic aspects of medicine and illness through various works of literature and poetry. Non-science based reading is used as a springboard for discussion of the human issues common to both art and medicine. This course also examines the place and value of the humanities in medical education.
3 credits

ETHC 536 Ethical Challenges in Medicine: A Case Study Approach
This course utilizes cases to explore a variety of ethical dilemmas present in the day-to-day practice of health care. An emphasis is placed on developing a practical approach to identifying, understanding, and resolving ethical issues. Goals include demonstrating the relevance of ethics to everyday medicine, and providing a bridge between the systematic, theoretical concerns of ethics and the realities of clinical medicine.
3 credits

ETHC 537 Ethics and Pediatric Medicine
This course looks at the ethical issues involved in caring for children. These include parental rights, when can children make their own decisions, patient confidentiality, and experimentation with children.
3 credits

ETHC 538 Teaching Medical Ethics
This course looks at pedagogic considerations related to teaching medical ethics. Teaching about issues that have no “absolute correct answers” can be challenging. This course is designed to give the student insight into the varying subject matters in the discipline of bioethics.
2 credits

ETHC 539 Clinical Ethics Rotations
This course provides the student an opportunity to make and discuss ethical decisions in a clinical environment.
3 credits

ETHC 540, 541 Special Topics
These additional courses are taught at the discretion of the Bioethics Program faculty.
1-3 credits each course

ETHC 542 Contemporary Readings in Bioethics
This course takes an in-depth look at a number of important new books in bioethics. The goal is to read and discuss a number of recent interesting works on topics chosen by the instructor and class participants. This class combines elements of an independent study with organized group discussion.
3 credits

ETHC 550 Independent Study
The independent study course is designed to allow any student the opportunity to explore particular topics of interest in greater depth. The course is student-designed and faculty-approved.
1-3 credits

ETHC 551 Research Literature Review: Independent Study
This course is an independent study designed to give students the opportunity to perform the literature research for the master’s project.
1 credit

ETHC 552 Research Project Proposal: Independent Study
This independent study course is designed to allow the student to prepare the final project proposal and to develop the practical foundation for the successful implementation of his/her master’s project.
1 credit
Prerequisite: ETHC 551 Research Literature Review
ETHC 595-599 Research Thesis
The thesis is the culmination of the master’s curriculum in bioethics education for those in the research track. The project entails scholarly inquiry into a current ethical issue related to health care provision. The objective of the project is to develop and disseminate new information for the purpose of improving the delivery of health care. The student’s Research Committee approves the proposal, oversees the research project, and approves the final research thesis.
12 credits for the entire sequence
Prerequisites: ETHC 501 Introduction to Medical Ethics, ETHC 502 Foundations of Medical Ethics, ETHC 503 Philosophy of Medicine, ETHC 505 Ethics of Research and Experimentation, ETHC 551 Research Literature Review, ETHC 552 Research Project Proposal

MASTER OF HEALTH PROFESSIONS EDUCATION DEGREE PROGRAM

MISSION
The mission of the Master of Health Professions Education Program is to assist current and future health care providers in becoming effective educators within their scope of practice as well as within the community. In addition, this program should provide the graduate with credentials needed for increased opportunities and advancement within their current career.

DEGREE DESCRIPTION
The curriculum leading to the Master of Health Professions Education degree is a part-time, graduate-level program designed to prepare current and future health care providers with the skills necessary to become effective educators in their chosen professional field. Applicants typically possess health care training and include physicians, nurses, dentists, occupational and physical therapists, pharmacists, physician assistants, allied health personnel, health professions students, and other health care related professionals.

The 42-quarter-hour curriculum may be completed in as little as 18 months but must be completed within a period of 60 months, excepting approved leaves of absence. Typically, students will complete the program in a period of two to three years. The course of instruction includes 12 credit hours of required courses and 18 credit hours of electives. Most of the courses are offered either online or in a blended format that includes both online and on-campus classes. Required courses include: Educational Technology, Instructional Design and Methods, Teaching and Learning Styles, and Curriculum Construction. The student then enrolls in 12 additional credit hours to complete either a Research Thesis or Education Practicum. In the Research Thesis Option, the student is required to perform an approved research project on a topic related to health care education (11 credits). Prerequisite to the research project is a self-directed, one-credit course that allows the student to develop a proposal for the research project. The proposal describes the specific objectives of the research project and the methods by which these objectives will be accomplished. In the Educational Practicum Option, the student is required to develop, implement and evaluate an instructional design plan under the supervision of a practicing educator (11 credits). Prerequisite to the practicum project is a self-directed, one-credit course that allows the student to identify the target audience, determine the objectives and establish the timeline for completion of their practicum.

ADMISSIONS

Admission Requirements
To be considered for admission to the Master of Health Professions Education degree programs, applicants must submit the following documented evidence:
1. Completion of a bachelor’s level (or its equivalent, i.e., 120 undergraduate hours including professional program) or higher degree from a regionally accredited college or university. Exceptions to this requirement may be made by the Health Professions Education Program Admissions Committee for applicants who have:
   a. Successfully completed accredited professional programs, such as physician assistant, nursing, dental hygienist, etc.
   b. Completed a minimum of 100 semester hours of undergraduate training (including professional program), 20 of which are in general education courses including humanities, fine arts, social sciences, computer sciences, or business
   c. Five or more years of experience in a health care-related profession
   d. Demonstrated a record of continuous professional development, and
   e. Submitted one additional letter of reference (i.e., three total) attesting to their ability to perform at a graduate level
2. A minimum cumulative grade point average (GPA) of 2.75 on a scale of 4.00 for their bachelor’s or higher degree programs
3. Official transcripts verifying completion of their bachelor’s degree or higher level degree program from a regionally accredited college or university
4. Two letters of recommendation
5. Passage of the Midwestern University criminal background check
6. Commitment to abide by the Midwestern University Drug-Free Workplace and Substance Abuse Policy
Application and Selection Process
Individuals interested in applying for admission to the Master of Health Professions Education degree program may download their application from the University’s web site at www.midwestern.edu or obtain application packets by writing or calling:

Office of Admissions
Midwestern University
19555 N. 59th Avenue
Glendale, AZ 85308
623/572-3215
888/247-9277

To be considered for admission, applicants must also:
1. Submit their completed Health Professions Education Program Application for Admission form.
2. Submit their nonrefundable, nonwaivable application fee of $50 (the application fee is waived for dual degree students).
3. Complete the Health Profession Education Program’s interview process (by invitation only).
4. Submit two signed and sealed letters of recommendation.
5. Submit official transcripts verifying completion of their bachelor’s degree or higher level degree program from a regionally accredited college or university.

After receiving completed application packets, the information provided is verified to determine whether all prerequisite coursework has been completed satisfactorily or will be completed prior to potential matriculation. Applications meeting all established standards for admission are forwarded to the Health Professions Education Program Admissions Committee. Applicants will be notified in writing of Admissions Committee decisions.

Please Note: Applicants may track the receipt of their application materials and the status of their files on the Midwestern University web site using instructions for accessing account information that will be sent by the Office of Admissions after receipt of their applications. Applicants are responsible for notifying the Office of Admissions of any changes in their mailing address and e-mail address. All requests for application withdrawals must be made in writing.

The Health Professions Education Program uses a rolling admissions process. Completed applications are reviewed and decisions are made at regular intervals during the admissions cycle. Health Professions Education students may enter their programs during any academic quarter.

International Applicants
An international student must satisfy all of the requirements for admission to the college or program that apply to a student who has completed all of his/her prerequisite coursework in the U.S. at a regionally accredited college or university. In addition, an international student must demonstrate proficiency in the English language.

This may be accomplished by satisfying both of the following requirements:
1. The international student has completed a minimum of two full time semesters or three full time quarters of instruction at a postsecondary institution in the United States. Completed coursework must include a minimum of 50% of the prerequisite science coursework for the college or program of interest, 6 semester hours of non-remedial English composition, and 3 semester hours of public speaking/speech.
2. The international student must submit official TOEFL scores. A minimum passing score is 550 (paper version, maximum score 677) or 100 (internet version, maximum score 120). The TOEFL scores must be from an exam taken within two years of the anticipated date of matriculation into the college or program. If the international student wishes to receive credit for prerequisite coursework completed at a college or university outside of the United States, he/she must submit an official, detailed, course-by-course evaluation of this coursework. The student must obtain this evaluation from one of the following services:
   1. Educational Credential Evaluators (ECE): 414/289-3400 or Fax 414/289-3411 (www.ece.org, e-mail: info@ece.org).
   3. World Education Service (WES): 212/966-6311 or Fax 212/739-6100 (www.wes.org, e-mail: info@wes.org) Based on the official foreign transcript evaluation and the grade earned in the course(s), the college or program will decide if it will apply any of these credits toward fulfillment of its prerequisites.

Technical Standards
A candidate must have abilities and skills in five areas: I) observation; II) communication; III) motor; IV) intellectual, conceptual, integrative, and quantitative; and V) behavioral and social. Technological compensation can be made for some limitation in certain of these areas, but a candidate should be able to perform in a reasonably independent manner.

I. Observation: The candidate must be able to accurately make observations at a distance and close at hand. Observation necessitates the functional use of the sense of vision and somatic sensation and is enhanced by the functional use of all of the other senses.

II. Communication: The candidate must be able to communicate effectively, efficiently and sensitively in both oral and written form and be able to perceive nonverbal communication.
III. Motor: Candidates must be able to coordinate both gross and fine muscular movements, maintain equilibrium and have functional use of the senses of touch and vision. The candidate must possess sufficient postural control, neuromuscular control and eye-to-hand coordination to perform profession-specific skills and tasks.

IV. Intellectual, Conceptual, Integrative and Quantitative Abilities: The candidate must be able to problem solve, measure, calculate, reason, analyze, record and synthesize large amounts of information in a timely manner. The candidate must be able to comprehend three-dimensional relationships and understand spatial relationships.

V. Behavioral and Social Attributes: The candidate must possess the emotional health required for full utilization of his/her intellectual abilities, the exercise of good judgment and the consistent, prompt completion of all responsibilities and the development of mature, sensitive and effective relationships. Candidates must be able to tolerate physically, mentally and emotionally taxing workloads and to function effectively under stress. The candidate must be able to adapt to changing environments, to display flexibility, and to learn to function in the face of uncertainties. Compassion, integrity, concern for others, effective interpersonal skills, willingness and ability to function as an effective team player, interest and motivation to learn are all personal qualities required during the educational process.

Candidates are required to certify that they understand and meet these Technical Standards. Candidates must provide such certification prior to matriculation. Candidates who may not meet the Technical Standards must inform the Director of Admissions, who will then contact the Dean of Students. The Dean of Students, in consultation with the academic dean (and program director), will identify and discuss what accommodations, if any, the College(/Program) would need to make that would allow the candidate to complete the curriculum. The College(/Program) is not able to grant accommodations that alter the educational standards of the curriculum. Students must meet the Technical Standards for the duration of enrollment in their professional program.

**Matriculation Process**

The matriculation process begins after applicants receive notification of their acceptance into the Health Professions Education Program. Students must return both their signed matriculation agreement and their initial deposit to the Office of Admissions. Students must also:

1. Submit deposit monies by the date designated in their matriculation documents. Deposits are applied toward the first quarter’s tuition.
2. Submit official final transcripts verifying completion of their bachelor’s degree or higher level degree program from regionally accredited colleges or universities by the deadline of two weeks (14 calendar days) prior to the first day of classes. Students who are accepted to MWU less than one month prior to the first day of classes, they will have 30 calendar days from the date of their acceptance to submit all official transcripts to the Office of Admissions. Any special circumstances or requests for exceptions to this policy must be sent to and approved by the Office of the Dean of the College.
3. Students who fail to submit all official final transcripts by the stated deadline may jeopardize their acceptance or continued enrollment in the College.
4. Submit proof of immunization against measles, mumps, rubella, oral polio (opv), and diphtheria.
5. Submit proof of medical and disability insurance coverage. Students may select either a plan offered by an MWU-approved carrier or a comparable plan offered by an outside carrier of their choice.
6. Meet the Technical Standards for the Program.
7. Provide documentation verifying that sufficient funds have been deposited in a U.S. bank to cover all expenses while attending the College of Health Sciences (for non-U.S. citizen/nonpermanent resident only).
8. Submit additional documents as required by the Office of Admissions.
9. Authorize and pass the Midwestern University criminal background check.
10. Sign and submit the Midwestern University Drug Free Workplace and Substance Abuse Policy Statement.
11. Provide documentation verifying that sufficient funds have been deposited in a U.S. bank to cover all expenses while attending the College of Health Sciences (for non-U.S. citizen/nonpermanent resident only).
12. Authorize and pass the Midwestern University criminal background check.
13. Complete a physical exam and submit this form and a completed medical file as requested by the Office of Student Services.

Students who either fail to satisfy these matriculation requirements or omit or falsify information required on official admissions documents will automatically forfeit their seat in the Program.

**Articulation Agreement Between Midwestern University Programs**

Students enrolled in a Midwestern University program are guaranteed an admission interview with another Midwestern University program if the student:

1. is currently in good standing in the academic program in which the student is enrolled and does not have any pending misconduct charges against him/her;
2. meets all admission requirements for the professional program of interest;
3. after a minimum of two full time quarters of study, achieves a minimum Midwestern University grade point average, derived from all courses completed at Midwestern, that is equal to or greater than 3.0; AND
4. achieves a score on the professional entrance exam (if required) that is not less than one standard deviation below the mean score for students that matriculated into the professional degree program in the previous year.

A guaranteed interview does not guarantee admission into the professional program.
Dual Admission Program
The Health Professions Education Program offers an educational opportunity to current and incoming physician assistant (PA), occupational therapy (OT), cardiovascular science (M.C.S.), nurse anesthetist (CRNA), biomedical science, podiatric medicine (D.P.M.) and osteopathic medical (D.O.) students. Students accepted into these programs may apply to the Health Professions Education Program as dual degree candidates. The following policies apply:

1. Applicants must apply and be accepted into the clinical program and Health Professions Education Program separately. Only applicants meeting minimum entrance requirements for both degree programs will be given an option for admission to the dual degree program.
2. The clinical degree program will be considered the primary degree program and the Health Professions Education Program the secondary degree program. Continuity of the primary degree program must be maintained.
3. The length of the secondary program will be extended for a duration of time sufficient to complete the secondary degree program. This is usually three to six months (for OT, CRNA and M.C.S. students) and may be individualized to accommodate availability of desired courses, academic proficiency, type of tract desired in the Health Professions Education Program (i.e., research or practicum), and student preferences. The Health Professions Education Program degree must be completed within a total of 60 months from initial matriculation.
4. Students must maintain the minimum cumulative GPA requirements of each program. Failure to maintain the minimum cumulative GPA in either program will result in students receiving academic warnings or placement on academic probation. This may result in deceleration or temporary suspension from the secondary degree program.
5. The number of credits required for completion of the Health Professions Education Program is degree-specific (see degree descriptions). Some courses from the clinical degree programs of students may be deemed suitable for credit in the Health Professions Education Program degree program. If approved, these courses may be substituted for elective credit in the Health Professions Education Program up to a maximum of six (6) credits. No Health Professions Education Program tuition will be charged for these credits.
6. In addition to the established quarterly tuition for the clinical degree program, students enrolled in a dual degree shall pay tuition to the Health Professions Education Program on a per credit basis. Dual degree students accepted into the Health Professions Education Program at any time before graduation shall receive a 30% discount on the normal Health Professions Education Program per credit hour charge during their matriculation in the primary degree program and for up to 12 months following completion of their primary degree program. Quarterly Health Professions Education Program tuition is determined by the number of credits for which students are registered.

GRADUATION REQUIREMENTS
To qualify for graduation from the Master of Health Professions degree program, the student must:

1. Follow an approved course of study acceptable to the Biomedical Science Program Student Academic Review Committee;
2. Satisfactorily complete all courses with a minimum cumulative grade point average of 2.75 with no course grade below a C;
3. Satisfactorily complete the required 42 minimum number of quarter hour credits in their programs (dual-degree applicants should discuss the credit load needed for their degree with the Program Director);
4. Receive a favorable recommendation for master’s degree conferral from the program faculty to the CHS Student Promotion and Graduation Committee;
5. Receive a favorable recommendation for master’s degree conferral from the University Faculty Senate;
6. Settle all financial accounts with the University; and
7. Submit a properly completed and signed graduation clearance form to the Office of the Registrar.

CURRICULUM LISTING

Required Courses
MHPE 501  Teaching and Learning Styles  3 credits
MHPE 502  Educational Technology  3 credits
MHPE 503  Instructional Design and Methods  3 credits
MHPE 504  Curriculum Construction  3 credits

Elective Courses. Not all electives are available every year.
BMED 510  Research Topics and Methods  2 credits
BMED 511  Research Design and Statistics  3 credits
BMED 512  Information Systems for Research and Education  2 credits
BMED 513  Writing for Publications  3 credits
BMED 518  Grant Writing in the Health Sciences  3 credits
ETHC 516  Communication Skills for Health Care Professionals  3 credits
ETHC 517  Foundations of Managed Care Systems  3 credits
MHPE 515  Leadership and Management  3 credits
MHPE 521  Instructional Supervision  2 credits
MHPE 522  Advanced Topics in PT Education  2 credits
MHPE 523  Advanced Topics in OT Education  2 credits
MHPE 524  Advanced Topics in PA Education  2 credits
MHPE 525 Advanced Topics in Medical Education 2 credits
MHPE 526 Advanced Topics in Pharmacy Education 2 credits
MHPE 527 Advanced Topics in Nursing Education 2 credits
MHPE 528 Organization and Management of Health Professions Programs 2 credits
MHPE 529 Distance Learning Technology 3 credits
MHPE 530 Teaching Medical Ethics 2 credits
MHPE 531 Cultural Diversity in Education 2 credits
MHPE 532 Evaluation and Assessment 2 credits
MHPE 534 Patient Education: Improving Health Outcomes 3 credits
MHPE 540 Special Topics 1-3 credits
MHPE 541 Special Topics 1-3 credits
MHPE 550 Independent Study 1-3 credits
MHPE 551 Practicum Project Proposal 1 credit
MHPE 552 Research Project Proposal 1 credit
MHPE 590-594 Education Practicum 11 credits
MHPE 595-599 Research Thesis 11 credits

**COURSE DESCRIPTIONS**

Prerequisites are listed for those courses with such requirements. When no prerequisite is listed in a course description, it is implied that there is no prerequisite.

**MHPE 501 Teaching and Learning Styles**
This course is designed to give students specialized knowledge and understanding of the major learning style theories and their application within educational practice. Students identify their predominant learning and teaching styles and explore how to incorporate various strategies to improve teaching effectiveness.
3 credits

**MHPE 502 Educational Technology**
This course is designed to provide the student with an introduction to using educational technology in the classroom and to assist the student with developing skills in applying various educational technologies to meet instructional needs. This course includes computer-assisted instruction.
3 credits

**MHPE 503 Instructional Design and Methods**
In this course, students examine the use of instructional design models to create educational materials that focus on the needs of learners in the health professions. Students design and carry out an instructional design plan related to their health profession or area of expertise.
3 credits
Prerequisite: MHPE 501 Teaching and Learning Styles

**MHPE 504 Curriculum Construction**
This course provides students with the opportunity to practice designing health-related curricula. Students examine trends and relevant research to locate appropriate resources for teaching in the health professions and design a syllabus on a health-related topic.
3 credits
Prerequisite: MHPE 503 Instructional Design and Methods

**ELECTIVES**

With permission from the Program Coordinator, Health Professions Education students can substitute up to nine credits of electives offered through the Master of Arts in Bioethics degree program.

Not all electives are offered every year.

**BMED 510 Research Topics and Methods**
This course explores recent and established areas of research pertinent to the health professional, health educator, and clinical ethicist. Current policy, bioethical, and funding issues are discussed. The format of the class includes both lecture and small group discussion. The course is intended to provide students with a broad understanding of professional research topics and issues with a view toward stimulating ideas for the master’s project.
2 credits

**BMED 511 Research Design and Statistics**
This course is required for those students pursuing the research option. It is an overview of research designs and basic statistical approaches used in basic science, applied, and descriptive research. The course teaches basic research skills used in all disciplines of the health professions, lays the groundwork for each student’s master’s project, and aids in the interpretation of research presented in the literature.
3 credits
Prerequisite: BMED 510 Research Topics and Methods

**BMED 512 Information Systems for Research and Education**
This course is intended to expose students to information management and retrieval methods. Students gain hands-on experience in the use of various computer-based tools (CD-ROMs, library catalogs, databases, Internet/Web, etc.) and learn the fundamental principles of library research. Students also learn how to locate and access information and how to evaluate the quality of the information retrieved.
2 credits

**BMED 513 Writing for Publication**
This elective course is designed to provide students with the tools necessary to prepare manuscripts for publication. Among the areas practiced and discussed are locating an appropriate venue, performing a literature review, writing a
manuscript, and understanding reviewing techniques. The goal of this course is to provide students with the step-by-step instructions to take them from the research process through publication and dissemination.
3 credits

BMED 518 Grant Writing in the Health Sciences
This course is designed to teach students the process of writing a complete grant that meets requirements for federal grant applications. Each student learns to identify appropriate funding sources, plan a research project, organize data, write a research project budget, develop specific aims, and reference the most appropriate literature. The course culminates in a written grant proposal suitable for submission.
3 credits

ETHC 516 Communication Skills for Health Care Professionals
Good communication skills are an essential medical tool. This class helps improve participants’ communication abilities by teaching a wide range of active listening skills including behavior description, projective listening, story construction, dealing with emotions, direct expression of feeling, dealing with criticism, neurolinguistic programming, and more. Class time focuses on the active practice and integration of these skills.
3 credits

ETHC 517 Foundations of Managed Care Systems
This elective course is designed to provide students with an understanding of the evolution of managed health care. Key structures, processes, and outcomes of managed care systems will be discussed in depth. The goal of this course is to give students the tools necessary to analyze health systems in order to lead improvements within their respective disciplines.
3 credits

MHPE 515 Leadership and Management
This elective course explores the various methods of leadership and management, with an emphasis on the healthcare arena. Leadership theories and management styles will be explored, focusing on behaviors, characteristics and practices. Each student will be required to research and present on a current leadership topic.
3 credits

MHPE 521 Instructional Supervision
This course is designed to focus on the role of supervision in facilitating learning. Including mentoring, evaluating and providing good leadership. Effective communication methods are also explored.
2 credits

MHPE 522 Advanced Topics in Physical Therapy (PT) Education
This course provides students with the opportunity to examine current educational, administrative, and professional issues that affect the quality and scope of physical therapy practice locally and nationally. The course emphasizes how students might impact these issues in very practical ways.
2 credits

MHPE 523 Advanced Topics in Occupational Therapy (OT) Education
The course explores issues relevant to occupational therapy education and some of the challenges facing clinicians who transition to educators. The course is intended to provide the student with a broad understanding of educational and curricular topics and issues.
2 credits

MHPE 524 Advanced Topics in Physician Assistant (PA) Education
The course explores issues relevant to physician assistant education as well as some of the challenges facing clinicians who transition to educators. The course is intended to provide students with a broad understanding of educational and curricular topics and issues.
2 credits

MHPE 525 Advanced Topics in Medical Education
The course explores issues relevant to medical education as well as some of the challenges facing clinicians who both practice and teach. The course is intended to provide students with the opportunity to explore and discuss educational topics and issues such as problem-based learning and clinical rotations as learning environments.
2 credits

MHPE 526 Advanced Topics in Pharmacy Education
This course provides students the opportunity to examine current educational, administrative, and professional issues that affect the quality and scope of pharmacy practice locally and nationally. The course is intended to provide students with a broad understanding of educational and curricular topics and issues.
2 credits

MHPE 527 Advanced Topics in Nursing Education
The course explores issues relevant to nursing education as well as some of the challenges facing clinicians who transition to educators. The course is intended to provide students with a broad understanding of educational and curricular topics and issues.
2 credits
MHPE 528 Organization and Management of Health Professions Programs
This course is designed to provide students with an introduction to organization and management theories to assist them with developing the skills necessary to contribute to the successful administration of a health professions program.
2 credits

MHPE 529 Distance Learning Technology
This course is designed to explore the components of distance education including methods of delivery, effectiveness, technology requirements, and costs. Past and present distance learning modalities are discussed along with anticipated trends for the future.
3 credits
Prerequisite: MHPE 502 Educational Technology

MHPE 530 Teaching Medical Ethics
This course looks at pedagogic considerations related to teaching medical ethics. Teaching about issues that have no “absolute correct answers” can be challenging; this course is designed to give the student insight into the various subject matters in the bioethics discipline.
2 credits

MHPE 531 Cultural Diversity in Education
This course is designed to acquaint students with issues they may face in both treating and instructing minorities from diverse cultural and ethnic backgrounds. It focuses on increasing awareness of the predominant minority health issues in the U.S. and develops skills to instruct students in a culturally sensitive manner.
2 credits

MHPE 532 Evaluation and Assessment
This course provides students with the opportunity to design evaluation and assessment tools to measure learning. Students learn how to design tests, surveys, and other outcome measurements that can be used to evaluate teaching effectiveness.
2 credits

MHPE 534 Patient Education: Improving Health Outcomes
This course focuses on developing patient education materials related to preventing and/or managing disease. Emphasis is placed on the application of instructional design theories to develop educational tools such as brochures or handouts, as well as patient education treatment plans. Health literacy issues are also explored.
3 credits

MHPE 540, 541 Special Topics
Additional courses are offered at the discretion of the Biomedical Sciences Program faculty.
1 to 3 credits each course

MHPE 550 Independent Study
The independent study course is designed to allow students to explore in greater depth an area of educational interest within the health professions. The course is student-designed and faculty-approved.
1 to 3 credits

MHPE 551 Practicum Project Proposal
This self-structured course is designed to allow students to develop the goals and methods for the practicum project. Students identify and establish a Practicum Committee and present a project proposal outline for review. Upon receiving committee approval, students may begin their educational project.
1 credit

MHPE 552 Research Project Proposal
This self-structured course is designed to allow students to identify the research topic and methods of investigation for their master’s project. Students establish a Research Committee who review the project proposal. Upon receiving committee approval, students may begin their research project.
1 credit

MHPE 590-594 Education Practicum
The practicum gives students opportunities to put theory into practice by working on a teaching project within the health professions. The practicum project includes implementing and evaluating the approved practicum proposal outline developed in MHPE 551. The final product will include a practicum report that describes the results of the educational project, the methods used and the materials that were developed to accomplish the project goals. The Practicum Committee oversees the entire process, provides input, and approves the final product.
11 credits for the entire sequence
Prerequisites: MHPE 501 Teaching and Learning Styles, MHPE 502 Educational Technology, MHPE 503 Instructional Design and Methods, MHPE 504 Curriculum Construction, MHPE 551 Practicum Project Proposal

MHPE 595-599 Research Thesis
The research project entails scholarly inquiry into a current issue related to the education and training of health professionals. The objective of the project is to explore and disseminate new information about teaching in the health professions for the purpose of improving educational delivery
and effectiveness. The research proposal includes the specific issue to be explored and the methods by which the student investigates the issue. The student’s Research Committee approves the proposal, oversees the research project, and approves the final research thesis.

11 credits for the entire sequence

Prerequisites: MHPE 501 Teaching and Learning Styles, MHPE 502 Educational Technology, MHPE 503 Instructional Design and Methods, MHPE 504 Curriculum Construction, and MHPE 552 Research Project Proposal

**FACULTY**

Leonard B. Bell, Ph.D.
Medical College of Wisconsin
Biomedical Sciences Program Director and Professor

Pedro I. Chavez, Ph.D.
University of Texas
Graduate School
Professor

Kimbal E. Cooper, Ph.D.
University of Illinois
College of Liberal Arts and Sciences
Professor

Elizabeth E. Hull, Ph.D.
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Associate Professor

Carleton B. Jones, Ph.D.
Washington State University
College of Pharmacy
Associate Professor

Gregory S. Loeben, Ph.D.
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College of Social and Behavioral Sciences
Associate Professor

Christine M. Morgan, Ed.D.
Nova Southeastern University
Fischler School of Education and Human Services
Associate Professor

Scott D. Soby, Ph.D.
University of California, Davis
College of Agricultural and Environmental Science
Assistant Professor
College of Health Sciences

Cardiovascular Science Program

Mission
The Cardiovascular Science Program at Midwestern University (MWU) will provide academic and clinical excellence in educating cardiovascular perfusionists for their professional career.

Accreditation
The Cardiovascular Science Program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Accreditation Committee—Perfusion Education.

Commission on Accreditation of Allied Health Education Programs
1361 Park Street
Clearwater, FL 33756
727/210-2350

Degree Description
In an ever-changing field where surgical, technological, and basic sciences are rapidly changing, program graduates are provided with the knowledge and skills necessary to meet the demands that will be placed upon them.

The 24-month curriculum leading to a Master of Science in Cardiovascular Science degree is a full-time professional program of seven continuous quarters. The maximum time for completion of the program is three (3) years. The program begins with three quarters of didactic and laboratory education at the Glendale, Arizona campus. The student is exposed to clinical medicine during the first three quarters by clinical observation at affiliated hospitals in the Phoenix area.

The summer quarter of the student’s second year begins the four-quarter clinical rotation segment held at various affiliated hospitals located across the country. Relocation during clinical rotation will be necessary. This is a rigorous and demanding program; however, graduates are rewarded with the satisfaction that comes with accomplishment and an excellent start to their professional careers.

Admissions
The Cardiovascular Science Program currently uses a rolling admissions process. Completed applications are reviewed and decisions are made at regular intervals during the admissions cycle. Matriculation into the Master of Cardiovascular Science degree program occurs during the Fall quarter.

Admission to the Cardiovascular Science Program at Midwestern University is considered on a competitive basis for prospective students who hold a bachelor’s level (or its equivalent) or higher degree from regionally accredited professional programs. Applications received are reviewed by the Office of Admissions for completeness and referred to the Director of Cardiovascular Science to determine eligibility for applicant interviews. Final acceptance into the Cardiovascular Science Program is determined by the Admissions Committee with the approval of both the Director of Cardiovascular Science and the Dean. Decisions on acceptance are made until the maximum enrollment for each class is reached. Candidates are encouraged to submit a completed application early in the admission cycle.

Admission Requirements
To be considered for admission to the Cardiovascular Science Program, applicants must submit documentation of the following:
1. Completion of a bachelor’s level or higher degree from regionally accredited colleges or universities
2. Minimum cumulative grade point average (GPA) of 2.75 on a scale of 4.00
3. Completion of the Application for admission
4. Completion of the minimum number of prerequisite courses at regionally accredited college or university
   • All prerequisites must be completed with a grade of C or better
   • Grades of C- are not acceptable for any prerequisite courses
5. Completion of the Program’s interview process (by invitation only)
6. Passage of the Midwestern University criminal background check
7. Commitment to abide by the Midwestern University Drug-Free Workplace and Substance Abuse Policy
**PREREQUISITE COURSES**

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
<th>Qtr. Hrs.</th>
</tr>
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<tbody>
<tr>
<td>Social and Behavioral Sciences (e.g., sociology, psychology, anthropology)</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>Biology (must include laboratory)</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>General Chemistry (inorganic; must include laboratory)</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Anatomy &amp; Physiology</td>
<td>3</td>
<td>4</td>
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<tr>
<td>Applied Mathematics (college algebra or higher)</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>English (emphasizing composition, communication, and language skills)</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>General Education electives (recommended courses include fine arts, humanities, human services, ethics, philosophy, foreign language, business principles, computer information systems, economics, and cultural anthropology.)</td>
<td>25</td>
<td>38</td>
</tr>
</tbody>
</table>

**International Credit Hours**

| Total Credit Hours | 55       | 82       |

If the international student wishes to receive credit for prerequisite coursework completed at a college or university outside of the United States, he/she must submit an official, detailed, course-by-course evaluation of this coursework. The student must obtain this evaluation from one of the following services:

1. Educational Credential Evaluators (ECE): 414/289-3400 or Fax 414/289-3411 (www.ece.org, e-mail: info@ece.org)
3. World Education Service (WES): 212/966-6311 or Fax 212/739-6100 (www.wes.org, e-mail: info@wes.org)

Based on the official foreign transcript evaluation and the grade earned in the course(s), the college or program will decide if it will apply any of these credits toward fulfillment of its prerequisites.

**Application Process**

To be considered for admission into the Cardiovascular Science Program, applicants must submit to the Office of Admissions an application packet that includes:

1. A completed Application for Admission form, which may be downloaded from the University's web site at www.midwestern.edu or sent by calling or writing to the Office of Admissions (noted below)
2. A nonrefundable, nonwaivable application fee of $50
3. Two signed and sealed letters of recommendation
4. Official transcripts from each college or university attended

Mail the completed application packet within thirty (30) days to:

Office of Admissions
Midwestern University
19555 North 59th Avenue
Glendale, AZ 85308

**Please Note:** Applicants may track the receipt of their application materials and the status of their files on the University’s web site with the instructions for accessing account information that will be sent by the Office of Admissions after receipt of their applications. Applicants are responsible for notifying the Office of Admissions of any changes in their mailing address and/or e-mail address. All requests for application withdrawals must be made in writing via e-mail, fax or letter to the Office of Admissions.

**Technical Standards**

A candidate must have abilities and skills in five areas: I) observation; II) communication; III) motor; IV) intellectual, conceptual, integrative, and quantitative; and V) behavioral and social. Technological compensation can be made for some limitation in certain of these areas, but a candidate should be able to perform in a reasonably independent manner.
Matriculation Process

The matriculation process begins after applicants receive notification of their acceptance into the Cardiovascular Science Program of the College of Health Sciences. Students must return their signed matriculation agreement to the Office of Admissions. Students must also:

1. Submit deposit monies by the dates designated in their matriculation documents. Deposits are applied toward the first quarter's tuition.
2. Submit official final transcripts from all colleges attended post-high school by the deadline of two weeks (14 calendar days) prior to the first day of classes. Students who are accepted to MWU less than one month prior to the first day of classes will have 30 calendar days from the date of their acceptance to submit all official transcripts to the Office of Admissions. Any special circumstances or requests for exceptions to this policy must be sent to and approved by the Office of the Dean of the College. Students who fail to submit all official final transcripts by the stated deadline may jeopardize their acceptance or continued enrollment in the College.
3. Complete a medical file as requested by the Office of Student Services.
4. Submit proof of medical and disability insurance coverage. Students may select either a plan offered by an MWU-approved carrier or a comparable plan offered by an outside carrier of their choice.
5. All non-U.S. citizens/nonpermanent residents must provide documentation verifying that sufficient funds have been deposited in a U.S. bank to cover all expenses while attending CHS.
6. Provide documentation that any additional coursework or service requirements stipulated by the Admissions Committee have been completed.
7. Submit additional documents as required by the Office of Admissions.
8. Authorize and pass the Midwestern University criminal background check.
10. Complete a physical exam and submit form.
11. Sign and submit a Credit Policy Statement.
12. Meet the Technical Standards for the Program.

Students who either fail to satisfy these matriculation requirements or omit or falsify information required on official admissions documents automatically forfeit their seat in the Program. Individuals accepted for admission to the Cardiovascular Science Program who do not comply with stated timelines for submission of all required materials will not receive further notification from CHS regarding forfeiture of their seat.

I. Observation: The candidate must be able to accurately make observations at a distance and close at hand. Observation necessitates the functional use of the sense of vision and somatic sensation, and is enhanced by the functional use of all of the other senses.

II. Communication: The candidate must be able to communicate effectively, efficiently and sensitively in both oral and written form and be able to perceive nonverbal communication.

III. Motor: Candidates must be able to coordinate both gross and fine muscular movements, maintain equilibrium and have functional use of the senses of touch and vision. The candidate must possess sufficient postural control, neuromuscular control and eye-to-hand coordination to perform profession-specific skills and tasks.

IV. Intellectual, Conceptual, Integrative and Quantitative Abilities: The candidate must be able to problem solve, measure, calculate, reason, analyze, record and synthesize large amounts of information in a timely manner. The candidate must be able to comprehend three-dimensional relationships and understand spatial relationships.

V. Behavioral and Social Attributes: The candidate must possess the emotional health required for full utilization of his/her intellectual abilities, the exercise of good judgment and the consistent, prompt completion of all responsibilities and the development of mature, sensitive and effective relationships. Candidates must be able to tolerate physically, mentally and emotionally taxing workloads and to function effectively under stress. The candidate must be able to adapt to changing environments, to display flexibility, and to learn to function in the face of uncertainties. Compassion, integrity, concern for others, effective interpersonal skills, willingness and ability to function as an effective team player, interest and motivation to learn are all personal qualities required during the educational process.

Candidates are required to certify that they understand and meet these Technical Standards. Candidates must provide such certification prior to matriculation. Candidates who may not meet the Technical Standards must inform the Director of Admissions, who will then contact the Dean of Students. The Dean of Students, in consultation with the academic dean (and program director), will identify and discuss what accommodations, if any, the College(/Program) would need to make that would allow the candidate to complete the curriculum. The College(/Program) is not able to grant accommodations that alter the educational standards of the curriculum. Students must meet the Technical Standards for the duration of enrollment in their professional program.

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Articulation Agreement Between Midwestern University Programs
Students enrolled in a Midwestern University program are guaranteed an admission interview with another Midwestern University program if the student:
1. is currently in good standing in the academic program in which the student is enrolled and does not have any pending misconduct charges against him/her;
2. meets all admission requirements for the professional program of interest;
3. after a minimum of two full time quarters of study, achieves a minimum Midwestern University grade point average, derived from all courses completed at Midwestern, that is equal to or greater than 3.0; AND
4. achieves a score on the professional entrance exam (if required) that is not less than one standard deviation below the mean score for students that matriculated into the professional degree program in the previous year.

A guaranteed interview does not guarantee admission into the professional program.

Graduation Requirements
To qualify for graduation with the master’s degree, students must:
1. Follow an approved course of study leading to the completion of a master’s project acceptable to the Program Student Academic Review Committee;
2. Satisfactorily complete the required 103.0 quarter-credit hours in the overall course of study with a minimum cumulative grade point average of 2.75, have no course or rotation grade below a C, and satisfactorily complete a final general exercise (Program Summative Evaluation) involving a comprehensive knowledge-based and skills-based examination;
3. Receive a favorable recommendation for master’s degree conferral from the Program Student Academic Review Committee and the College of Health Sciences Student Promotion and Graduation Committee;
4. Be recommended for conferral of the master’s degree by the University Faculty Senate;
5. Settle all financial accounts with the University; and
6. Complete all graduation clearance requirements as instructed by the Office of the Registrar.

Licensure Requirements
Licensure is not required in all states, including Arizona. In some states, students must successfully complete a Perfusion Education Program accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP). Certification is achieved by passing the certifying examination administered by the American Board of Cardiovascular Perfusion (ABCP).

For further information regarding the ABCP certifying examination contact:
The American Board of Cardiovascular Perfusion
207 N. 25th Avenue
Hattiesburg, MS 39401
601/582-2227

Curriculum
First Year, Fall Quarter
BMED 560 Biophysics 4.0
CORE 460 Interdisciplinary Health Care 0.5
CVSP 531 CV Sciences Journal Review I 1.0
CVSP 532 Research Methodology for CV Sciences 3.0
CVSP 541 Introduction to the Perfusion Environment 2.0
CVSP 561 CV Perfusion Technology & Lab I 2.0
PHYS 471 Human Physiology I 4.0
Total 16.5

First Year, Winter Quarter
BMED 574 Pharmacology I 3.0
CORE 470 Interdisciplinary Health Care 0.5
CVSP 533 CV Sciences Journal Review II 1.0
CVSP 534 Research Laboratory for CV Sciences 2.0
CVSP 551 Applied CV Anatomy & Embryology 2.0
CVSP 554 Renal, Fluid & Acid-Base Physiology 1.5 for CV Sciences (online)
CVSP 562 CV Perfusion Technology & Lab II 5.0
CVSP 571 CV Observations I 1.0
Total 16.0

First Year, Spring Quarter
BMED 575 Pharmacology II 3.0
CORE 480 Interdisciplinary Health Care 0.5
CVSP 535 CV Sciences Project Development 1.0
CVSP 544 Quality & Risk Management for CV Sciences 3.0
CVSP 552 CV Pathology 3.0
CVSP 553 Monitoring of the CV Patient 2.0
CVSP 563 CV Perfusion Technology & Lab III 5.0
CVSP 564 CV Devices Laboratory 1.0
CVSP 565 CV Sciences High Fidelity Simulation 1.0
CVSP 572 CV Observations II 1.0
Total 20.5

Second Year, Summer Quarter
CVSP 581 Clinical Practicum I (6 weeks) 6.0
CVSP 582 Clinical Practicum II (6 weeks) 6.0
Total 12.0

Second Year, Fall Quarter
CVSP 566 Special Techniques in Cardiopulmonary Bypass 1.0
CVSP 583 Clinical Practicum III (6 weeks) 6.0
CVSP 584 Clinical Practicum IV (6 weeks) 6.0
Total 13.0
Second Year, Winter Quarter
CVSP 585   Clinical Practicum V (6 weeks)   6.0
CVSP 586   Clinical Practicum VI (6 weeks)   6.0
Total                        12.0

Second Year, Spring Quarter
CVSP 567   Current Trends in Perfusion   1.0
CVSP 587   Clinical Practicum VII (6 weeks)   6.0
CVSP 588   Clinical Practicum VIII (6 weeks)   6.0
Total                        13.0

Program Completion                        103.0

Note: The Cardiovascular Science Program reserves the right to modify the curriculum.

COURSE DESCRIPTIONS
Prerequisites are listed for those courses with such requirements. When no prerequisite is listed in a course description, it is implied that there is no prerequisite.

BMED 560 Biophysics
The purpose of this course is to show how the various branches of physics can be used to understand important aspects of physiology, pharmacology, and pathology. Control theory is used throughout the course to help quantify the mechanisms of homeostasis.
4 credits

BMED 574 Pharmacology I
This course introduces students to the general principles of drug action, drug dynamics and kinetics, toxicities, and therapeutic uses as related to humans. Students learn about common drugs affecting major organ systems of the body, namely: the autonomic nervous system, central nervous system, cardiovascular and renal systems. Specific drugs for the treatment of arrhythmias, angina, congestive heart failure, hypertension and hyperlipidemias will be discussed.
3 credits

BMED 575 Pharmacology II
This course builds on the information presented in BMED 574 (Pharmacology I). The initial focus will be on drugs that affect hemostasis followed by drugs affecting the gastrointestinal and genitourinary systems, chemotherapy of microbial and parasitic organisms, chemotherapy of neoplastic diseases, local and general anesthetics, treatment of diabetes, hormones, and vitamins.
3 credits
Prerequisite: BMED 574 Pharmacology I

CORE 460, 470, 480 Interdisciplinary Health Care
The Interdisciplinary Health Care course involves the Colleges of Health Sciences, Osteopathic Medicine, Dental Medicine, Optometry and Pharmacy in order to teach all clinically-based students about the importance of an interdisciplinary approach to patient care. Lectures will be given in a seminar format in conjunction with panel presentations and discussions by interdisciplinary team members.
0.5 credit per quarter

CVSP 531 Cardiovascular Sciences Journal Review I
This course covers topics related to cardiovascular perfusion. Students will evaluate journal review articles and present to the class. The course will provide the student with skills to review, critique, present, and lead discussions of journal articles that are relevant to perfusion and cardiothoracic surgery.
1 credit

CVSP 532 Research Methodology for Cardiovascular Sciences
This course introduces the student to a variety of research and professional issues pertinent to the basic science and clinical researcher. Current policy, bioethical and funding issues will be discussed. Fundamentals of the scientific and analytical methods will be discussed along with the limitations of each. The various types of research, research design, sampling techniques, hypothesis generation, information gathering skills and literature critiques will also be discussed.
3 credits

CVSP 533 Cardiovascular Sciences Journal Review II
This course is a continuation of CVSP 531 (Cardiovascular Sciences Journal Review I) that covers topics related to cardiovascular perfusion. The course will provide the student with skills to review, critique, present, and lead discussions of journal articles that are relevant to perfusion and cardiothoracic surgery.
1 credit
Prerequisite: CVSP 531 Cardiovascular Sciences Journal Review I

CVSP 534 Research Laboratory for Cardiovascular Science
This course takes the theory and principles presented in CVSP 532 (Research Methodology for Cardiovascular Science) and applies them to a real-life research project. Students will conduct a research project from the design phase through presentation of the study and the results.
2 credits
Prerequisite: CVSP 532 Research Methodology for Cardiovascular Sciences

CVSP 535 Cardiovascular Sciences Project Development
A requirement of the Cardiovascular Science Program is that the students write and submit a manuscript acceptable for publication prior to the student’s graduation. Acceptability
will be determined by either acceptance for presentation or publication in a peer-reviewed, professional journal. In this independent study course, the student will select a topic, find major references, produce a text outline, and write an abstract for their manuscript. It is anticipated that the student may present their research information during a regional or national perfusion meeting.

1 credit

CVSP 541 Introduction to the Perfusion Environment
This course incorporates the basic knowledge and principles of the operating room and its environment and the basic components of the hardware and disposables employed in the conduct of cardiopulmonary bypass. The Practical Laboratory provides hands-on experience with the heart-lung machine and the extracorporeal circuit. Other hands-on experiences during the quarter include roller pump calibration, setup and priming of a simple pump circuit, and initiation and termination of bypass.
2 credits

CVSP 544 Quality & Risk Management for Cardiovascular Sciences
This course covers topics related to quality management and risk management in cardiovascular perfusion. The quality management course will instruct the student in setting-up a quality management program for a perfusion department. The curriculum will incorporate the continuous quality improvement cycle including process improvement. The risk management segment covers topics related to risk management in cardiovascular perfusion. The course will instruct the student in risk management in perfusion technology.
3 credits

CVSP 551 Applied Cardiovascular Anatomy & Embryology
This course examines cardiac, vascular, renal, and respiratory anatomy as they are applied to the cardiovascular sciences and perfusion technology in particular. Emphasis is placed on normal structure and function and the current techniques used to visualize and analyze each of the structures. In addition, the course will also look at the normal embryonic development of the heart and the vascular system.
2 credits

CVSP 552 Cardiovascular Pathology
This course provides an overview of cardiovascular pathology. Professionals who participate in the care of cardiac patients need to have an understanding of a broad range of cardiovascular disease states, both congenital and acquired. The pathophysiology and therapeutic strategies of the important cardiovascular diseases will be reviewed. Where applicable, developmental, genetic, and environmental factors that impact the disorders will be discussed. The presenting signs and symptoms of the most important entities, as well as therapeutic and interventional strategies will be reviewed.
3 credits

CVSP 553 Monitoring of the Cardiovascular Patient
This course provides an overview of patient monitoring, especially the critically ill patient. The cardiovascular perfusionist must rely on the output of various physiologic monitors and analyzers to ensure that the patient is being adequately perfused during cardiopulmonary bypass. The course takes an in-depth look at these monitors and analyzers. The student will learn how each device and system operates, the strengths and limitations of each, how to troubleshoot each system, and how to interpret the clinical data.
2 credits

CVSP 554 Renal, Fluid & Acid-Base Physiology for Cardiovascular Sciences
Professionals who participate in the care of cardiac patients need to have an understanding of fluid and electrolyte balance. This on-line course will present topics of management and understanding of renal physiology and acid-base balance. Fluid and electrolyte replacement therapy for the cardiac patient will be presented.
1.5 credits

CVSP 561 Cardiovascular Perfusion Technology & Lab I
This course examines the technology that is the cornerstone of open-heart surgery, the heart-lung machine. It provides the student with an overview of the history and evolution of the technology that is the basis of open-heart surgery. A goal of this course is to provide a place for the student to start their study. Technologies that are related to open-heart surgery will also be examined. The World Wide Web will be utilized to provide the student with links to the most modern technologies, and tutorials applicable to open-heart surgery. A laboratory portion of this class is included in the course.
2 credits

CVSP 562 Cardiovascular Perfusion Technology & Lab II
This course is the second class in the series that deals with the technology issues related to open-heart surgery. This course covers topics related to cardiopulmonary bypass, the components of the heart-lung machine, techniques, physiology, and pathophysiology related to cardiopulmonary bypass and extracorporeal support. The associated practical laboratory provides hands-on experience with the extracorporeal circuit and an introduction to the conduct of cardiopulmonary bypass via simulation.
5 credits
Prerequisite: CVSP 561 Cardiovascular Perfusion Technology & Lab I
CVSP 563 Cardiovascular Perfusion Technology & Lab III
This course is a continuation of the coursework that deals with the technology and technique issues related to the extracorporeal circuit. The course continues to look at the physiology and pathophysiology of cardiopulmonary bypass. In addition, the course will look at specific techniques and applications of extracorporeal circulation, various adjunct procedures and pediatric perfusion. The associated practical laboratory continues to build on the hands-on experience of the previous quarters.
5 credits
Prerequisite: CVSP 562 Cardiovascular Perfusion Technology & Lab II

CVSP 564 Cardiovascular Devices Laboratory
This course exposes the student to devices used in the treatment and diagnosis of cardiovascular disease with emphasis on their principles of operation, underlying pathophysiology, set-up, and use. Emphasis is on the practical application of devices in cardiovascular medicine and especially in cardiac surgery.
1 credit

CVSP 565 Cardiovascular Sciences High Fidelity Simulation
This course employs high fidelity simulation exercises to augment academic and laboratory training to consolidate particular skills, increase situation awareness, and prepare the student for practice within the team environment of an operating room. In addition to developing procedural skills, emphasis in simulator training exercises will be placed on developing skills in patient/system monitoring, communication with other surgical team members, and situation awareness. Clinical perfusionists from the perfusion community participate as mentors.
1 credit
Prerequisites: CVSP 561 Cardiovascular Perfusion Technology & Lab I; CVSP 562 Cardiovascular Perfusion Technology & Lab II

CVSP 566 Special Techniques in Cardiopulmonary Bypass
This on-line course is divided into ten separate conditions which may require special and unusual techniques for cardiopulmonary bypass. The class is highly interactive with discussion on each subject.
1 credit

CVSP 567 Current Trends in Perfusion
This on-line course is divided into ten separate discussions. Ten different topics will be discussed on-line, each representing a current trend in perfusion.
1 credit

CVSP 567 1, 572 Cardiovascular Observations I, II
This course involves clinical observations at affiliate hospitals or by independent study. Hospital conferences and Grand Rounds may also be included as a clinical activity. The course exposes the student to procedures and topics in cardiovascular medicine. It exposes the student to clinical issues either by direct observation or by independent study. Clinical exposure may correspond with didactic topics taught during the same quarter of study.
1 credit

CVSP 581, 582, 583, 584, 585, 586, 587, 588 Clinical Practicum I-VIII
The curriculum for Year Two features four quarters of clinical rotations including a one-week Orientation and a one-week Summative Evaluation. During these rotations, students are expected to achieve specific competencies in cardiovascular perfusion and related technologies of open-heart surgery, including proficiency in managing patient problems, handling issues of quality assurance, utilization review, continuity of care and appropriate treatment plans. At least one clinical rotation will be pediatrics. Text reading assignments, journal review, and other online activities are required for each clinical rotation.
6 credits per each 6 week rotation
Prerequisite: Completion of all first year courses and successful completion of the Orientation to the Clinical Rotations program.

PHYS 471 Human Physiology I
Students are introduced through didactic instruction and clinical case discussions to the basic physiologic principles that underlie the normal function of the various organs and organ systems. These core principles provide the foundation through which the student develops an understanding of the physiologic adaptations and transitions that occur in commonly occurring disease states. Topics presented include a general study of cell function, properties of excitable cells, and the function of the neuromuscular, cardiovascular, renal and respiratory systems.
4 credits

FACULTY
Jon W. Austin, M.A. Ed, CP
Ottawa University
College of Education
Program Director and Assistant Professor

Edward L. Evans, B.B.A., M.A., CP
University of Phoenix
College of Business
Assistant Professor

Harry R. Hoerr, Jr., M.S., CCT
National University
College of Education
Associate Professor

Dawn M. Oles, B.S., CCP
Rush University
College of Health Sciences
Instructor
MISSION
As a leader in podiatric medical education, the mission of the Arizona Podiatric Medicine Program is to ensure excellence in an environment that nurtures diversity, professionalism, dedication and creativity.

Vision
The vision of the Arizona Podiatric Medicine Program is to be the standard of excellence by which podiatric medical education will be measured through:
- Innovative curriculum
- Cutting edge research
- Compassionate patient care
- Contemporary graduate and continuing medical education
- Service to community

ACCREDITATION STATUS
The Arizona Podiatric Medicine Program has been granted full accreditation by the Accreditation Committee of the Council on Podiatric Medical Education. The Council is recognized by the U.S. Department of Education as the accrediting agency for colleges, schools and programs of podiatric medicine. For further information, please contact the Council on Podiatric Medical Education at 9312 Old Georgetown Road, Bethesda, Maryland 20814; 800/ASK-APMA or 1-301/581-9200.

DEGREE DESCRIPTION
The Arizona Podiatric Medicine Program offers a four year course of study leading to the Doctor of Podiatric Medicine degree. Maximum time for completion of the degree is six years. Courses in the clinical sciences are integrated with basic science courses during the first two years of the curriculum. Clinical courses continue through the summer and part of the fall quarter of the third year. Full time clinical training occupies eight months of the third year and all of the fourth year. The overall goal of the Program is to prepare the finest possible podiatric physicians for entry into residency training. Dual degree programs are available in Medical Ethics and Medical Education. Participation in a dual degree program requires the permission of the Program Director and acceptance by the Department of Biomedical Sciences.

ADMISSIONS
The Arizona Podiatric Medicine Program (AZPod) considers for admission those students who possess the academic, professional, and personal qualities necessary for development as exemplary podiatric physicians. In the selection process, the Program uses a competitive rolling admissions process. The Program uses multiple criteria to select the most qualified candidates including cumulative grade point average (GPA), science GPA, Medical College Admissions Test (MCAT), personal experiences and character, ability to communicate, familiarity with the profession, volunteer and community involvement, research experience, and other considerations.

Admission Requirements
To be considered for admission to AZPod, the successful candidate must submit the following documented evidence:
1. Minimum cumulative GPA and science GPA’s of 2.75 on a 4.00 scale
2. Ability to successfully complete a rigorous curriculum that requires critical thinking skills, effective oral and written communication skills, and voluminous reading, as well as the capacity for responsible, self-directed learning
3. Competitive scores on the Medical College Admissions Test (MCAT)
4. Completion of the necessary course prerequisites
   - Candidates must complete a minimum of 90 semester hours at regionally accredited colleges or universities
   - A bachelor’s degree is preferred
5. Two letters of recommendation
6. A good understanding of podiatric medicine and a sincere interest in a career in the field
   - Candidates will not be accepted if they have not visited at least one podiatric practice
7. Demonstration of extracurricular or community activities that indicate a well-rounded background and a service orientation
8. Medically-related experiences that indicate sufficient exposure for candidates to make informed decisions about medical careers
9. Personal integrity and sound moral character
10. Interpersonal and communication skills necessary to relate effectively with others
11. Passage of the Midwestern University criminal background check
12. Commitment to abide by the Midwestern University Drug-Free Workplace and Substance Abuse Policy

**PREREQUISITE COURSES**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology with lab</td>
<td>8 Sem/12 Qtr hours</td>
</tr>
<tr>
<td>General/Inorganic Chemistry with lab</td>
<td>8 Sem/12 Qtr hours</td>
</tr>
<tr>
<td>Organic Chemistry with lab</td>
<td>8 Sem/12 Qtr hours</td>
</tr>
<tr>
<td>Physics</td>
<td>8 Sem/12 Qtr hours</td>
</tr>
<tr>
<td>English</td>
<td>6 Sem/9 Qtr hours</td>
</tr>
</tbody>
</table>

Grades less than C are not acceptable for any prerequisite courses (grades of C- are not acceptable).

**International Applicants**

An international student must satisfy all of the requirements for admission to the college or program that apply to a student who has completed all of his/her prerequisite coursework in the U.S. at a regionally accredited college or university. In addition, an international student must demonstrate proficiency in the English language. This may be accomplished by satisfying both of the following requirements:

1. The international student has completed a minimum of two full time semesters or three full time quarters of instruction at a postsecondary institution in the United States. Completed coursework must include a minimum of 50% of the prerequisite science coursework for the college or program of interest, 6 semester hours of non-remedial English composition, and 3 semester hours of public speaking/speech.

2. The international student must submit official TOEFL scores. A minimum passing score is 550 (paper version, maximum score 677) or 100 (internet version, maximum score 120). The TOEFL scores must be from an exam taken within two years of the anticipated date of matriculation into the college or program.

If the international student wishes to receive credit for prerequisite coursework completed at a college or university outside of the United States, he/she must submit an official, detailed, course-by-course evaluation of this coursework. The student must obtain this evaluation from one of the following services:

1. Educational Credential Evaluators (ECE): 414/289-3400 or Fax 414/289-3411 (www.ece.org, e-mail: info@ece.org)
3. World Education Service (WES): 212/966-6311 or Fax 212/739-6100 (www.wes.org, e-mail: info@wes.org)

Based on the official foreign transcript evaluation and the grade earned in the course(s), the college or program will decide if it will apply any of these credits toward fulfillment of its prerequisites.

**Application Process and Deadlines**

Individuals interested in applying for admission to AZPOD may download their applications at the American Association of Colleges of Podiatric Medicine (AACPM) web site at www.aacpm.org or obtain application packets by writing or calling:

The American Association of Colleges of Podiatric Medicine (AACPM)
15850 Crabbs Branchway
Suite 320
Rockville, MD 20855-2622
800/922-9266

To initiate the competitive selection process, applicants must complete their application packets, which must include:

1. A completed Application for Admission form (a nonrefundable application fee will also be due to the AACPM Application Service [AACPMAS])
2. Two letters of recommendation

   Applicants must submit two signed and sealed letters of recommendation from professionals who know the applicant well. One letter must be written by a medical practitioner, and letters from podiatric physicians are strongly encouraged. The second letter must be written by a prehealth professions advisor or a science professor. Additional letters from individuals who can attest to the character of applicants are welcome.

3. Official transcripts

   Applicants must submit official transcripts from every undergraduate, graduate, or professional school that they have attended or are currently attending. These transcripts must be signed and sealed by the registrar at each institution

4. Official MCAT score report

The application deadline for admission to AZPod is June 30 of the year of matriculation.

**Interview and Selection Process**

To be considered for interviews, applicants must meet the admissions requirements listed previously. After the Office of Admissions receives these materials, applicant files are reviewed to determine whether applicants merit interviews based on established criteria of the Admissions Committee. The Admissions Director, with the approval of the Program Director, may also place a large number of students on an interview “wait list” pending possible interview openings toward the end of the interview cycle.
Applicants who accept interviews will join several other interviewees in a meeting with members of a three-person interview panel, which is selected from a volunteer group of basic scientists, administrators, and clinicians. Team members question students about their academic, personal, and health care preparedness for podiatric medical school and rate applicants on a standardized evaluation form relative to each of these variables. At the conclusion of the interviews, the team members forward their evaluations for each applicant to the Admissions Committee. The Committee may recommend to accept, to deny, or to place applicants on either the hold or alternate list. Recommendations are then forwarded to the Dean of the College of Health Sciences for final approval. The Dean, via the Office of Admissions, typically notifies applicants of their status within one or two weeks of their interviews.

Technical Standards
A candidate for the Doctor of Podiatric Medicine degree must have abilities and skills in five areas: I) observation; II) communication; III) motor; IV) intellectual, conceptual, integrative, and quantitative; and V) behavioral and social. Technological compensation can be made for some limitation in certain of these areas, but a candidate should be able to perform in a reasonably independent manner.

I. Observation: The candidate must be able to accurately make observations at a distance and close at hand. Observation necessitates the functional use of the sense of vision and somatic sensation and is enhanced by the functional use of all of the other senses.

II. Communication: The candidate must be able to communicate effectively, efficiently and sensitively in both oral and written form and be able to perceive nonverbal communication.

III. Motor: Candidates must be able to coordinate both gross and fine muscular movements, maintain equilibrium and have functional use of the senses of touch and vision. The candidate must possess sufficient postural control, neuromuscular control and eye-to-hand coordination to perform profession-specific skills and tasks.

IV. Intellectual, Conceptual, Integrative and Quantitative Abilities: The candidate must be able to problem solve, measure, calculate, reason, analyze, record and synthesize large amounts of information in a timely manner. The candidate must be able to comprehend three-dimensional relationships and understand spatial relationships.

V. Behavioral and Social Attributes: The candidate must possess the emotional health required for full utilization of his/her intellectual abilities, the exercise of good judgment, the consistent, prompt completion of all responsibilities, and the development of mature, sensitive and effective relationships. Candidates must be able to tolerate physically, mentally and emotionally taxing workloads and to function effectively under stress. The candidate must be able to adapt to changing environments, to display flexibility, and to learn to function in the face of uncertainties. Compassion, integrity, concern for others, effective interpersonal skills, willingness and ability to function as an effective team player, and interest and motivation to learn are all personal qualities required during the educational process.

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Matriculation Process
To initiate the matriculation process, newly accepted students must return both their signed matriculation agreement and their initial deposit by the date designated in their matriculation agreement. To conclude the matriculation process, students must also:

1. Submit deposit monies by the date designated in their matriculation documents. Deposits are applied toward the first quarter’s tuition.
2. Submit official final transcripts from all colleges attended post-high school by the deadline of two weeks (14 calendar days) prior to the first day of classes. Students who are accepted to MWU less than one month prior to the first day of classes will have 30 calendar days from the date of their acceptance to submit all official transcripts to the Office of Admissions. Any special circumstances or requests for exceptions to this policy must be sent to and approved by the Office of the Dean of the College. Students who fail to submit all official final transcripts by the stated deadline may jeopardize their acceptance or continued enrollment in the College.
3. Submit documented laboratory proof of the absence of tuberculosis (updated yearly) and proof of immunization against measles, mumps, rubella, varicella (chicken pox), diphtheria/tetanus, and hepatitis B.

4. Submit proof of medical and disability insurance coverage. Students may select either a plan offered by an MWU-approved carrier or a comparable plan offered by an outside carrier of their choice.

5. If a non-U.S. citizen/nonpermanent resident, provide documentation verifying that sufficient funds have been deposited in a U.S. bank to cover all expenses while attending Midwestern University.

6. Submit additional documents as required by the Office of Admissions.

7. Authorize and pass the Midwestern University criminal background check.

8. Sign and submit the Midwestern University Drug-Free Workplace and Substance Abuse Policy Statement.

9. Complete a physical exam and submit the form.

10. Sign and submit the Credit Policy Statement.

11. Meet the Technical Standards for the Program.

Students who fail to satisfy these matriculation requirements or omit or falsify information required on official admissions documents will automatically forfeit their seat at the College. Students will not receive further notification regarding their forfeiture.

Articulation Agreement Between Midwestern University Programs
Students enrolled in a Midwestern University program are guaranteed an admission interview with another Midwestern University program if the student:

1. is currently in good standing in the academic program in which the student is enrolled and does not have any pending misconduct charges against him/her;

2. meets all admission requirements for the professional program of interest;

3. after a minimum of two full time quarters of study, achieves a minimum Midwestern University grade point average, derived from all courses completed at Midwestern, that is equal to or greater than 3.0; AND

4. achieves a score on the professional entrance exam (if required) that is not less than one standard deviation below the mean score for students that matriculated into the professional degree program in the previous year.

A guaranteed interview does not guarantee admission into the professional program.

Reapplication Process
After receiving either denial or end-of-cycle letters, prospective students may reapply for the next enrollment cycle. Before reapplying, however, students should seek the advice of an admissions counselor. To initiate the reapplication process, prospective students must complete and submit new applications and proceed through the standard application process.

Transfer Admission
AZPod may elect to accept transfer students from other U.S. podiatric medical schools as long as these students remain in good academic standing and have an acceptable reason(s) for seeking transfer. Typically, transfers are only granted to students desiring to transfer in as third- or fourth-year students; however, transfers to the second year may be granted.

To be considered for transfer, students must meet the Program’s general requirements for admission. They must also submit:

1. A letter to the Director of Admissions indicating their reason for requesting to transfer and explaining any difficulties encountered at their previous institution(s)

2. The AZPod Transfer Application (available through the Office of Admissions)

3. Official MCAT score report

4. Official transcripts from all schools attended, including undergraduate, graduate, and professional

5. A letter from the dean of the college in which the students are enrolled that describes the current academic status and terms of withdrawal or dismissal of prospective transfer students

6. Additional documents or letters of recommendation as determined to be necessary by the Director of Admissions

Following receipt of these materials, the Admissions Committee determines whether students merit on-campus interviews. Students who receive interview invitations will meet with an interview team. The interview team offers recommendations to the Dean of the College of Health Sciences, who approves both the admissions status and class standing of transfer students.

Transfer applications must be received three months prior to the desired matriculation date. This allows time for processing of applications, interviews, and student relocations prior to the start of the next academic term.

Graduation Requirements
To receive the degree of Doctor of Podiatric Medicine, the student must complete all requirements within six years of matriculation. To be eligible for graduation the student must meet the following requirements:

1. Follow an approved course of study leading to the completion of all academic requirements;

2. Satisfactorily complete all academic requirements with a cumulative GPA of at least 2.00;
3. Repeat and pass any course for which an F grade has been issued;
4. Complete the Service Learning requirement (four hours of volunteer service in a health care environment per quarter for the first and second years of study);
5. Pass Part I of the National Boards and take Part II of the National Boards administered by the National Board of Podiatric Medical Examiners;
6. Be of good moral character;
7. Receive a favorable recommendation from the Program Student Academic Review Committee, and the College of Health Sciences Student Promotion and Graduation Committee;
8. Be recommended for conferral of the Doctor of Podiatric Medicine degree by the University Faculty Senate;
9. Settle all financial accounts with the University; and
10. Complete all graduation clearance requirements as instructed by the Office of the Registrar.

LICENSURE REQUIREMENTS
Podiatric physicians are licensed in all 50 states and Puerto Rico as well as Canada, Israel, Australia, and many other foreign countries. To obtain licensure, graduates must have completed a residency (in most states) and must meet the requirements established by each state or national licensing board. Licenses require successful passage of all three parts of the National Boards and may require the passage of an additional state licensing exam. Postdoctoral requirements may vary among states. For additional information regarding licensure, contact the Federation of Podiatric Medical Boards (FPMB) or the American Podiatric Medical Association (APMA).

FPMB
6551 Malta Drive
Boynton Beach, FL 33437
561/752-3735

APMA
9312 Old Georgetown Road
Bethesda, Maryland
800/275-2762

CURRICULUM
First Year

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<thead>
<tr>
<th>Fall Quarter</th>
<th>Credit Hours</th>
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<tr>
<td>ANAT 1511</td>
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<td>BIOC 1511</td>
<td>Biochemistry I 7.0</td>
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<td>CORE 1460</td>
<td>Interdisciplinary Health Care 0.5</td>
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<tr>
<td>HIST 1511</td>
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Total First Year: 57.9

Second Year

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Total Second Year: 72.5
Third Year Didactic Instruction
ACLS/BLS is a mandatory, non-credit, 2-day session taught during the summer.

Summer Quarter
PMED 1722 Advanced Podiatric Surgery and Trauma 4.0
PMED 1724 Orientation to Operating Room and Anesthesia 1.0
PMED 1732 General Medicine III 3.0
PMED 1753 Jurisprudence 1.5
PMED 1773 Sports Medicine and Rehabilitation 2.5
PMED 1774 General Orthopedics/Disorders of Bone 2.5
Total: 14.5

Fall Quarter
PMED 1723 Emergency Medicine 1.0
PMED 1734 Practice Management 2.0
PMED 1741 Podiatric Dermatology and Infectious Diseases 3.0
PMED 1742 Evidence Based Medicine 1.0
PMED 1751 Advanced Biomechanics 3.0
Total: 10.0

Rotations (Integrated October through May)
PMED 1701 Core Podiatric Medicine (3 rotations, 4 weeks each) 12.0
PMED 1701A Core Rotation
PMED 1701B Core Rotation
PMED 1701C Core Rotation
PMED 1702 Radiology (2 weeks) 2.0
PMED 1706 Outpatient Medicine (4 weeks) 4.0
PMED 1710 Dermatology (2 weeks) 2.0
PMED 1711 Rheumatology (2 weeks) 2.0
PMED 1713 Wound Care (2 weeks) 2.0
PMED 1714 Endocrinology (2 weeks) 2.0
PMED 1715 Neurology (2 weeks) 2.0
Required Elective - May choose either one 4-week or two 2-week rotations from the list below 4.0
PMED 1705 Podiatry Office (4 weeks)
PMED 1707 Vascular Medicine (2 weeks)
PMED 1708 Pedorthics, Bracing & Prosthetics (2 weeks)
PMED 1712 Physical Medicine & Rehabilitation (2 weeks)
PMED 1716 Orthotic Fabrication (2 weeks)
PMED 1733 Clerkship (4 weeks)
PMED 1735 Research (4 weeks)
PMED 1740 International (2 weeks)
Total: 32.0

Total Third Year: 56.5

Fourth Year Didactic Instruction
The Clinical Correlates courses are all taught on-line. Each student is allowed one month of vacation in the fourth year.

Summer/Fall/Winter
PMED 1821 Clinical Correlates in Podiatric Medicine 1.0
PMED 1831 Clinical Correlates in Podiatric Biomechanics 1.0
PMED 1841 Clinical Correlates in Podiatric Surgery 1.0
Total: 3.0

Rotations (Integrated June through May)
PMED 1801 Core Podiatric Medicine (3 rotations, 4 weeks each) 12.0
PMED 1801A Core Rotation
PMED 1801B Core Rotation
PMED 1801C Core Rotation
PMED 1802 Emergency Medicine and Trauma (4 weeks) 4.0
PMED 1803 Surgery (4 weeks) 4.0
PMED 1804 Inpatient Medicine (4 weeks) 4.0
PMED 1805 Clinical Clerkship (4 rotations, 4 weeks each) 16.0
PMED 1805A Clinical Clerkship
PMED 1805B Clinical Clerkship
PMED 1805C Clinical Clerkship
PMED 1805D Clinical Clerkship
PMED 1807 Non-Podiatric Medicine or Surgery Specialty (4 weeks) 4.0
PMED 1808 Optional Rotation (4 weeks) (4.0)
Total: 44.0 (48.0)

Total Fourth Year: 47.0 (51.0)

Elective Non-Podiatric Medicine or Surgery Rotations
Research, Dermatology, Rheumatology, Physical Medicine and Rehabilitation, General Surgery, Orthopedic Surgery, Hand Surgery

Course Descriptions
Prerequisites are listed for those courses with such requirements. When no prerequisite is listed in a course description, it is implied that there is not a prerequisite.

ANAT 1511 Gross Anatomy I
In this course, students approach the study of the human body in a regional manner with sequential study of the back, upper extremities, body wall, thoraco-abdominal cavity and contents. Included in the dissection of each region are the musculoskeletal, vascular, nervous and lymphatic components, relevant surface anatomy, and imaging of the...
region. The lectures and laboratories are coordinated with the Histology/Embryology course to provide an overall anatomic view of each region. This course involves lecture and dissection in the laboratory, and student progress is evaluated through written and practical examinations.
5 credits

ANAT 1522 Gross Anatomy II
In this portion of the Gross Anatomy course, students continue their regional study of the body by examining the pelvis and perineum, lower extremities, and the head and neck. Regional coordination with the Histology/Embryology course continues. This course also involves lecture and dissection in the laboratory and testing by written and practical examinations.
5 credits

BIOC 1511 Biochemistry I
Course modules feature protein structure and enzymes emphasizing structure-function relationships; cell biology emphasizing how cells move, grow, and divide; molecular biology emphasizing the role of nucleic acids in storage and expression of genetic information; and intermediary metabolism emphasizing degradation and synthesis of carbohydrates, lipids, and amino acids. Clinical aspects as well as regulation and coordination of biologic processes during the fed and fasted states are emphasized. Workshops introduce the biochemical basis of common clinical laboratory tests and/or illustrate clinical applications of biochemical concepts.
7 credits

BIOC 1522 Biochemistry II
This course has modules on human nutrition emphasizing the importance of nutrition in health and preventive medicine; human genetics emphasizing the inheritance of selected genetic disorders; and tissues and organs emphasizing the customization and adaptation of biochemical pathways in specialized cells. The workshops introduce the biochemical basis of common clinical laboratory tests and/or they illustrate clinical applications of biochemical concepts. Selected workshops feature a modified problem-based learning environment.
4 credits

CORE 1460, 1470, 1480 Interdisciplinary Health Care
The Interdisciplinary Health Care course involves the Colleges of Health Sciences, Osteopathic Medicine, Dental Medicine, Optometry and Pharmacy, in order to teach all clinically based students about the importance of an interdisciplinary approach to patient care. Lectures will be given in a seminar format, in conjunction with panel presentations and discussions by interdisciplinary team members.
0.5 credit per quarter

HIST 1511 Histology/Embryology I
In Histology, students study the structure of the cell and the distinguishing morphologic characteristics of the four types of tissues: epithelium, connective tissue, muscle tissue, and nervous tissue. Students will learn how these four basic tissues are combined to form organs. This portion of the course focuses on the normal microscopic features of the lymph, circulatory, respiratory, and gastrointestinal systems. In the Embryology component of the course, students learn the general pattern and principles of normal development and the basic aspects of development of the musculoskeletal, circulatory, and gastrointestinal systems. This course uses a lecture-based format. Examinations include both written and image-based practical questions.
4.4 credits

HIST 1522 Histology/Embryology II
The Histology portion of the course continues with the microscopic examination of the urinary, reproductive, and endocrine systems and the eye and ear. The development of the urogenital system, the eyes, the face, and structures derived from the pharyngeal arches are the focus of the Embryology portion of this course. Regional coordination with the Gross Anatomy course also continues. This course uses a lecture-based format. Examinations include both written and image-based practical questions.
1.5 credits

MICR 1531 Immunology
This course uses a didactic approach for a comprehensive coverage of immunology. Students are presented with information pertinent to fundamental principles of immunology, the cells and cell products involved in host defense mechanisms, their origin, function, roles in health, in infectious processes, and in immunologic disorders and deficiencies.
3 credits

MICR 1611 Microbiology I
This course covers basic morphologic, cultural, physiologic, and antigenic characteristics of microorganisms with special emphasis on factors pertinent to clinical medicine. Topics include the principles of microbial genetics and chemotherapy; an organ system approach to viral, bacterial, fungal, and parasitic agents of disease, and their biologic characteristics, natural history, public health importance, course of infection, and host interaction. Laboratory exercises and demonstrations help students develop the microbiologic skills applicable for clinical practice, acquaint students with available diagnostic laboratory tests and their interpretation.
5 credits
**MICR 1622 Microbiology II**

This course is a continuation of MICR 1611 and also uses an organ system approach with lectures and laboratories.  
5 credits

**NEUR 1531 Neuroscience**

This four-unit course utilizes lectures to deliver the anatomy of the nervous system and clinical correlations related to the various pathways of the nervous system. The first unit studies surface landmarks, internal anatomy, and blood supply of the spinal cord, brainstem, and forebrain. This provides the framework and terminology for the remaining units, which adopt a systems approach to the study of the nervous system. The second unit focuses on the sensory systems, the third unit studies the motor systems, and the fourth unit studies systems not as easily categorized, including higher cortical functions. Throughout the course, basic anatomy is presented in the context of neurological disorders that involve the system or pathway being studied. Written and practical examinations assess student progress.  
6.5 credits

**PASS 469 Physical Diagnosis**

This course is designed to teach the student the art and technique of physical assessment. Course content includes lectures and reading assignments covering normal and abnormal physical findings. In addition, there are weekly physical exam laboratory sessions designed to provide the student with hands-on practice in exam techniques. At the conclusion of the course the student will be expected to pass a written final exam and satisfactorily perform a complete physical examination.  
4 credits

Prerequisites: ANAT 1511 & ANAT 1522 Gross Anatomy I & II

**PATH 1611 Pathology I**

This course introduces students to the basic concepts of pathology. It stresses altered cellular, genetic, and molecular mechanisms, and attempts to convey the dynamic nature of the processes involved. By focusing on the organism as a whole system, the discipline of pathology can provide a bridge for transition by showing the interrelationship between basic scientific principles and the practice of clinical medicine. This approach provides a complete, medical overview of the disease process in relation to its histological, functional, and structural changes. Students have an opportunity to develop the skills necessary to interpret and use laboratory data in describing and recognizing various types of injury to cells, tissues, and organs.  
6 credits

**PATH 1622, 1633 Pathology II, III**

A continuation of basic pathology, these courses identify the causes and mechanisms of disease as they relate to specific organ systems as well as stressing the need for the medical student to understand the pathophysiology of disease and its implications to both the patient and the physician. Emphasis is also placed on the dynamic process of the pathologic progression of changes, adaptive responses, and therapeutic modifications as well as discovering how all these changes produce the ultimate clinical manifestations of disease processes.  
PATH 1622: 6 credits; PATH 1633: 5 credits

Prerequisites for Pathology II: PATH 1611 Pathology I
Prerequisites for Pathology III: PATH 1622 Pathology II

**PHAR 1611 Pharmacology I**

This course deals with the general principles of pharmacology, all aspects of absorption, distribution, metabolism, and elimination of drugs, mechanisms of drug actions, drug testing in humans, and prescription writing. In addition, this course describes in great detail the pharmacologic actions and clinical uses of autonomic and cardiovascular drugs, and the principles of toxicology.  
4 credits

**PHAR 1622, 1633 Pharmacology II, III**

These courses are a continuation of PHAR 1611. Topics covered include the chemotherapy of microbial and parasitic diseases, chemotherapy of neoplastic diseases, drugs acting on blood and blood-forming organs, hormones and hormone antagonists, principles of toxicology, vitamins, gastric antacids, digestants, laxatives, antihistamines, and drugs causing birth defects. In addition, these courses include several lectures in clinical pharmacology. Workshops are conducted to demonstrate the application of pharmacologic principles in simulated human cases. In these presentations, emphasis is placed on problem solving, formulating hypotheses, making therapeutic decisions, and evaluating the patient’s response to pharmacotherapy.  
PHAR 1622: 4 credits; PHAR 1633: 3 credits

Prerequisites for Pharmacology II: PHAR 1611 Pharmacology I
Prerequisites Pharmacology III: PHAR 1622 Pharmacology II

**PHYS 1521 Physiology I**

This course presents the biophysics, functional properties, and regulation of membrane transport, excitable cells, skeletal muscle, cardiovascular and gastrointestinal systems. A discussion of circulatory fluid dynamics, peripheral vascular tone, blood pressure, and electrical and mechanical activity of the heart is included in the cardiovascular section of the course. Small group case discussions and workshops facilitate development of critical thinking and problem solving skills
as students use basic physiologic concepts to understand the pathogenesis of signs and symptoms in specific case studies. 5.5 credits

PHYS 1532 Physiology II
This course is a sequel to PHYS 1521 and builds on physiologic foundations developed during the preceding semester. This course covers the function, mechanism of action, regulation, and integration of the renal and respiratory systems that maintain body homeostasis through fluid, electrolyte and gas balance. The endocrine section of the course presents the function, mechanism of action, and regulation of specific hormones and several special topics will be explored. Small group discussions will refine critical thinking and problem solving skills as students identify physiologic and pathophysiologic mechanisms underlying the signs and symptoms described in pertinent clinical case studies.
5.5 credits

PMED 1512 Podiatric Medicine I
This course introduces students to the scope of podiatric practice, podiatric terminology, medical charting and conservative management techniques for common foot disorders. Students will also learn the basic lower extremity examination and handling of instrumentation in practical lab sessions.
1.5 credits

PMED 1521 Podiatric Biomechanics I
This course introduces the principles of podiatric biomechanics including body planes and movement, normal locomotion, the mechanics of normal muscle and joint function, open and closed kinetic chain movement, and the basic biomechanical examination. Computer animation, videotapes, and live demonstrations are used to demonstrate normal gait patterns and the steps of a standard biomechanical examination. Practical labs are held to teach the proper techniques of biomechanical analysis whereby students examine one another.
3 credits

PMED 1531 Podiatric Surgery
This course teaches the fundamental principles of surgery including normal wound healing. Specific minor surgical techniques are discussed including biopsy techniques, injection techniques and suturing, and treatment for warts and nail problems. Practical labs allow students to practice suturing, regional injections for arthrocentesis, intralesional injections, local and regional anesthesia, biopsy, suturing, and nail procedures (utilizing cadaveric limbs).
3 credits

PMED 1533 Evidence Based Medicine (EBM)/Epidemiology I
This course covers evidence-based medicine and biostatistics in detail, to include P-values, numbers needed to treat, evaluation of prognosis, diagnosis, treatment and harm articles. Current and clinically relevant articles will be used for problem-based analysis.
1.5 credits

PMED 1631 Ethics
This course provides an accessible, discussion-based introduction to the field of medical ethics. Students will explore some of the prominent ethical dilemmas in contemporary health care, as well as some of the basic methods and goals of doing applied ethics. Attention is paid to supporting one’s opinions through reasoned argumentation and critical thinking.
1 credit

PMED 1641 Podiatric Medicine II
This course expands on the knowledge, skills, and attitudes developed in Part I. Focus is on the management of the lower extremity manifestations of systemic diseases including diabetes, rheumatoid arthritis, osteoarthritis, gout, seronegative spondyloarthropathies, and peripheral arterial, venous, and lymphatic disease. The diagnosis and management of lower extremity ulcerations are discussed including the use of advanced technologies. Complications of diabetes including neuropathy and Charcot disease are covered in detail.
3.5 credits
Prerequisite: PMED 1512 Podiatric Medicine I; ANAT 1511 & ANAT 1522 Gross Anatomy I & II; BIOC 1511 & BIOC 1522 Biochemistry I & II; PHYS 1521 & PHYS 1532 Physiology I & II

PMED 1643 Lower Extremity Anatomy
The purpose of this course is to provide students a firm foundation in the structure of the lower extremity. The course will emphasize a functional and clinical approach to the study of the anatomy of the lower extremity. The anatomical terminology learned will be the vocabulary necessary to understand podiatric surgery, radiology, orthopedics and biomechanics. This knowledge is essential to the podiatrist’s assessment of a patient’s status, and in the interpretation of laboratory and diagnostic tests; and in learning pathology.
6.5 credits
Prerequisite: ANAT 1522 Gross Anatomy II

PMED 1644 Medical Imaging
This course will introduce the student to special imaging (MRI, CT scan, bone scan, and diagnostic ultrasonography) and how it pertains to the diagnosis of foot and ankle
pathology. Emphasis will be given to the physics and interpretation as well as the appropriate times to order these tests. Students will also learn the proper technique in performing a diagnostic ultrasound.

2 credits
Prerequisites: ANAT 1511 & ANAT 1522 Gross Anatomy I & II

PMED 1651 Podiatric Biomechanics II
Podiatric Biomechanics II is designed to provide a comprehensive study of biomechanics with an emphasis on normal and abnormal structure and function. General treatment concepts will be considered for a range of conditions with special emphasis on orthosis therapy and footwear correlated to the clinical setting. Short presentations will be followed by hands-on exercises for clinical application. 3.5 credits
Prerequisite: PMED 1521 Podiatric Biomechanics I

PMED 1662 General Medicine I
The purpose of this course is to present the student with basic concepts (preclinical and clinical) associated with the cardiovascular, pulmonary and hematology systems. This course is designed to help the student integrate the preclinical and clinical sciences toward a comprehension of cardiovascular, pulmonary and hematological system function and dysfunction. The podiatric medical student will achieve the medical knowledge needed to prepare him/her to enter third year clinical rotations. 3 credits
Prerequisites: PHYS 1521 & PHYS 1532 Physiology I & II; PASS 469 Physical Diagnosis

PMED 1663 Podiatric Pathomechanics
Pathomechanics informs students of the common deformities that occur in the foot that have underlying biomechanical etiologies. Students correlate the abnormal mechanics of the foot with selection of and techniques utilized for surgical correction. The clinical skills component will demonstrate, a) the components and techniques used in basic internal fixation b), the skills and techniques used in the radiographic assessment of a Hallux Abducto Valgus deformity and c), proper dressing application. 3.5 credits
Prerequisites: PMED 1643 Lower Extremity Anatomy; PMED 1531 Podiatric Surgery; PMED 1521 & PMED 1651 Podiatric Biomechanics I & II; PMED 1512 Podiatric Medicine I; PMED 1644 Medical Imaging

PMED 1672 General Medicine II
Students study diseases of the renal and gastrointestinal systems and disorders of nutrition through the integration of the basic and clinical sciences. Case-based approaches are used in addition to didactic instruction. 3 credits
Prerequisites: PHYS 1521 & PHYS 1532 Physiology I & II; PASS 469 Physical Diagnosis; PMED 1662 General Medicine I

PMED 1675 Pediatric Orthopedics
Pediatric Orthopedics is designed to provide the podiatric medical student with a comprehensive understanding of the diagnosis and treatment of normal and abnormal lower extremity conditions and pediatric gait patterns. This course includes lectures on child development, normal pediatric growth, ontogeny, common pediatric foot and ankle deformities, pediatric arthritides, congenital abnormalities, pediatric radiographs, and common pediatric gait problems. 3 credits
Prerequisites: ANAT 1511 & ANAT 1522 Gross Anatomy I & II; PMED 1643 Lower Extremity Anatomy; PMED 1521 Podiatric Biomechanics I

PMED 1678 Behavioral Medicine
This course applies the biopsychosocial model to normal and abnormal growth and development concepts, patient interview techniques, mental status examination, and the origins of clinical reasoning. Common psychiatric pathologies are demonstrated and discussed. Issues of patient communication and education, cultural and social awareness and sensitivity, and health promotion are discussed. 1.5 credits

PMED 1722 Advanced Podiatric Surgery and Trauma
This is a comprehensive surgical course covering the fundamental concepts and principles of rearfoot, ankle and reconstructive surgery. This includes discussing surgical treatment for trauma to the lower extremity. Foundational concepts will be discussed along with an examination of newer concepts and techniques. Lectures are augmented with case presentations and critical evaluation of current and past literature. 4 credits
Prerequisites: PMED 1643 Lower Extremity Anatomy; PMED 1531 Podiatric Surgery; PMED 1512 & PMED 1641 Podiatric Medicine I & II; PMED 1521 & PMED 1651 Podiatric Biomechanics I & II; PMED 1644 Medical Imaging; PMED 1663 Podiatric Pathomechanics

PMED 1723 Emergency Medicine
This course is designed to expose the student to different facets of emergency medicine and general trauma. This includes office emergency care, prehospital care, and emergency room care. Further, an introduction to the trauma patient with specific emphasis on orthopedic trauma will be discussed. This is accomplished through a combination of clinical case presentations, and lectures and a critical evaluation of the literature. 1 credit
Prerequisites: PMED 1662, PMED 1672 & PMED 1732 General Medicine I, II & III; PMED 1512 Podiatric Medicine I; PMED 1531 Podiatric Surgery; PMED 1722 Advanced Podiatric Surgery & Trauma

PMED 1724 Orientation to the Operating Room & Anesthesia
This course is a hands-on introduction to operating room protocol. In the format of a skills lab conducted in the surgical suite, students will learn basic aseptic technique, the proper methods of gowning and gloving, sterile prep and draping of the patient, the safe handling of sharps, maintenance of a sterile field, and phlebotomy. The student will also learn the basics for administering and monitoring of general anesthesia.
1 credit
Prerequisites: PMED 1512 Podiatric Medicine I; PMED 1531 Podiatric Surgery

PMED 1732 General Medicine III
General Medicine III includes Endocrinology and Neurology. Students study endocrine and nervous system diseases through the integration of the basic and clinical sciences. Case-based approaches are used in addition to didactic instruction.
3 credits
Prerequisites: PHYS 1521 & PHYS 1532 Physiology I & II; PASS 469 Physical Diagnosis; PMED 1662 & PMED 1672 General Medicine I & II

PMED 1734 Practice Management
Students will now have the opportunity to build upon their experiences and mentorship by learning the “how and why” of podiatric practice management and the interrelationship with patient quality care and obtaining a gratifying professional and personal life. The course will follow the development of an overall business plan and will be largely driven by the preparation of products that the student can use later when building a practice.
2 credits

PMED 1741 Podiatric Dermatology and Infectious Disease
In this course, students learn to recognize, diagnose, and manage cutaneous disorders that commonly manifest in the lower extremities. The section on infectious diseases focuses on common lower extremity infections including those caused by viruses, fungi, and bacteria. In addition, the course explores infection including infections in the diabetic foot, bone infections, and infections caused by puncture wounds. Case-based instruction is employed and students give presentations on assigned topics.
3 credits
Prerequisites: PMED 1512 & PMED 1641 Podiatric Medicine I & II; MICR 1611 & MICR 1622 Microbiology I & II

PMED 1742 Evidence Based Medicine
This course is designed to provide the student with realistic experience in the use of the principles of evidence based medicine. The course will develop advanced literature techniques and critical analysis of scientific literature. Diabetes and its complications will be the primary topic of discussion.
1 credit
Prerequisites: PMED 1533 Evidence Based Medicine (EBM)/Epidemiology; PMED 1631 Ethics

PMED 1751 Advanced Biomechanics
This course will serve as a final step toward clinical practice and will nurture an appreciation for comprehensive understanding of lower extremity biomechanics. The course will cover currently accepted concepts as well as introduce new theories under investigation in the field of podiatric biomechanics. This course will illustrate the power and dynamic nature of biomechanics within clinical podiatric practice.
3 credits
Prerequisites: PMED 1521 & PMED 1651 Podiatric Biomechanics I & II; PMED 1643 Lower Extremity Anatomy; PMED 1663 Podiatric Pathomechanics

PMED 1753 Jurisprudence
In this course students will be given an overview of civil, criminal, and regulatory laws and their relationship to both medicine and ethics. Doctor-patient relationships, informed consent, and mandatory reporting will be discussed. Students will examine governmental regulations including licensing, scope of practice, drug dispensing and advertising. The course will conclude with a review of contract law (e.g. partnerships, leases).
1.5 credits

PMED 1773 Sports Medicine and Rehabilitation
This course introduces the student to the evaluation, diagnosis and management of athletic injuries. This course will also present various physical therapy evaluative techniques and modalities used in the rehabilitation of athletic injuries. The clinical skills component will include exam techniques for specific athletic injuries, application and use of immobilizing devices, physical therapy modalities, and assessment of running shoes and proper bike fit.
2.5 credits
Prerequisites: PMED 1643 Lower Extremity Anatomy; PMED 1521 & PMED 1651 Podiatric Biomechanics I & II; PMED 1512 & PMED 1641 Podiatric Medicine I & II; PMED 1644 Medical Imaging

PMED 1774 General Orthopedics and Disorders of Bone
This course is designed to introduce the student to many of the significant conditions that afflict the musculoskeletal system. Additionally, a number of general non-lower...
extremity orthopedic conditions are presented. An overview of less common rheumatologic conditions not covered in Podiatric Medicine II is also presented. The clinical skills component is designed to demonstrate to the student the classic radiographic findings seen with the more commonly encountered bone tumors and metabolic bone disorders.

2.5 credits

Prerequisites: PMED 1643 Lower Extremity Anatomy; PMED 1512 & PMED 1641 Podiatric Medicine I & II; PMED 1531 Podiatric Surgery; PMED 1644 Medical Imaging

PMED 1821, 1831, 1841 Clinical Correlates
These on-line courses will serve as a final step toward residency interview preparation and clinical case presentations, and will nurture an appreciation for comprehensive understanding of podiatric medicine, biomechanics, and surgery. Clinical Correlates uses small group discussion/interaction and student presentations to meet the course objectives. The course will review selected topics previously reviewed in the AZPOD curriculum as they pertain to advanced clinical knowledge and skills.

1 credit each course

Elective Courses
Podiatric medical students may take one elective course each quarter in addition to the regular course load with the permission of the Program Director. Students may also take elective courses during the extended course of study with the permission of the Program Director.

Rotation Descriptions

PMED 1701 Podiatric CORE Rotation
The CORE podiatric rotation consists of a one month training experience at each of three different locations (A, B, C) during the third year. The overall goal of the rotation is to develop skills in documentation, history taking, interpretation of diagnostic tests and physical examination techniques. Students will be exposed to a wide variety of patients of all ages and differing pathologies.

4 credits each rotation (12 credits total)

PMED 1702 Radiology
The radiology rotation is a two week training experience with a radiologist at an outpatient imaging facility. The overall goal of the experience is for the student to develop fundamental skills in evaluating patients with common imaging findings. In addition, students will develop an understanding of various imaging modalities including plain radiograph, MRI, CT scans, bone scans, ultrasound, and bone densitometry. The students will also develop the skills necessary to read the various imaging studies.

2 credits

PMED 1706 Outpatient Medicine
The Outpatient Medicine rotation is a four week training experience at an outpatient primary care clinic. The overall goal of the experience is for the student to develop fundamental skills in evaluating and managing patients with common, general medical complaints, including history taking, physical examination, ordering and interpreting of labs, and the use of imaging. It is expected that the student will enhance his/her ability to formulate a differential diagnosis and treatment plan appropriate to the medical pathologies encountered.

4 credits

PMED 1710 Dermatology
The Dermatology rotation is a two week training experience at an outpatient dermatology clinic. The overall goal of the experience is for the student to develop fundamental skills in evaluating and managing patients with common dermatologic pathologies. In addition, students will learn diagnostic and treatment modalities related to the treatment of various dermatologic conditions.

2 credits

PMED 1711 Rheumatology
The Rheumatology rotation is a two week training experience at an outpatient rheumatology clinic. The overall goal of the experience is to assist the student to develop fundamental skills in evaluating and managing patients with common and general rheumatologic complaints.

2 credits

PMED 1713 Wound Care
The Wound Care rotation is a two week training experience. The overall goal is for the student to develop fundamental skills in the evaluation and management of patients presenting with ulcerations. Students will have an opportunity to treat wounds in a variety of somatic locations resulting from various etiologies including diabetes, pressure, arterial disease, and venous disease. Students will enhance their ability to utilize proper assessment techniques, distinguish among various types of ulcers, select and apply wound dressings and topical agents, and employ various techniques of debridement.

2 credits

PMED 1714 Endocrinology
The Endocrinology rotation is a two week training experience in an outpatient endocrinology clinic. The overall goal of the experience is for the student to develop fundamental skills in evaluating and managing patients with endocrinologic disorders including diabetes, osteoporosis, thyroid disorders, and disorders of the pituitary and adrenal glands. Under the supervision of endocrinologists, students will augment their ability to examine the endocrine patient, order and interpret tests, and participate in the treatment of the endocrine patient.

2 credits

180
**PMED 1715 Neurology**
The Neurology rotation is a two week training experience in an outpatient neurology clinic. The overall goal of the experience is for the student to develop fundamental skills in evaluating and managing patients with neurologic disorders. Working closely with a neurologist, students will learn how nerve testing is conducted. Students will improve their ability to complete a thorough neurologic history and physical examination, develop a differential diagnosis, and participate in the treatment of patients with neurologic disorders.

2 credits

**PMED 1801 Podiatric CORE Rotation**
The CORE rotation consists of three months of training in podiatric medicine, biomechanics and surgery (A, B, C). In collaboration with the office of clinical education, students play a role in selecting the location of this rotation. The training experiences take place at established podiatric student training programs nationwide. The overall goal of the rotation is to enhance skills of diagnosis and management of podiatric patients. In addition, students will improve skills in documentation, history taking, interpretation of diagnostic tests and physical examination techniques.

4 credits each rotation (12 credits total)

**PMED 1802 Emergency Medicine and Trauma**
The Emergency Medicine and Trauma rotation is a four week training experience in an emergency room or on a trauma service. The overall goal of the experience is for the student to develop fundamental skills in evaluating and managing patients with emergent podiatric and non-podiatric pathologies. Students will utilize both diagnostic and treatment modalities for various emergent and traumatic conditions that are present in the emergency room setting.

4 credits

**PMED 1803 Surgery**
The Surgery rotation is a four week training experience on a surgical service, i.e., orthopedics, vascular, general or plastics. The overall goal of the experience is for the student to develop fundamental skills in evaluating and managing patients with non-podiatric pathologies that warrant surgical intervention. Students will utilize diagnostic and treatment modalities throughout the peri-operative period.

4 credits

**PMED 1804 Inpatient Medicine**
The Inpatient Medicine rotation is a four week training experience on an inpatient service. The overall goal of the experience is for the student to develop fundamental skills in evaluating and managing patients with general medical pathologies that require inpatient management. Participating with other medical students and residents on the house staff, students will assist in the management of various serious medical conditions.

4 credits

**PMED 1805 Clinical Clerkships**
The rotation consists of four 4-week training experiences training programs involving both an ambulatory and a hospital based component. The overall goal of the experience is for the student to improve the skills of evaluation and management of patients with podiatric medical, biomechanical, and surgical disorders. In addition, students will enhance skills in documentation, history taking, interpretation of diagnostic tests and physical examination techniques.

4 credits each rotation (16 credits total)

**PMED 1807 Non-Podiatric Medicine or Surgery Specialty**
In collaboration with the office of clinical education, the student selects this four week rotation that involves a non-podiatric training experience at an outpatient clinic or in an operating room. The overall goal of the experience is for the student to develop fundamental skills in evaluating and managing patients with general medical pathologies or to expand skills in the surgical management of non-podiatric disorders. In addition, students will learn to function effectively with other members of the health care team.

4 credits

**Elective Rotations**

**PMED 1705 Podiatric Office**
This Podiatric Office rotation is a four week training experience at the office of an affiliated preceptor during the third year. The overall goal of the experience is for the student to further develop the ability to perform a thorough podiatric history and physical, order and interpret common lab tests, and formulate a reasonable differential diagnosis and treatment plan for common podiatric pathologies. In addition, students will develop an enhanced understanding of practice management and professionalism through observation in a private practice setting.

4 credits

**PMED 1707 Vascular Medicine**
The Vascular Medicine rotation is a two week training experience with an interventional cardiologist. The overall goal of the experience is for the student to develop fundamental skills in evaluating vascular disease and to understand the interventional techniques employed to improve blood flow. Students will gain experience in non-invasive vascular evaluation and observe interventional approaches to the assessment and the augmentation of peripheral blood flow.

2 credits
PMED 1708 Pedorthics, Bracing & Prosthetics
The Pedorthics, Bracing and Prosthetics rotation is a two week training experience at an outpatient O&P clinic. The overall goal of the experience is for the student to develop fundamental skills in evaluating and managing patients with common orthotic and prosthetic needs. In addition, students will participate in the assessment and fitting of the patient for the appropriate medical devices needed to improve function.
2 credits

PMED 1712 Physical Therapy
The goal of the Physical Therapy rotation is to provide the podiatric student with a diversity of exposure and training experiences in rehabilitating lower extremity injuries and disease. The student will have direct participation in evaluation and therapeutic management with an emphasis on regaining appropriate lower extremity function.
2 credits

PMED 1716 Orthotic Fabrication
The Orthotic Fabrication rotation is a two week training experience at a prescription foot orthotic laboratory. The overall goal of the experience is for the student to develop fundamental skills with orthosis design, construction and materials. In addition, students will gain an in depth insight into the indications, construction and use of all types of orthoses.
2 credits

PMED 1733 Clerkship
The rotation consists of a 4-week training experience. The overall goal of the experience is for the student to improve the skills of evaluation and management of patients with podiatric medical, biomechanical, and surgical disorders. In addition, students will enhance skills in documentation, history taking, interpretation of diagnostic tests and physical examination techniques.
4 credits

PMED 1735 Research
This rotation is a four week experience designed to foster the student’s knowledge in clinical research. Students will choose between two separate clinical research experiences (Elective A or Elective B). With Elective A, the student will be guided through the steps necessary in designing and implementing research with an end result of a research proposal that can be submitted to an Institutional Review Board and/or a research grant source. Elective B offers the student the ability to recruit patients for the various phase two and three clinical trial studies for Sun Health Research Institute.
4 credits

PMED 1740 International
The International Rotation is a two week training experience that may include both inpatient and outpatient settings and often takes place as a medical mission to underdeveloped nations where access to medical care is limited. The overall goal of the experience is for the student to expand his or her awareness of public health needs and improve cultural competence while learning to provide medical care without all of the technological capacities typically available. Requires the approval of the Program Director.
2 credits

PMED 1808 Optional Rotation
Students are provided one month off during the fourth year to visit residency programs or take vacation. Students are given the option of scheduling an additional month of clerkship during this time. In selected cases, when remediation becomes necessary, this time may be used to complete the remediation process.
4 credits

POST GRADUATE EDUCATION
The Program co-sponsors residency programs in podiatric medicine and surgery in affiliation with teaching hospitals in the United States. Information about affiliated residencies is available through the Graduate Placement Director.

SCHOLARSHIPS AND AWARDS
Scholarships
American Association of Women Podiatrists Founders Scholarship
APMA Educational Foundation Director’s Scholarship
George E. Clark Scholarship
Hispanic Scholarship Foundation
Indian Health Service Health Professions Scholarship
Johnson & Johnson Wound Management Scholarship
Medicis-Omnicef/Loprox Scholarship
Meyer Friedlander and Milton Klakky Olam Scholarship
Orthofix Podiatry Student Scholarship
Podiatry Insurance Company of America
Stephen L. Barrett, DPM Scholarship
Western Interstate Commission for Higher Education (WICHE)

Awards
Michael L. Stone, DPM, Professional Conduct Award
Paul H. Rasmussen Memorial Award for Excellence in Biomechanics
Samuel Mason, DPM, Pioneering Service Award
Timothy Holbrook, DPM, Memorial Award of Excellence
Jeffrey C. Page, DPM, Distinguished Student Award
FACULTY

Denise B. Freeman, DPM, MSE
Pennsylvania College of Podiatric Medicine
Associate Program Director and Professor

Gary Friedlander, DPM
Ohio College of Podiatric Medicine
Associate Professor

David W. Jenkins, DPM
California College of Podiatric Medicine
Professor

Paul J. Kim, DPM
Ohio College of Podiatric Medicine
Assistant Professor

Kent Myers, M.D.
University of Utah
College of Medicine
Associate Professor

Jeffrey C. Page, DPM
California College of Podiatric Medicine
Program Director and Professor

John Tassone, Jr., DPM
Ohio College of Podiatric Medicine
Assistant Professor

Tanya L. Thoms, DPM
California College of Podiatric Medicine
Assistant Professor

Melanie Violand, DPM
New York College of Podiatric Medicine
Associate Professor

Lance Wissman, DPM
William M. Scholl College of Podiatric Medicine
Associate Professor
COLLEGE OF HEALTH SCIENCES

NURSE ANESTHESIA PROGRAM

MISSION
To create an educational environment that cultivates excellence in professionalism, compassion, competence, and teamwork in the practice of anesthesia.

ACCREDITATION
The Nurse Anesthesia Program is accredited by the Council on Accreditation of Nurse Anesthesia Educational Programs (COA), 222 South Prospect Avenue, Suite 304, Park Ridge, IL 60068-4010, 847/692-7050. Accreditation was granted for the period of October 13, 2007 through October 31, 2011.

DEGREE DESCRIPTION
The Nurse Anesthesia Program is 27 months divided into a didactic phase (4 quarters) and a clinical phase (5 quarters). The initial portion of the didactic phase of the program provides the student with a strong foundation in the basic sciences. Students are then introduced to a series of courses that address all aspects of anesthesia equipment and anesthesia management.

The clinical phase of the program begins in the summer of the second year of the program. This phase of the program will provide students with the necessary hands-on experience to develop the knowledge, skills and attitudes essential to the practice of nurse anesthesia in a variety of practice settings. All students will be considered for rotation to clinical sites in Arizona, California, Colorado, New Mexico, and Utah. These sites will provide students with a broad scope of experiences in rural, urban, and suburban hospitals, as well as specialty rotations in cardiac surgery, pediatrics, and obstetrics. Thus, a student may be assigned to rotations in any combination of these states as needed to ensure the best quality set of clinical rotations. For a listing of the Program’s current clinical sites see Clinical Practicum I - V under Course Descriptions. The Program is adding new clinical sites on an ongoing basis. For an updated list of clinical sites please contact the Program at 623/572-3760. It will be necessary for students to make arrangements for transportation to and lodging at these clinical sites. The University does not provide for the cost of transportation or lodging.

Students that satisfactorily complete the Nurse Anesthesia Program will receive a Master of Science degree with a concentration in nurse anesthesia.

ADMISSIONS
Admission to the Nurse Anesthesia Program is considered on a competitive basis for prospective students who are registered nurses and hold baccalaureate degrees or its equivalent in nursing or a related field (e.g., physiology, chemistry, anatomy) or higher degrees from regionally accredited professional programs. Applications received are reviewed by the Office of Admissions for completeness and referred to the Director of the Nurse Anesthesia Program or the Director of Admissions to determine applicant eligibility for interviews. Final acceptance into the Nurse Anesthesia Program is determined by the Admissions Committee with the approval of both the Director of the Nurse Anesthesia Program and the Dean of the College of Health Sciences. Decisions on acceptance are made until the maximum enrollment for the Program is reached.

Applications are due on June 1 of the year preceding enrollment. The Admissions Committee reviews all applications within two weeks of the application deadline. Applicants are interviewed in August, and acceptance letters are mailed in early September.

Admission Requirements
To be considered for admission to the Nurse Anesthesia Program at Midwestern University, students must submit the following documented evidence:

1. Minimum cumulative grade point average (GPA) of 2.75 on a 4.00 scale
   • Cumulative GPA of 3.00 on a 4.00 scale is recommended to remain competitive
   • Cumulative GPAs are calculated from the last 150 credits completed by applicants

2. Minimum science GPA of 2.75 on a 4.00 scale
   • Science GPA of 3.00 on a 4.00 scale is recommended to remain competitive
• Courses included in the calculation of the science GPA include anatomy, physiology, pathophysiology, pharmacology, chemistry, and physics

3. Completion of a baccalaureate degree in nursing, or other appropriate degree, granted by regionally accredited U.S. colleges or universities prior to the application deadline of June 1st

4. Satisfactory completion (grades of C or better) of all prerequisite coursework prior to the application deadline of June 1st (grades of C- are not acceptable)

5. Licensure to practice as a registered nurse in at least one legal jurisdiction in the United States or its territories

6. Minimum of one year of critical care registered nursing experience prior to the application deadline of June 1st

7. Demonstration of sincere understanding of and interest in nurse anesthesia

8. Oral and written communication skills necessary to interact with faculty, patients, and colleagues

**Prerequisite Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hrs.</th>
<th>Qtr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmacology</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Anatomy &amp; Physiology</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>Chemistry (may include general chemistry, organic chemistry, or biochemistry)</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>Basic Research</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Statistics (must complete with a grade of B or better)</td>
<td>3</td>
<td>4</td>
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</tbody>
</table>

**International Applicants**

Students who have completed coursework at or have graduated from foreign colleges or universities must submit acceptable evidence of U.S. degree and course equivalency. Students must also complete at least 30 semester hours of coursework at a U.S. college or university prior to matriculation. Of the 30 semester hours, 6 hours must be in nonremedial English composition and three hours must be in speech/communications.

1. The international student has completed a minimum of two full time semesters or three full time quarters of instruction at a postsecondary institution in the United States. Completed coursework must include a minimum of 50% of the prerequisite science coursework for the college or program of interest, 6 semester hours of non-remedial English composition, and 3 semester hours of public speaking/speech.

2. The international student must submit official TOEFL scores. A minimum passing score is 550 (paper version, maximum score 677) or 100 (internet version, maximum score 120). The TOEFL scores must be from an exam taken within two years of the anticipated date of matriculation into the college or program.

If the international student wishes to receive credit for prerequisite coursework completed at a college or university outside of the United States, he/she must submit an official, detailed, course-by-course evaluation of this coursework. The student must obtain this evaluation from one of the following services:

1. Educational Credential Evaluators (ECE): 414/289-3400 or Fax 414/289-3411 (www.ece.org, e-mail: info@ece.org)
3. World Education Service (WES): 212/966-6311 or Fax 212/739-6100 (www.wes.org, e-mail: info@wes.org)

Based on the official foreign transcript evaluation and the grade earned in the course(s), the college or program will decide if it will apply any of these credits toward fulfillment of its prerequisites.

**Application Process and Deadlines**

To be considered for admission into the Nurse Anesthesia Program, applicants must submit to the Office of Admissions application packets that include:

1. A completed Application for Admission form
2. A nonrefundable, nonwaivable application fee of $50
3. Official transcripts verifying completion of baccalaureate or higher level degrees from regionally accredited programs and satisfactory completion of all prerequisite coursework
4. Official final transcripts from all colleges attended post-high school must be submitted
5. Three signed and sealed letters of recommendation
   - One letter of recommendation from the current nursing supervisor of applicants
   - Two letters from peers, academic instructors, or physicians

The deadline for receipt of applications is June 1st of the preceding year, with the planned date for enrollment at the beginning of the Summer quarter (June).

Mail completed application packets by June 1st of the year preceding matriculation to:

Midwestern University
Office of Admissions
19555 North 59th Avenue
Glendale, AZ 85308
888/247-9277 or 623/572-3215
admissaz@midwestern.edu

**Please Note:** The receipt of the application materials and the status of the file can be tracked on the University’s web site. Upon receipt of the application the Office of Admissions will send instructions for accessing your account information. Please notify Midwestern University of any changes to your mailing address and e-mail address.

All requests for withdrawing an application must be done in writing.
Technical Standards
A candidate must have abilities and skills in five areas: I) observation; II) communication; III) motor; IV) intellectual, conceptual, integrative, and quantitative; and V) behavioral and social. Technological compensation can be made for some limitation in certain of these areas, but a candidate should be able to perform in a reasonably independent manner.

I. Observation: The candidate must be able to accurately make observations at a distance and close at hand. Observation necessitates the functional use of the sense of vision and somatic sensation and is enhanced by the functional use of all of the other senses.

II. Communication: The candidate must be able to communicate effectively, efficiently and sensitively in both oral and written form and be able to perceive nonverbal communication.

III. Motor: Candidates must be able to coordinate both gross and fine muscular movements, maintain equilibrium and have functional use of the senses of touch and vision. The candidate must possess sufficient postural control, neuromuscular control and eye-to-hand coordination to perform profession-specific skills and tasks.

IV. Intellectual, Conceptual, Integrative and Quantitative Abilities: The candidate must be able to problem solve, measure, calculate, reason, analyze, record and synthesize large amounts of information in a timely manner. The candidate must be able to comprehend three-dimensional relationships and understand spatial relationships.

V. Behavioral and Social Attributes: The candidate must possess the emotional health required for full utilization of his/her intellectual abilities, the exercise of good judgment and the consistent, prompt completion of all responsibilities and the development of mature, sensitive and effective relationships. Candidates must be able to tolerate physically, mentally and emotionally taxing workloads and to function effectively under stress. The candidate must be able to adapt to changing environments, to display flexibility, and to learn to function in the face of uncertainties. Compassion, integrity, concern for others, effective interpersonal skills, willingness and ability to function as an effective team player, interest and motivation to learn are all personal qualities required during the educational process.

Candidates are required to certify that they understand and meet these Technical Standards. Candidates must provide such certification prior to matriculation. Candidates who may not meet the Technical Standards must inform the Director of Admissions, who will then contact the Dean of Students. The Dean of Students, in consultation with the academic dean (and program director), will identify and discuss what accommodations, if any, the College/(Program) would need to make that would allow the candidate to complete the curriculum. The College/(Program) is not able to grant accommodations that alter the educational standards of the curriculum. Students must meet the Technical Standards for the duration of enrollment in their professional program.

Transfer Students
The Nurse Anesthesia Program may elect to accept transfer students from other U.S. nurse anesthesia programs. Candidates will be considered on an individual basis.

Matriculation Process
The matriculation process begins after applicants receive notification of their acceptance into the Nurse Anesthesia Program of the College of Health Sciences. The students must return a signed matriculation agreement to the Office of Admissions. Students must also:

1. Submit deposit monies by the date designated in their matriculation documents. Deposits are applied toward the first quarter’s tuition.
2. Complete a medical file as requested by the Office of Student Services.
3. Submit proof of medical and disability insurance coverage. Students may select either a plan offered by an MWU-approved carrier or a comparable plan offered by an outside carrier of their choice.
4. Provide documentation verifying that sufficient funds have been deposited in a U.S. bank to cover all expenses while attending CHS (for non-U.S. citizens/nonpermanent residents only).
5. Submit additional documents as required by the Office of Admissions.
6. Authorize and pass the Midwestern University criminal background check.
7. Sign and submit Midwestern University’s Drug-Free Workplace and Substance Abuse Policy Statement.
8. Complete a physical exam and submit form.
10. Provide proof of completed required immunizations.
11. Meet the Technical Standards for the Program.

Students who either fail to satisfy these matriculation requirements or omit or falsify information required on official admissions documents automatically forfeit their seat in the Program. Individuals accepted for admission to the Program who do not comply with stated timelines for submission of all required materials will not receive further notification from CHS regarding forfeiture of their seat.
Articulation Agreement Between Midwestern University Programs

Students enrolled in a Midwestern University program are guaranteed an admission interview with another Midwestern University program if the student:

1. is currently in good standing in the academic program in which the student is enrolled and does not have any pending misconduct charges against him/her;
2. meets all admission requirements for the professional program of interest;
3. after a minimum of two full time quarters of study, achieves a minimum Midwestern University grade point average, derived from all courses completed at Midwestern, that is equal to or greater than 3.0; AND
4. achieves a score on the professional entrance exam (if required) that is not less than one standard deviation below the mean score for students that matriculated into the professional degree program in the previous year.

A guaranteed interview does not guarantee admission into the professional program.

Graduation Requirements

To qualify for graduation with a master’s degree from the Nurse Anesthesia Program of Midwestern University, students must:

1. Follow an approved course of study acceptable to the Program Student Academic Review Committee;
2. Satisfactorily complete the required number of credit hours and pass all courses with a 3.00 or higher cumulative GPA, with no clinical anesthesia course or rotation grade below a B;
3. Receive a favorable recommendation from the Nurse Anesthesia Program, Program Student Academic Review Committee, and the College of Health Sciences Student Promotion and Graduation Committee;
4. Be recommended for conferral of the master’s degree by the University Faculty Senate;
5. Settle all financial accounts with the University; and
6. Complete all graduation clearance requirements as instructed by the Office of the Registrar.

Licensure Requirements

Students must have a current Arizona registered nursing license or a license from one of the states in the nursing compact at the time they enter the program. Students from a non-compact state will have to obtain licensure in Arizona. Students in the second year of the Program will need a California registered nursing license as well.

Curriculum

First Year

<table>
<thead>
<tr>
<th>Summer Quarter</th>
<th>14.5 quarter credits</th>
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<tbody>
<tr>
<td>ANAT 451</td>
<td>Human Anatomy and Embryology</td>
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<tr>
<td>NAAP 411</td>
<td>Biophysics</td>
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<tr>
<td>NAAP 412</td>
<td>Evidence-Based Journal Club</td>
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<tr>
<td>NAAP 450</td>
<td>Biochemistry for Nurse Anesthetists</td>
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Fall Quarter | 16 quarter credits
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<tbody>
<tr>
<td>CORE 460</td>
<td>Interdisciplinary Health Care</td>
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<tr>
<td>NAAP 413</td>
<td>Evidence-Based Journal Club</td>
</tr>
<tr>
<td>NAAP 432</td>
<td>Principles of Anesthesia I</td>
</tr>
<tr>
<td>NAAP 434</td>
<td>Anesthesia Pharmacology</td>
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<tr>
<td>PHYS 471</td>
<td>Human Physiology I</td>
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Winter Quarter | 17 quarter credits
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<tr>
<td>CORE 470</td>
<td>Interdisciplinary Health Care</td>
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<tr>
<td>NAAP 414</td>
<td>Evidence-Based Journal Club</td>
</tr>
<tr>
<td>NAAP 433</td>
<td>Principles of Anesthesia II</td>
</tr>
<tr>
<td>NAAP 443</td>
<td>Research Methods</td>
</tr>
<tr>
<td>PHAR 461</td>
<td>Pharmacology I</td>
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<tr>
<td>PHYS 482</td>
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Spring Quarter | 14.5 quarter credits
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<td>CORE 480</td>
<td>Interdisciplinary Health Care</td>
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<tr>
<td>NAAP 415</td>
<td>Evidence-Based Journal Club</td>
</tr>
<tr>
<td>NAAP 422</td>
<td>Professional Aspects of Nurse Anesthesia</td>
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<tr>
<td>NAAP 444</td>
<td>Principles of Anesthesia III</td>
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<tr>
<td>PHAR 472</td>
<td>Pharmacology II</td>
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Second Year

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<tr>
<th>Summer Quarter</th>
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<tr>
<td>NAAP 515</td>
<td>Clinical Rotation I</td>
</tr>
<tr>
<td>NAAP 520</td>
<td>Clinical Rotation I Didactic Component</td>
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Fall Quarter | 12 quarter credits
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<tr>
<td>NAAP 516</td>
<td>Clinical Rotation II</td>
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<tr>
<td>NAAP 521</td>
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Winter Quarter | 12 quarter credits
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<td>NAAP 517</td>
<td>Clinical Rotation III</td>
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<tr>
<td>NAAP 522</td>
<td>Clinical Rotation III Didactic Component</td>
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Spring Quarter | 12 quarter credits
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<tr>
<td>NAAP 518</td>
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Third Year

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<tr>
<td>NAAP 519</td>
<td>Clinical Rotation V</td>
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</table>
NAAP 524 Clinical Rotation V Didactic Component 3

TOTAL CREDITS FOR PROGRAM COMPLETION: 122

**Course Descriptions**

Prerequisites are listed for those courses with such requirements. When no prerequisite is listed in a course description, it is implied that there is no prerequisite.

**ANAT 451 Human Anatomy and Embryology (with Gross Anatomy Lab)**
This course presents lectures and laboratory (human cadaver dissection and prosection, microscopy) sessions emphasizing the embryologic development of the human body, the relationship between body structure and function, and the use of gross human anatomy in physical diagnosis.
7 credits (including laboratory sessions)

**CORE 460, 470, 480 Interdisciplinary Health Care**
The Interdisciplinary Health Care course includes students from the colleges of Health Sciences, Osteopathic Medicine, Dental Medicine, Optometry and Pharmacy in order to teach all clinically based students about the importance of an interdisciplinary approach to patient care. Topic pertinent to all providers, such as cultural and ethical issues and the roles of the profession will be presented.
0.5 credits each (1.5 credits total)

**NAAP 411 Biophysics**
The purpose of the course is to show how the various branches of physics can be used to understand important aspects of physiology, pharmacology, and pathology, as well as the mechanics of the anesthesia machine and vaporizers.
4 credits

**NAAP 412, 413, 414, 415 Evidence-Based Journal Club**
The purpose of this four-quarter series is to foster the students critical analysis of research related to clinical anesthesia practice. Using current anesthesia literature students will read, critique and present literature on a specified topic. Lecture and classroom discussion aimed at promoting the usefulness of research will enhance student awareness regarding transferring research and theory to clinical practice.
0.5 credits each (2 credits total)

**NAAP 422 Professional Aspects of Nurse Anesthesia**
This course will present material concerning professional issues surrounding the practice of Nurse Anesthesia.
4.5 credits

**NAAP 432, 433, 444 Principles of Anesthesia I, II, III**
These courses introduce the student to the scope and complexity of anesthesia management. Principles of Anesthesia I focuses on general principles, including anesthesia equipment, monitoring, perioperative patient assessment, basic anesthesia care, documentation of care, principles of infection control and safety, and airway management. The second course introduces regional anesthesia, methods for pain management, the management of patients with coexisting disease that complicate anesthesia management, and the anesthetic management of specific types of procedures. The final course in this series focuses on more complex anesthesia management scenarios including the specialty practice of cardiac, neurologic, obstetric, and pediatric anesthesia.
6 credits each (18 credits total)
Prerequisite for NAAP 433 Principles of Anesthesia II: NAAP 432 Principles of Anesthesia I
Prerequisite for NAAP 444 Principles of Anesthesia III: NAAP 433 Principles of Anesthesia II

**NAAP 434 Anesthesia Pharmacology**
This course focuses exclusively on those drugs and delivery systems utilized for anesthesia. The major emphasis is on inhalational agents, muscle relaxants, induction agents, and narcotics used to provide general anesthesia. The pharmacology for regional anesthesia is also discussed. Medicinal organic chemistry will be covered in this course as well.
5 credits

**NAAP 443 Research Methods**
This course provides an overview of research designs used in basic science, applied, and descriptive research. The course is intended to teach research skills used in all of the health professions and to aid in the interpretation of published research reports.
3 credits

**NAAP 450 Biochemistry for Nurse Anesthetists**
Biochemistry is the science concerned with the functioning of cellular constituents at the molecular level in health and how their functions are altered in disease. Biochemistry is fundamental to understanding all branches of the life sciences. Topics include cellular energy metabolism, signal transduction, cell biology, nutrition, serum chemistry profile, complete blood count, anemias, liver function tests, diabetes, lipid disorders, and hemostasis tests.
3 credits
NAAP 515, 516, 517, 518, 519 Clinical Rotation I, II, III, IV, V
Students will begin the clinical practicum in the summer of their second year in the program. Students will rotate to a variety of hospitals in Arizona, New Mexico, California, Colorado, and Utah. These rotations will include specialty rotations in cardiac surgery, neurosurgery, pediatrics, and obstetrics.
9 credits each (45 credits total)
Prerequisite: Completion of all didactic course work; successful completion of previous Clinical Rotation.

Current Clinical Sites Include:
1. Arizona Heart Hospital, Phoenix, AZ
   Distance from campus: local
2. Canyon Surgery Center, Phoenix, AZ
   Distance from campus: local
3. CIGNA Healthcare of Arizona, Phoenix, AZ
   Distance from campus: local
4. Cobre Valley Community Hospital, Globe, AZ
   Distance from campus: 2 hours
5. Community Regional Medical Center, Fresno, CA
   Distance from campus: 9 hours
6. Del E Webb Memorial Hospital, Sun City West, AZ
   Distance from campus: local
7. Flagstaff Medical Center, Flagstaff, AZ
   Distance from campus: 2 hours
8. Fort Defiance Indian Medical Center, Fort Defiance, AZ
   Distance from campus: 6 hours
9. La Paz Regional Hospital, Parker, AZ
   Distance from campus: 3 hours
10. Maricopa Medical Center, Phoenix, AZ
    Distance from campus: local
11. Mountain Vista Medical Center, Mesa, AZ
    Distance from campus: local
12. Mount Graham Regional Medical Center, Safford, AZ
    Distance from campus: 2 hours
13. Rehoboth McKinley Christian Health Services, Gallup, NM
    Distance from campus: 8 hours
    Distance from campus: local
15. Saint Mary Corwin Medical Center, Pueblo, CO
    Distance from campus: 10 hours
16. San Juan Regional Medical Center, Farmington, NM
    Distance from campus: 8 hours
17. Saint Vincent Infirmary Medical Center, Little Rock, AR
    Distance from campus: Arkansas
18. Southern Arizona Veterans Affairs Healthcare, Tucson, AZ
    Distance from campus: 2 hours
19. Summit Healthcare Regional Medical Center, Show Low, AZ
    Distance from campus: 4 hours
20. Sun Health Boswell Hospital, Sun City, AZ
    Distance from campus: local
21. Tampa General Hospital, Tampa, FL
    Distance from campus: Florida

22. Tempe Saint Luke's Hospital, Tempe, AZ
    Distance from campus: local
23. Tuba City Indian Medical Center, Tuba City, AZ
    Distance from campus: 6 hours

NAAP 520, 521, 522, 523, 524 Clinical Rotation Didactic Component I, II, III, IV, V
This course comprises the didactic component of NAAP 515 through NAAP 519. The student's retention of didactic information from the first year of the program will be evaluated and a professional case report will be presented by the student.
3 credits each (15 credits total)
Prerequisite: Completion of all didactic course work; concurrently registered for corresponding Clinical Rotation.

PHAR 461 and 472 Pharmacology I & II
These courses introduce students to the general principles of drug action, drug dynamics and kinetics, toxicities, and the therapeutic uses as related to humans. Students are exposed to common drugs affecting major organ systems of the body.
3 credits each (6 credits total)
Prerequisites: ANAT 451 Human Anatomy and PHYS 471 Human Physiology I, and PHYS 482 Human Physiology II

PHYS 471 and 482 Human Physiology I & II
In this two-quarter series, students are introduced through didactic instruction and clinical case sessions to the basic physiologic principles that underline the normal function of the various organs and organ systems. These core principles provide the foundation through which the student develops an understanding of health in physiologic terms and appreciation of diverse regulatory processes that maintain the homeostasis of the human body.
4 credits each (8 credits total)

FACULTY
Shari M. Burns, CRNA, MSN
US Air Force Nurse Anesthetist Program
Associate Program Director and Assistant Professor

Kathleen A. Piotrowski, CRNA, MSN
Case Western Reserve University
Frances Payne Bolton School of Nursing
Assistant Professor

Mary M. Wojnakowski, CRNA, Ph.D.
University of Pittsburgh
School of Nursing
Program Director and Assistant Professor
MISSION
The Midwestern University Doctor of Psychology (Psy.D.) in Clinical Psychology Program is designed to educate and train students in the general practice of clinical psychology, serving a diverse population of persons in need of psychological services.

ACCREDITATION
Midwestern University is accredited by The Higher Learning Commission, A Commission of the North Central Association of Colleges and Schools (HLC/NCA), 30 North LaSalle St., Suite 2400, Chicago, IL 60602; 800/621-7440.

Since MWU’s Clinical Psychology Program is relatively new, it is not yet accredited by the American Psychological Association (APA). The Program will apply for accreditation from the APA as soon as it is eligible. Accreditation information can be obtained from the Committee on Accreditation of the American Psychological Association, 750 First Street NE; Washington, DC 20002-4242. Phone: 202/336-5979; TDD/TTY: 202/336-6123. Web Site: http://www.apa.org/ed/accreditation/status.html

DEGREE DESCRIPTION
The Doctor of Psychology degree is designed to be a professional degree similar to the doctoral degrees provided in medicine, law, pharmacy, physical therapy, and dentistry. The Psy.D. has become the degree of choice for persons interested in becoming a high-level practitioner when pursuing a career in clinical psychology. The curriculum for the program does not follow any one theoretical perspective; rather, the emphasis is upon the development of the essential diagnostic, therapeutic, and consultative skills for the practice of clinical psychology.

The overall goal is to prepare students for careers in the practice of professional psychology. There are five specific goals, defined as competencies, and an emphasis on training in Integrated Behavioral Health Care. These competencies are:

1. Research and Evaluation/Foundations of Psychological Science: This competence includes the areas of research and evaluation, test construction, statistics, scholarship, and scientific mindedness. This competence rests on the assessor’s foundation of knowledge, skills, and professional attitudes in the areas of tests and measurement, statistics, qualitative methods, and experimental design. This competence also encompasses knowledge of the history of scientific psychology and its clinical applications, including the areas of physiological psychology, neuropsychology, psychopharmacology, cognitive and affective bases of behavior, history and systems of psychology, and social psychology.

2. Professionalism: This competence includes the areas of ethics, diversity (defined broadly), self-care, awareness, self-reflection, practice management, collegiality, professional problem solving, a commitment to lifelong learning, and critical thinking which underlies all subject matter and professional behavior.

3. Diagnostics & Assessment: This competence rests on the foundation of knowledge, skills, and professional attitudes in the areas of human development and psychopathology. The Diagnostics and Assessment competence requires an ability to acquire and synthesize multiple sources of data into a comprehensive, cohesive and clearly articulated communication form.

4. Intervention: This competence requires students to demonstrate an ability to intervene with clients from an articulated theoretical perspective. Intervention is broadly defined to include a variety of activities that promote or sustain well-being or provide remedial or preventative services. Intervention populations are broadly defined (e.g. individuals, groups, couples, families, communities). Students demonstrate knowledge, skills and attitudes congruent with evidence-based practice rationales and can articulate them.

5. Relationship & Communication: This competence requires a demonstration of interpersonal skills and effective written and oral communication. Ability to consult and collaborate with others, interdisciplinary teams and members of agencies and organizations is considered part of...
relationship skills. Evidence of ability to teach/present and manage at a developmentally appropriate level is also included. Supervisory ability (including the ability to be supervised) is part of this competence.

**Integrated Behavioral Health Care Emphasis:** The MWU Clinical Psychology Program emphasizes a broad and general training in psychology. In addition, emphasis on psychological practice in integrated health care settings is provided. MWU views psychologists as generalists in healthcare. Because we are housed in a medical school and healthcare environment, students have the opportunity to interact with many healthcare professionals. As part of this interdisciplinary approach, training in other related psychological activities is available to interested students, including medical psychology, rehabilitation psychology, neuropsychology, health psychology and behavioral medicine.

**Program Philosophy**
The Doctor of Psychology in Clinical Psychology Program follows the practitioner-scholar model of preparation that was accepted by the American Psychological Association at the Vail Conference. This model recognizes the ongoing need in society for expertly trained practitioners in the field of clinical psychology. The practitioner-scholar philosophy dictates that competent practitioners are required to have an extensive understanding of the theoretical principles in the clinical practice of psychology and the ability to utilize the knowledge in specific clinical situations. This program has the philosophy of educating and training individuals to enter careers emphasizing the delivery of direct psychological services and consultation. Relevant theory, research, and field experiences are integrated toward the development of competent and ethical practitioners who are respectful of individual and cultural differences in the provision of psychological services.

**Program Requirements**
The Psy.D. Program is designed to be completed in four to five years. Typically, full-time students will complete three years of coursework, clerkship, and practicum experiences. This is followed by a one-year internship and the satisfactory completion of a Practitioner Scholar Project. Some evening courses may be scheduled.

**Master of Arts in Clinical Psychology Degree**
Students are only admitted into the Psy.D. Program. There is no separate master degree program. Doctoral students may elect to earn a M.A. degree while pursuing the Psy.D. degree after completion of the first two years of coursework, clerkship, and practicum experiences. Students electing to receive the M.A. degree must have successfully completed all of the 500 and 600 level nonclinical core and clinical core courses, clerkship, and practicum experiences for a total of 116.5 credit hours. In addition, these students must complete and successfully defend a clinical master’s project. Students must also register for PSYC 681 Master’s Project (3 credits).

The awarding of the M.A. in Clinical Psychology is done to provide an additional credential certifying the work completed by students who are pursuing the Psy.D. degree.

**Clerkship**
The Psy.D. Program offers a number of supervised clinical training experiences beginning in the first year of study. Students are selected for clerkships following consideration of the Program Director and clerkship supervisor.

**Clinical Practicum**
All students must successfully complete practicum experiences in the second and third year of study. Students enter practicum training if they are making satisfactory progress in the program and receive approval of the Program Director. Practicum is a field experience that spans the academic or calendar year. Practicum training is completed at numerous hospitals, agencies, and organizations throughout the Phoenix metropolitan area. The specific clinical focus of the experience varies according to the student’s needs, interests, and availability of practicum sites. Students complete a minimum of six quarters of practicum. Students work approximately 16 to 20 hours per week in a clinical setting. The practicum experiences in psychodiagnostics and psychotherapy total approximately 1,000 hours over two years. Practicum placements may require work in the summer months, over holiday periods, and during breaks in the academic calendar. The Director of Clinical Training assists students in the application process for practicum placement.

**Qualifying Examination**
The purpose of the Qualifying Examination is to permit students to demonstrate the capacity to integrate the knowledge, skills and attitudes accumulated during the first two years of study, demonstrating organizational and differential thinking. The successful completion of the Qualifying Examination signals the official acceptance of the matriculated student as a doctoral candidate. The examination is evaluated on a pass/fail basis and is scheduled at the end of the first two years of study.

**Internship**
The predoctoral internship is a 2,000-hour requirement at an approved site over a 12-month or 24-month period. The internship is designed to provide intensive advanced clinical training that builds upon the coursework and practicum experiences. The internship is a critical component of the Psy.D. Program and cannot be waived. After successfully completing the Qualifying Examination, a student can apply for an internship. Students must complete all required coursework and practicum experiences before beginning the internship. The internship may or may not be a paid position, depending on the placement of the student.
Practitioner Scholar Project
A Practitioner Scholar Project is required for graduation. This is intended as a scholarly work that permits the student an opportunity to enhance their knowledge about a particular clinical area. A committee of faculty members will assist with this process. The Practitioner Scholar Project takes a minimum of nine to 12 months to complete. Students are required to develop a proposal for their project that must be approved by the Practitioner Scholar Project Committee before the project is implemented. The student then completes any data collection and analysis required for the project and completes a written document about the project. Each student must present an oral defense of the project upon its completion. Following the defense, the student must provide the program with copies of the Practitioner Scholar Project that are suitable for binding. With the Program Director’s approval, students needing additional time to complete the Practitioner Scholar Project following completion of their internship must register for PSYC 820 Practicum Scholar Project Continuation, a zero credit course.

ADMISSIONS
The Clinical Psychology Program considers applicants who possess the academic and professional promise necessary for development as competent, caring members of the health care community. The Program requires an interview with applicants before decisions are made concerning admission into the Program.

Admission Requirements
To be considered for admission within our competitive selection process applicants must submit the following documented evidence:
1. Completion of a bachelor’s degree from a regionally accredited college or university
2. Minimum cumulative grade point average (GPA) of 3.00 on a 4.00 scale.
3. Completion of 18 semester hours of prerequisite coursework in psychology, including:
   • Introductory/General Psychology
   • Human Growth & Development or Personality Theory
   • Abnormal Psychology
   • Statistics or Tests and Measurements
4. Graduate Records Examination (GRE) general test scores using the Midwestern University institution code of 4160
   • Scores will be accepted from tests taken no earlier than January 1, 2005
   • For more information about the GRE, contact Educational Testing Services (ETS) at 866/473-4373 (toll-free) or visit www.gre.org
   • Substitution of Miller Analogies or Medical College Admission Test (MCAT) scores instead of GRE will be evaluated on a case to case basis.
5. Demonstration of a people or service orientation through community service or extracurricular activities
6. Motivation for and commitment to health care as demonstrated by previous work, volunteer work, or other life experiences
7. Oral and written communication skills necessary to interact with patients and colleagues
8. Commitment to abide by Midwestern University’s Drug-Free Workplace and Substance Abuse Policy
9. Passage of Midwestern University’s criminal background check.

International Applicants
An international student must satisfy all of the requirements for admission to the college or program that apply to a student who has completed all of his/her prerequisite coursework in the U.S. at a regionally accredited college or university. In addition, an international student must demonstrate proficiency in the English language. This may be accomplished by satisfying both of the following requirements:
1. The international student has completed a minimum of two full time semesters or three full time quarters of instruction at a postsecondary institution in the United States. Completed coursework must include a minimum of 50% of the prerequisite science coursework for the college or program of interest, 6 semester hours of non-remedial English composition, and 3 semester hours of public speaking/speech.
2. The international student must submit official TOEFL scores. A minimum passing score is 550 (paper version, maximum score 677) or 100 (internet version, maximum score 120). The TOEFL scores must be from an exam taken within two years of the anticipated date of matriculation into the college or program.

If the international student wishes to receive credit for prerequisite coursework completed at a college or university outside of the United States, he/she must submit an official, detailed, course-by-course evaluation of this coursework. The student must obtain this evaluation from one of the following services:
1. Educational Credential Evaluators (ECE): 414/289-3400 or Fax 414/289-3411 (www.ece.org, e-mail: info@ece.org)
3. World Education Service (WES): 212/966-6311 or Fax 212/739-6100 (www.wes.org, e-mail: info@wes.org)

Based on the official foreign transcript evaluation and the grade earned in the course(s), the college or program will
decide if it will apply any of these credits toward fulfillment of its prerequisites.

**Application Process and Deadlines**

To be considered for admission to the Clinical Psychology Program, students must submit the following to the Office of Admissions:

1. Completed application forms, which can be downloaded with instructions from the University’s web site at www.midwestern.edu; click on the AZ Clinical Psychology Program section. Students may also obtain application packets by writing or calling the Office of Admissions (see below)
2. A nonrefundable, nonwaivable application fee of $50
3. Three signed and sealed letters of recommendation from professionals who know the student well (teachers, advisors, professional colleagues or supervisors)
4. A personal statement that reflects the educational and career goals of applicants and provides a self-appraisal of their qualifications for the Program and profession. Applicants are encouraged to include explanations of any factors in their application materials that might impact evaluation of their application.
5. Current resume
6. Official transcripts from all postsecondary schools attended
7. GRE general test scores

Send all application materials to:

Midwestern University  
Office of Admissions  
19555 N. 59th Avenue  
Glendale, AZ 85308  
888/247-9277 or 623/572-3215  
admissaz@midwestern.edu

**Please Note:** Applicants may track the receipt of their application materials and the status of their files on the University’s web site with the instructions for accessing account information that will be sent by the Office of Admissions after receipt of their application. Applicants are responsible for notifying the Office of Admissions of any changes in their mailing address and e-mail address. All requests for application withdrawals must be made in writing.

Completed applications are reviewed to determine the applicant’s eligibility for interviews, which are conducted on the Midwestern University campus during several admission days throughout the admissions cycle. The personal interview is the final step in the application process. Upon completion of the interview, the Program makes admissions decisions and the Dean, via the Office of Admissions, notifies applicants of admissions decisions.

For those admitted to the Doctor of Psychology Program, a nonrefundable tuition deposit to reserve a seat in the entering class will be required by a date stipulated in the acceptance letters. Deposits are applied toward the tuition due for the first quarter of study.

Admissions decisions will be made on a rolling basis. Applicants are advised to complete their application files as early as possible to ensure timely consideration.

**Technical Standards**

A candidate must have abilities and skills of five varieties: I) observation; II) communication; III) motor; IV) intellectual, conceptual, integrative, and quantitative; and V) behavioral and social. Technological compensation can be made for some limitation in certain of these areas, but a candidate should be able to perform in a reasonably independent manner.

I. Observation: A candidate must be able to make observations at a distance and close at hand. Observation necessitates the functional use of the sense of vision and somatic sensation and is enhanced by the functional use of all of the other senses.

II. Communication: The candidate should be able to communicate effectively, efficiently and sensitively in both oral and written form and be able to perceive nonverbal communication.

III. Motor: Candidates must be able to coordinate both gross and fine muscular movements, maintain equilibrium and have functional use of the senses of touch and vision. The candidate must possess postural control, neuromuscular control and eye-to-hand coordination.

IV. Intellectual, Conceptual, Integrative, and Quantitative Abilities: The candidate must be able to measure, calculate, reason, analyze, record, and synthesize large amounts of information and problem solve. The candidate must be able to comprehend three-dimensional relationships and understand spatial relationships.

V. Behavioral and Social Attributes: The candidate must possess the emotional health required for full utilization of his/her intellectual abilities, the exercise of good judgment and the consistent, prompt completion of all responsibilities and the development of mature, sensitive, and effective relationships. Candidates must be able to tolerate physically, mentally, and emotionally taxing workloads and to function effectively under stress. The candidate must be able to adapt to changing environments, to display flexibility, and to learn to function in the face of uncertainties. Compassion, integrity, concern for others, effective interpersonal skills, willingness and ability to function as an effective team player, interest and motivation to learn are all personal qualities that are assessed during the admissions and education process.
Candidates are required to certify that they understand and meet these Technical Standards. Candidates must provide such certification prior to matriculation. Candidates who may not meet the Technical Standards must inform the Director of Admissions, who will then contact the Dean of Students. The Dean of Students, in consultation with the Academic Dean (and Program Director), will identify and discuss what accommodations, if any, the College/Program would need to make that would allow the candidate to complete the curriculum. The College/Program is not able to grant accommodations that alter the educational standards of the curriculum. Students must meet the Technical Standards for the duration of enrollment in their professional program.

**Matriculation Process**
The matriculation process begins after applicants receive notification of their acceptance into the Doctor of Psychology Program. Students must return both their signed matriculation agreement and their initial deposit to the Office of Admissions. Students must also:

1. Submit deposit monies by the date designated in their matriculation documents. Deposits are applied toward the first quarter's tuition.
2. Submit official final transcripts from all colleges attended post-high school by the deadline of two weeks (14 calendar days) prior to the first day of classes. Students who are accepted to MWU less than one month prior to the first day of classes will have 30 calendar days from the date of their acceptance to submit all official transcripts to the Office of Admissions. Any special circumstances or requests for exceptions to this policy must be sent to and approved by the Office of the Dean of the College. Students who fail to submit all official final transcripts by the stated deadline may jeopardize their acceptance or continued enrollment in the College.
3. Submit proof of immunization against measles, mumps, rubella, oral polio (opv), diphtheria, and hepatitis B.
4. Provide evidence of testing for tuberculosis within the last 12 months. A titer verifying immunity to the previously mentioned diseases may be required.
5. Submit proof of medical and disability insurance coverage. Students may select either a plan offered by an MWU-approved carrier or a comparable plan offered by an outside carrier of their choice.
6. Provide documentation verifying that sufficient funds have been deposited in a U.S. bank to cover all expenses while attending CHS (for non-U.S. citizens/nonpermanent residents only).
7. Provide documentation that any additional coursework or service requirements stipulated by the Admissions Committee of the Program has been completed.
8. Meet the Technical Standards for the Program.
9. Submit additional documents as required by the Office of Admissions.
10. Authorize and pass the Midwestern University criminal background check
12. Complete a physical exam and submit form.

Students who either fail to satisfy the above matriculation requirements or omit or falsify information required on official admissions documents automatically forfeit their seat in the Program. Individuals accepted for admission to the Clinical Psychology Program of the College of Health Sciences who do not comply with stated timelines for submission of all required materials will not receive further notification from CHS regarding forfeiture of their seat.

**Articulation Agreement Between Midwestern University Programs**
Students enrolled in a Midwestern University program are guaranteed an admission interview with another Midwestern University program if the student:

1. Is currently in good standing in the academic program in which the student is enrolled and does not have any pending misconduct charges against him/her;
2. Meets all admission requirements for the professional program of interest;
3. After a minimum of two full time quarters of study, achieves a minimum Midwestern University grade point average, derived from all courses completed at Midwestern, that is equal to or greater than 3.0; and
4. Achieves a score on the professional entrance exam that is not less than one standard deviation below the mean score for students that matriculated into the professional degree program in the previous year.

A guaranteed interview does not guarantee admission into the professional program.

**Reapplication Process**
After receiving either denial or end-of-cycle letters, prospective students may reapply for the following year’s admissions cycle. Before reapplying, however, individuals contemplating reapplication should seek the advice of an admissions counselor.

To initiate the reapplication process, prospective students must complete and submit new applications and proceed through the standard application process.
Transfer of Credit
In order to receive credit for previous coursework completed at other institutions prior to matriculation at Midwestern University, students must submit a Transfer of Credit Request Application prior to registration. The transfer of credit has the following conditions:
1. A maximum of 40 quarter hours of credit for coursework completed prior to matriculation may be considered.
2. Transferred course credit is limited to graduate level courses from recognized, regionally accredited degree granting institutions.
3. Credit is not transferred for a clinical practicum or an internship.
4. Credit may be awarded for required courses from other doctoral programs.
5. Credit may only be awarded for courses in which grades of B- or better were attained.
6. The Program may require a competency examination to determine satisfactory performance before awarding credit for a course.
7. Credit can only be awarded for courses completed within the seven-year period prior to matriculation.

Graduation Requirements
The M.A. in Clinical Psychology is awarded if the following conditions are fulfilled by students in the Psy.D. Program:
1. Petition to the program for the awarding of the M.A. degree;
2. Satisfactory completion of 116.5 credit hours including all required 500 and 600 level courses (93 credits), Interdisciplinary Healthcare courses (1.5 credits), clerkships (3 credits), practica and practicum seminar (16 credits) and clinical master’s project (3 credits);
3. Attainment of a cumulative grade point average of 3.00 or higher and a minimum of B- or P in all required courses, seminars, and practica.
4. Successful completion and defense of a clinical master’s project;
5. Full payment of all outstanding tuition and fees; and
6. Faculty and committee approval for awarding of the degree
To receive the Psy.D. in Clinical Psychology, the student must complete all requirements within seven years of matriculation. To be eligible for graduation the student must meet the following requirements:
1. Satisfactory completion of 220.5 quarter credit hours, including the required courses and seminars (125 credits), Interdisciplinary Healthcare Core Courses (1.5 credits); clerkships (3 credits), practica and practicum seminars (32 credits), internship (50 credits), and Practitioner Scholar Project (9 credits);
2. Attainment of a cumulative grade point average of 3.00 or higher and a minimum of B- or P in all required courses, seminars, and practica.

Licensure Requirements
Licensure requirement and standards for professional practice vary from state to state and prospective students are urged to examine the requirements of the specific state in which they plan to practice. The Association of State and Provincial Psychology Boards can provide useful information on this issue. Although the Doctor of Psychology in Clinical Psychology Program will seek status as an approved program from the American Psychological Association at the earliest time, this status is currently not necessary for graduates to become licensed in the State of Arizona.

Curriculum
YEAR 1
Fall Quarter
CORE 460  Interdisciplinary Health Care  0.5
PSYC 501  Professional Issues and Ethics  3
PSYC 502  Life Span Development I  3
PSYC 515  Tests and Measurements I  3
PSYC 560  Cognitive-Affective Bases of Behavior  3
PSYC 572  Psychopathology: Anxiety-Based and Personality Disorders  3
15.5 credits
Winter Quarter
CORE 470  Interdisciplinary Health Care  0.5
PSYC 503  Life Span Development II  3
PSYC 516  Tests and Measurements II  2
PSYC 524  Intelligence Testing I  3
PSYC 525  Intelligence Testing II  2
PSYC 570  Psychopathology: Child and Adolescent  3
PSYC 582  Clerkship I  1
14.5 credits

Spring Quarter
CORE 480  Interdisciplinary Health Care  0.5
PSYC 514  Research Methods and Design  3
PSYC 526  Personality Assessment I  3
PSYC 550  Biological Bases of Behavior  3
PSYC 573  Psychopathology: Psychotic and Mood Disorders  3
PSYC 583  Clerkship II  1
PSYC 665  Professional Writing  1
14.5 credits

Summer Quarter
PSYC 510  Statistics  3
PSYC 520  Clinical Appraisal and Interviewing  3
PSYC 527  Personality Assessment II: Projective Techniques  3
PSYC 530  Introduction to Psychotherapy  3
PSYC 584  Clerkship III  1
13 credits

YEAR 2
Fall Quarter
PSYC 620  Advanced Assessment  3
PSYC 631  Cognitive Theories and Approaches to Psychotherapy  3
PSYC 639  Integrated Behavioral Health Care  3
PSYC 682  Practicum I  3
PSYC 683  Practicum Seminar I  1
13 credits

Winter Quarter
PSYC 554  Social and Cultural Bases of Behavior  3
PSYC 601  Advanced Professional Development and Ethics  2
PSYC 632  Psychodynamic Approaches to Psychotherapy  3
PSYC 635  Marriage and Family Counseling and Therapy  3
PSYC 684  Practicum II  3
PSYC 685  Practicum Seminar II  1
15 credits

Spring Quarter
PSYC 610  Diversity in Clinical Psychology  3
PSYC 636  Behavioral Therapy  3
PSYC 650  Psychopharmacology  3
PSYC 680  Research Seminar  2
PSYC 686  Practicum III  3
PSYC 687  Practicum Seminar III  1
15 credits

Summer Quarter
PSYC 540  History and Systems  3
PSYC 640  Introduction to Neuropsychology  3

PSYC 649  Group Therapy  3
PSYC 681  Masters Project  3
PSYC 688  Practicum IV  3
PSYC 689  Practicum Seminar IV  1
13 credits

(With Masters Project)
Total credits Year 1 + Year 2  113.5
(Total credits Year 1 + Year 2 for students petitioning for awarding of Master of Arts)  116.5

YEAR 3
Fall Quarter
PSYC 711  Advanced Statistics  3
PSYC 730  Advanced Psychotherapy Practice  2
PSYC 771  Advanced Psychopathology  3
PSYC 782  Advanced Practicum I  3
PSYC 783  Advanced Practicum Seminar I  1
Electives*  3
15 credits

Winter Quarter
PSYC 708  Mental Health Law  3
PSYC 739  Issues in Substance Abuse  3
PSYC 751  Advanced Integrated Behavioral Healthcare  1
PSYC 780  Practitioner Scholar Project  1
PSYC 784  Advanced Practicum II  3
PSYC 785  Advanced Practicum Seminar II  1
Electives*  3
15 credits

Spring Quarter
PSYC 732  Supervision and Consultation Models & Practice  3
PSYC 781  Practitioner Scholar Project Seminar  1
PSYC 786  Advanced Practicum III  3
PSYC 787  Advanced Practicum Seminar III  1
Electives*  6
14 credits

Summer Quarter
PSYC 788  Advanced Practicum IV  3
PSYC 789  Advanced Practicum Seminar IV  1
PSYC 810  Practitioner Scholar Project  8
12 credits

YEAR 4
Fall Quarter
PSYC 800  Internship I  12.5
12.5 credits

Winter Quarter
PSYC 801  Internship II  12.5
12.5 credits

Spring Quarter
PSYC 802  Internship III  12.5
12.5 credits
Summer Quarter
PSYC 803  Internship IV  12.5
PSYC 810  Practitioner Scholar Project  1

Total credits  220.5
(With M.A. degree  223.5)

Note: The MWU/CHS Clinical Psychology Program reserves the right to alter its curriculum however and whenever it deems appropriate.

**Course Descriptions**

Prerequisites are listed for those courses with such requirements. When no prerequisite is listed in a course description, it is implied that there is no prerequisite.

**CORE 460, 470, 480 Interdisciplinary Health Care**
The Interdisciplinary Health Care course involves the Colleges of Health Sciences, Osteopathic Medicine, Dental Medicine, Optometry and Pharmacy in order to teach all clinically-based students about the importance of an interdisciplinary approach to patient care. Lectures will be given in a seminar format, in conjunction with panel presentations and discussions by interdisciplinary team members.

0.5 credit per quarter

**PSYC 501 Professional Issues and Ethics**
The legal, ethical, and professional issues are discussed in the context of the delivery of mental health services. These issues include APA ethical standards, privacy issues, confidentiality, mental health codes, mental health law and legislation, certification and licensure, ethical standards in research, confidentiality in insurance and managed care contexts, and ethical standards in private practice, schools, hospitals and clinics, community settings, and government.

3 credits

**PSYC 502 Life Span Development I**
This course examines the major developmental issues from birth through adolescence. The topics include normal and abnormal development in the context of physical, biological, cognitive, social, and emotional functioning. Other topics include a study of models of development including learning theory, cognitive theory (Piaget), and other theories. Speech and language development are also examined as a basis for later human cognition. Developmental factors related to issues of culture, ethnicity, disabilities, and gender are addressed.

3 credits

**PSYC 503 Life Span Development II**
This course examines the biopsychosocial factors in adult development and aging. Topics include physical and psychological changes that occur from early adulthood through senescence, and normal and abnormal changes through this cycle including cognitive changes. The course examines the role of work and career as it impacts on basic adult life processes. Retirement is examined as it relates to psychological consolidation and the prospect of death and dying. Cross-cultural, gender, familial, and gender perspectives are included.

3 credits

**PSYC 510 Statistics**
The course examines basic statistical measures including parametric and nonparametric tests at both the theoretical and applied levels. The course will allow the student to understand the statistical methods used in clinical research. Emphasis is placed on the preparation of the students for their own clinical research. Topics include complex factorial ANOVA, Repeated Measures ANOVA, multiple regression, power analysis, MANOVA, and factor analysis.

3 credits

**PSYC 514 Research Methods and Design**
This course is a survey of the methods used in empirical clinical research, program evaluation, and clinical outcomes studies. Students will learn both experimental and quasi-experimental designs. Strategies for research design, subject selection, and statistical analysis will also be examined.

3 credits

**PSYC 515 Tests and Measurements I**
This is the first course in a two-semester sequence about the measurement of individual differences designed for students in the clinical psychology program. This course examines the philosophical, historical, and methodological foundations of psychological testing, assessment, and measurement. The course focuses on the statistical basis of validity, reliability, tests of intelligence, personality assessment, counseling and assessment, neuropsychological assessment, computer-assisted assessment, and the assessment of persons with disabilities.

3 credits

**PSYC 516 Tests and Measurements II**
This course continues the examination of the measurement of individual differences and prediction designed for students in the clinical psychology program. The course focuses on the measurement of behavior, affect, achievement, relationships, attitudes, traits, and self-concept that are appropriate in clinical practice. The course prepares students to effectively evaluate different psychological tests and to select tests for particular referral questions and special populations.

2 credits

Prerequisite: PSYC 515: Tests and Measurements I
PSYC 520 Clinical Appraisal and Interviewing
This course provides the student with basic principles and techniques of clinical interviewing and assessment. The approach is both didactic and experiential with the student conducting mock interviews of patients. Emphasis is placed not only on understanding verbal information but also on meta-communication including body language, voice quality, and pacing, and other aspects of nonverbal interpersonal interaction. Students are introduced to differential diagnosis, report writing, inferential analysis, diversity issues related to appraisal and interviewing, and psychological inference.
3 credits
Prerequisites: PSYC 570 Psychopathology: Child and Adolescent; PSYC 572 Psychopathology: Anxiety-Based and Personality Disorders; PSYC 573 Psychopathology: Psychotic and Mood Disorders

PSYC 524 Intelligence Testing I
This course introduces the student to the theory, administration, scoring, and interpretation of standard intelligence tests. Intellectual assessment scales examined include the Stanford-Binet, and the various Wechsler Scales. Basic interpretation and report writing skills are developed. Biopsychosocial, cultural, ethnic, and disability factors affecting test validity and interpretation are also examined.
3 credits

PSYC 525 Intelligence Testing II
The purpose of this course is to emphasize using the clinical instruments to assess cognitive functioning of children and adults. The course is designed to develop competency in administration and report writing and consists of lecture, demonstration, practice administrations, and individual checkouts of competencies in test administration. The students receive constructive feedback in the areas of test administration, scoring, interpretation of results and report writing.
2 credits
Prerequisite: Must be taken concurrently with PSYC 524 Intelligence Testing I

PSYC 526 Personality Assessment I
This course introduces the student to the administration, interpretation, and scoring of the objective tests for personality assessment. Tests examined include the MMPI2, and Millon Scales. Basic interpretation and report writing skills are taught for the objective personality assessment instruments. Biopsychosocial, cultural, ethnic, gender, and disability factors affecting assessment validity and interpretation are also examined.
3 credits

PSYC 527 Personality Assessment II: Projective Techniques
This course provides the clinical psychology student with instruction and practice in the administration, scoring, and interpretation of the projective techniques including the Rorschach, TAT, and projective drawings. The course addresses relevant cultural, ethnic, gender, and disability factors in considering interpretation of results and in the development of integrative report writing.
3 credits

PSYC 530 Introduction to Psychotherapy
From a historical basis, this course introduces the student to the various psychotherapeutic traditions. Treatment approaches examined include psychoanalytic, psychodynamic, Gestalt, behavioral, cognitive/behavioral, interpersonal, and others. Through both didactic and experiential means, the student will be exposed to the fundamental aspects of each treatment approach. Also reviewed is the current literature on empirically verified treatment approaches as well as issues related to culture, ethnicity, gender, and disabilities.
3 credits

PSYC 540 History and Systems
This course is a survey of the historical development of both experimental and clinical psychology. Major systems of psychology include sensory-perceptual psychology (Gestalt), Freudian, psychodynamic, behavioral, cognitive, social, family, humanistic, and existential. Major theorists such as Freud, Adler, Jung, Maslow, Skinner, Piaget, Beck, and Meichenbaum are examined.
3 credits

PSYC 550 Biological Bases of Behavior
This course examines the historical and current understandings of the physical/neurological underpinnings of human behavior. Recent advances in imaging techniques are examined as they relate to our understanding of the structure and function of the neurological substrate in human functioning.
3 credits

PSYC 554 Social and Cultural Bases of Behavior
This course examines the influence of socioeconomic and cultural influences on behavior. Normative and abnormal behavior is examined in the biopsychosocial context. Also covered is the assessment of individual behavior in new or unfamiliar sociocultural contexts.
3 credits

PSYC 560 Cognitive-Affective Bases of Behavior
This course explores the role of thought and emotion in its influence on human behavior. Normative cognitive and affective processes are examined, including major theoretical
perspectives, research findings, and controversies. Historic and current research is examined in support of various models as well as gender, cultural, ethnic and disability issues. 3 credits

**PSYC 570 Psychopathology: Child and Adolescent**
This course provides the student with a basic understanding of the major psychological disorders of childhood and adolescence. Topics include an examination of developmental disorders, impulse disorders, eating disorders, and disorders of behavior and affect. Theories on the etiology of the disorders are reviewed in the context of both diagnosis and treatment. 3 credits
Prerequisite: PSYC 502 Lifespan Development I

**PSYC 572 Psychopathology: Anxiety-Based and Personality Disorders**
This course reviews the theory and research underlying the anxiety-based and personality disorders. Topics include anxiety disorders, dissociative and somatoform disorders, personality disorders, impulse control disorders, and psychosexual disorders. 3 credits

**PSYC 573 Psychopathology: Psychotic and Mood Disorders**
This course reviews the theory and research underlying the psychotic and mood disorders. Topics include symptoms and symptom presentations of schizophrenia, depressive and bipolar disorders, other psychotic disorders, cognitive disorders, and substance abuse and dependence. The importance of cultural, gender, ethnic, and disability factors will be discussed in relation to the psychiatric disorders. 3 credits

**PSYC 582 Clerkship I**
The clerkship is a supervised field experience for clinical psychology students, focusing on the development of clinical inquiry skills, assessment ability, knowledge of community resources, diversity issues, and consultation skills. The clerkship is a supervised experience that may take place at hospitals, clinics, human service agencies, schools, shelters, or faith based institutions. Students participating in the clerkship are under the direct supervision of a site supervisor and also receive feedback from faculty in the clinical psychology program. 1 credit
Prerequisite: Approval of Program Director

**PSYC 583 Clerkship II**
This is a continuation of PSYC 582. 1 credit
Prerequisites: PSYC 582 Clerkship I and Approval of Program Director

**PSYC 584 Clerkship III**
This is a continuation of PSYC 583. 1 credit
Prerequisites: PSYC 583 Clerkship II and Approval of Program Director

**PSYC 585 Advanced Professional Development and Ethics**
This course examines the role of the psychologist in divergent settings. Topics include ethics, standards of practice, models and techniques of supervision, practice development and management, documentation needs, record keeping, and information protection in light of the latest Department of Health and Human Services (DHHS) and Health Insurance Portability and Accountability (HIPPA) regulations and liability management. 2 credits
Prerequisite: PSYC 501 Professional Issues and Ethics

**PSYC 586 Diversity in Clinical Psychology**
This course examines the impact of culture, race, ethnicity, gender, sexual orientation, disability and religion on theory and practice in clinical psychology. The course looks at the interaction between the clinician’s own perceptions of culture and that of the patient. The impact of these issues is also discussed as it affects the delivery of psychological and psychiatric services. The societal impact due to differential access to services is also examined along with possible solutions to this problem. 3 credits

**PSYC 590 Advanced Assessment**
This course concentrates on the development of skills needed in the interpretation of test findings. Emphasis is placed on a synergistic understanding of the contributions of various test findings to the formulation of a valid diagnostic impression. Students are expected to continue development of skills in formulating diagnostic conclusions, clinical report writing, research report writing, and examination of differential diagnoses. 3 credits
Prerequisites: PSYC 520 Clinical Appraisal and Interviewing; PSYC 524 Intelligence Testing I; PSYC 525 Intelligence Testing II; PSYC 526 Personality Assessment I; PSYC 527 Personality Assessment II: Projective Techniques

**PSYC 601 Cognitive Theories & Approaches to Psychotherapy**
Starting with the pioneering work of Beck and Ellis to the current theory and practice of such therapists as Meichenbaum and Freeman, this course examines the major paradigm shift in clinical psychology with the so-called "Cognitive Revolution." The course reviews the impact of cognitive therapy on the development of empirically verified treatment approaches. It also reviews the current research
supporting the use of a cognitive psychotherapy approach with certain diagnostic conditions, and populations.

3 credits
Prerequisites: PSYC 530 Introduction to Psychotherapy; PSYC 560 Cognitive-Affective Bases of Behavior

PSYC 632 Psychodynamic Approaches to Psychotherapy
Beginning with the seminal work of Freud, this course examines the theory and technique in the psychodynamic psychotherapy. Classical and newer models, such as Self Psychology and Object Relations, are included. The work of Freud, Klein, Kernberg, and Kohut among others will be reviewed illustrating the rich and diverse approaches within the psychodynamic tradition.

3 credits
Prerequisite: PSYC 530 Introduction to Psychotherapy

PSYC 635 Marriage and Family Counseling and Therapy
Taking from family systems theory, this course examines the basic models, theories, and assumptions underlying marriage and family therapy while considering the biopsychosocial perspective. Using case studies, films, and videotapes, the course examines fundamental techniques of both therapy and diagnostic evaluation such as the use and development of the genogram.

3 credits
Prerequisite: PSYC 530 Introduction to Psychotherapy

PSYC 636 Behavioral Therapy
Beginning with the work of the major learning theorists such as Pavlov, Hull, Thorndike, and Skinner, the course examines the basic theories and techniques that underlie the behavioral therapy approach in clinical psychology. Using recent studies in empirical verification of therapeutic approaches, the course will review the use of specific behavioral interventions with such disorders as anxiety, behavior problems, phobia, and obsessive-compulsive disorder.

3 credits
Prerequisite: PSYC 530 Introduction to Psychotherapy; PSYC 560 Cognitive-Affective Bases of Behavior

PSYC 639 Integrated Behavioral Health Care
This course focuses on the skills needed to provide psychological services in primary care settings. Topics include consultation and collaboration with primary care physicians; improving patient adherence to medical treatment regimens; flexibility of scheduling to match services to patients’ identified needs; brief, focused assessment and intervention strategies; and health behaviors for lifestyle changes.

3 credits
Prerequisites: PSYC 530 Introduction to Psychotherapy; Core 460 Interdisciplinary Healthcare I; Core 470 Interdisciplinary Healthcare II; Core 480 Interdisciplinary Healthcare III

PSYC 640 Introduction to Neuropsychology
This course reviews the major systems and structures of the brain and central nervous system. In addition to examining normal neurological functioning, the course discusses common impairments in cognition, language, and perception with a neurological base. Topics covered include neurological syndromes such as cerebral vascular accidents (CVA’s), head trauma and concomitant brain injury, seizure disorders, and various forms of dementia. An overview of neuropsychological assessment instruments will be introduced.

3 credits
Prerequisite: PSYC 550 Biological Bases of Behavior

PSYC 649 Group Therapy
This course includes the history and current models and theories of group therapy. Both didactic and experiential methods are used to introduce the student to different kinds of group interventions. The recommended uses of group interventions for different types of problems, settings, and age groups are included.

3 credits
Prerequisite: PSYC 530 Introduction to Psychotherapy

PSYC 650 Psychopharmacology
This course examines the development and use of pharmacological agents in the treatment of psychopathology. Further, the course examines the use of medication with empirically verified therapy approaches. All classes of psychopharmacological agents are reviewed including neuroleptics, anxiolytics, mood stabilizers, and antidepressants.

3 credits
Prerequisite: PSYC 550 Biological Bases of Behavior

PSYC 655 Professional Writing
This course introduces the student to the basic foundations of professional writing including the use of the APA style of writing. The course examines several applications of writing style to such diverse activities as research report writing, clinical chart documentation, SOAP charting, and psychodiagnostic report writing.

1 credit

PSYC 660 Research Seminar
This course provides supervision for the student in the development and analysis of student-based research. The faculty advisor provides the student with direction in the formulation of the research question, research design, analysis, and write-up.

2 credits
Prerequisites: PSYC 510 Statistics; PSYC 514 Research Methods and Design
PSYC 681 Master’s Project
Students who request the awarding of a master’s degree following completion of the first two years of the curriculum must register for this course when completing the clinical thesis.
3 credits
Prerequisite: Approval of Program Director

PSYC 682 Practicum I
This course is designed to provide the practical experiences in psychodiagnostics and psychotherapeutics that are appropriate for the training of practitioners in the human services.
3 credits
Prerequisite: Approval of Program Director

PSYC 683 Practicum Seminar I
Students come together from various practicum sites for the purpose of supervision and discussion of the clinical experience. Students are supervised in order to maximize the learning experience in a typical clinical setting.
1 credit
Prerequisite: Approval of Program Director

PSYC 684 Practicum II
This is a continuation of PSYC 682.
3 credits
Prerequisites: PSYC 682 Practicum I and Approval of Program Director

PSYC 685 Practicum Seminar II
This is a continuation of PSYC 683.
1 credit
Prerequisites: PSYC 683 Practicum Seminar I and Approval of Program Director

PSYC 686 Practicum III
This is a continuation of PSYC 684.
3 credits
Prerequisites: PSYC 684 Practicum II and Approval of Program Director

PSYC 687 Practicum Seminar III
This is a continuation of PSYC 685.
1 credit
Prerequisites: PSYC 685 Practicum Seminar II and Approval of Program Director

PSYC 688 Practicum IV
This is a continuation of PSYC 686.
3 credits
Prerequisites: PSYC 686 Practicum III and Approval of Program Director

PSYC 689 Practicum Seminar IV
This is a continuation of PSYC 687.
1 credit
Prerequisites: PSYC 687 Practicum Seminar III and Approval of Program Director

PSYC 708 Mental Health Law
This course provides an overview of the judicial/legal aspects as they pertain to the practice of psychology. Risk management considerations, forensic psychological issues, and other mental health law issues will be explored.
3 credits
Prerequisite: PSYC 601 Advanced Professional Development and Ethics

PSYC 711 Advanced Statistics
This course focuses on clinical research with emphasis on research design and multivariate analysis. Particular attention is given to the application of research methodology, and psychometric issues regarding theory and practice.
3 credits
Prerequisites: PSYC 510 Statistics; PSYC 514 Research Methods and Design

PSYC 730 Advanced Psychotherapy Practice
The course is designed to assist the student in training to develop a personal approach to psychotherapy practice, based upon their training in theoretical models and treatment, and their individual personality. The course focuses on using the student’s theoretical model to conceptualize their clients and to provide appropriate treatment interventions within that theoretical model. Case management and ongoing evaluation are discussed.
2 credits
Prerequisite: PSYC 530 Introduction to Psychotherapy

PSYC 732 Supervision and Consultation Models & Practice
This course focuses on supervision and consultation in psychology. Major models of supervision and consultation will be presented. Both didactic and experiential methods of instruction will be used to expose students to the implementation and practices of supervision and consultation.
3 credits

PSYC 739 Issues in Substance Abuse
This course presents major theories of etiology and treatment of substance abuse and dependence. Addictions to different classes of substances, intoxication and withdrawal effects, and methods of assessment, diagnosis, treatment, management, and relapse prevention will be discussed.
3 credits
Prerequisites: PSYC 530 Introduction to Psychotherapy; PSYC 550 Biological Bases of Behavior
PSYC 751 Advanced Integrated Behavioral Healthcare
This course focuses on the practice of psychology integrated with primary healthcare. Issues regarding practice concerns, diversity issues, and consultative skills will be addressed.
1 credit
Prerequisite: PSYC 639 Integrated Behavioral Health Care

PSYC 771 Advanced Psychopathology
This course focuses on the clinical manifestations of psychopathology of the major clinical entities of children, adolescents, and adults. The course will examine the major differences seen among cultural groups, gender, and persons with disabilities. Comorbidity and approaches to complex diagnostic problems will be considered. The wide range of disorders will be reviewed in the context of current research outcomes.
3 credits
Prerequisites: PSYC 520 Clinical Appraisal and Interviewing; PSYC 570 Psychopathology: Child and Adolescent; PSYC 572 Psychopathology: Anxiety-Based and Personality Disorders; PSYC 573 Psychopathology: Psychotic and Mood Disorders

PSYC 780 Practitioner Scholar Project Development
This course focuses on the development of a scholarly project. It will assist the student with exploring an area of interest and developing that idea into formalized project proposal. Students will be able to utilize the seminar-based process to receive consultation from the instructor as well as class members.
1 credit
Prerequisite: Approval of Program Director

PSYC 781 Practitioner Scholar Project Seminar
This seminar-based course focuses on the implementation of the Practitioner Scholar Project. Other aspects of the project (review of the literature, etc.) are reviewed. Practical considerations, such as a timeline for completion of the project are developed.
1 credit
Prerequisite: PSYC 780 Practitioner Scholar Project Development

PSYC 782 Advanced Practicum I
This practicum experience offers the opportunity to enhance the student’s skills in a particular area of interest.
3 credits
Prerequisites: PSYC 688 Practicum IV and Approval of Program Director

PSYC 783 Advanced Practicum Seminar I
This seminar reviews the progress of students enrolled in the advanced practicum. Students meet on campus to discuss training experiences.
1 credit
Prerequisites: PSYC 689 Practicum Seminar IV and Approval of Program Director

PSYC 784 Advanced Practicum II
This is a continuation of PSYC 782.
3 credits
Prerequisites: PSYC 782 Advanced Practicum I and Approval of Program Director

PSYC 785 Advanced Practicum Seminar II
This is a continuation of PSYC 783.
1 credit
Prerequisites: PSYC 783 Advanced Practicum Seminar I and Approval of Program Director

PSYC 786 Advanced Practicum III
This is a continuation of PSYC 784.
3 credits
Prerequisites: PSYC 784 Advanced Practicum II and Approval of Program Director

PSYC 787 Advanced Practicum Seminar III
This is a continuation of PSYC 785.
1 credit
Prerequisites: PSYC 785 Advanced Practicum Seminar II and Approval of Program Director

PSYC 788 Advanced Practicum IV
This is a continuation of PSYC 786.
3 credits
Prerequisites: PSYC 786 Advanced Practicum III and Approval of Program Director

PSYC 789 Advanced Practicum Seminar IV
This is a continuation of PSYC 787.
1 credit
Prerequisites: PSYC 787 Advanced Practicum Seminar III and Approval of Program Director

PSYC 800, 801, 802, 803 Internship I, II, III, IV
The internship is a 12-24 month commitment (2,000 hours) that is designed to provide an intensive clinical experience expanding upon the required didactic and the practicum experiences.
12.5 credits (each quarter)
Prerequisite: Approval of Program Director
PSYC 810 Practitioner Scholar Project
Completion of the Practitioner Scholar Project is required for the doctoral degree.
8 credits in summer quarter of year 3 and 1 credit in summer quarter of year 4
Prerequisites: PSYC 781 Practitioner Scholar Project Seminar and Approval of Program Director

PSYC 820 Practitioner Scholar Project Continuation
This course is reserved for students needing additional quarters beyond the fourth year in the program for completion of the required Practitioner Scholar Project. A fee is assessed with enrollment in this course. The university fee increases in the third quarter and beyond for enrollment in the course.
0 credits per quarter
Prerequisites: PSYC 800 Internship and Approval of Program Director

PSYC 821 Internships Continuation
This course is reserved for students requiring additional time for completing internship requirements beyond the fourth year in the program. A continuation fee is assessed for enrollment in this course. The fee increases in the third continuation quarter.
0 credits per quarter
Prerequisites: PSYC 800 Internship and Approval from Program Director

Electives

PSYC 678 Directed Readings in Clinical Psychology
This course permits extensive exploration of an approved topic in clinical psychology. With the consultation of a program faculty member, a reading list is developed around a relevant issue. The readings focus on the interchange between theory, research, diversity issues, and clinical practice.
1-3 credits (repeatable)
Prerequisite: Approval of Program Director

PSYC 709 Forensic Psychology
Building on basic information of the legal system and mental health law, students will gain a broad understanding of the ways in which psychologists interact with the legal system. This may include assessment, evaluation, treatment, testimony, and consultation.
3 credits
Prerequisite: PSYC 708 Mental Health Law

PSYC 735 Practice Management Issues
This course will introduce students to business principles as they apply to professional psychology. Students will be exposed to various business-practice issues and decisions, such as starting, managing, marketing, and diversifying a psychology practice, and will consider the related ethical, legal, and financial issues involved.
3 credits

PSYC 775 Advanced Independent Study
This course permits the student to pursue individualized study in a relevant area of clinical psychology under the direct supervision of program faculty. A study plan is developed in consultation with program faculty and with the approval of the Program Director.
1-3 credits (repeatable)
Prerequisite: Approval of Program Director

ACADEMIC AND ADMINISTRATIVE POLICIES

Satisfactory Progress
Once students have matriculated, they must be in continuous enrollment in the program until graduation. Credit hours can be earned during any academic quarter: fall, winter, spring, or summer. Student progress in the Psy.D. Program is evaluated at the conclusion of each quarter. The Program Student Academic Review Committee conducts the evaluation of student progress and students are provided feedback about their progress.

The academic standing of a student is determined by the student’s cumulative grade point average. A student enrolled in the Clinical Psychology Program must pass all courses with a minimum grade of B- or P and maintain a cumulative grade point average of 3.00 or higher to have achieved satisfactory academic progress. If a student fails to make satisfactory progress in completing his/her prescribed course of study, he/she is placed on academic warning, academic probation, administrative probation, academic leave of absence, an extended course of study, or academic dismissal, as described in the MWU Catalog, Glendale AZ, 2009-2010.

FACULTY

Kiran Amin, Ph.D.
McGill University
Professor

Ruchi Bhargava, Ph.D.
Gallaudet University
College of Liberal Arts, Sciences, and Technologies
Academic Clinic Coordinator and Assistant Professor

Philinda Smith Hutchings, Ph.D., ABPP
University of Kansas
College of Liberal Arts and Sciences
Program Director and Professor

Deborah J. Lewis, Ph.D.
California School of Professional Psychology
Director of Clinical Training and Professor

Thomas B. Virden III, Ph.D.
Western Michigan University
Associate Professor
MISSION
The mission of the Midwestern University College of Dental Medicine is to educate competent clinical dentists of strong character and high ethical standards who serve the needs of the public and improve the health and well-being of society. The College supports and promotes research/scholarly activity and service for students and faculty.

VISION
By 2015, it is the vision of Midwestern University College of Dental Medicine to be recognized as national and international leaders in:

Providing dental education for the 21st Century student through curriculum innovation and advanced technology.

Seamless, integrated, clinically-based, patient-centered education, founded in preventive health and evidence-based science.

CORE VALUES
The College of Dental Medicine’s core values are to:

• foster a humanistic and character-developing environment for students;
• foster a holistic (emphasizing the importance of the whole and the interdependence of its parts) and compassionate approach to patient care;
• provide interdisciplinary education to allow other health science students to learn about dental education and health, and dental students to learn how to use, and interact with, the other health science professionals;
• graduate competent dentists who possess the levels of clinical judgment, understanding, empathy, technical skills, and independence to begin professional practice;
• instill a sense of community in graduating dentists;
• instill a lifelong learning philosophy of oral health care among students of dental education;
• promote and expand research and scholarly activity among faculty, staff, and students; to integrate research with teaching and clinical care activities within the College and the University;
• be a leader in development and application of new technologies for education, research, and oral health care;
• develop and maintain a high quality, innovative, evidence-based, patient-centered, faculty led, “seamless” oral health education and delivery system;
• contribute to the overall growth and academic excellence of Midwestern University by supporting the mission and goals of the University.

ACCREDITATION
The Midwestern University College of Dental Medicine is accredited by the Commission on Dental Accreditation (CODA) and has been granted the accreditation status of “initial accreditation.” CODA, which operates under the auspices of the American Dental Association (ADA), is recognized by the U.S. Department of Education as the national accrediting body for dental education programs at the post-secondary level in the United States.

For further information, please contact the American Dental Association, 211 E. Chicago Avenue, Chicago, IL 60611; 800/621-8099.

DEGREE DESCRIPTION
Upon graduation from the College of Dental Medicine, the Doctor of Dental Medicine (DMD) degree is granted. The usual length of the course of study is 4 academic years. The curriculum consists of 2 years of primarily didactic and preclinical instruction with clinical introductory experiences followed by 2 years of primarily clinical experiences and rotations including the applicable didactic material. Upon graduation with the DMD degree, the graduate is eligible for postdoctoral residency training in all fields of dentistry.

ADMISSIONS
The Midwestern University College of Dental Medicine considers for admission those students who possess the academic, professional, and personal qualities necessary for development as exemplary dental professionals. To select
these students, the College uses a rolling admissions process within a competitive admissions framework.

**Competitive Admissions**
Within the competitive admissions framework, the College uses multiple criteria to select the most qualified, diverse group of candidates from an applicant pool that greatly exceeds the number of seats available. Applicants are evaluated on academic coursework, performance on the Dental Aptitude Test (DAT), their application (AADSAS) essays, letters of evaluation, and interviews. Demonstrated community service through volunteerism or service-oriented employment is preferred.

**Rolling Admissions**
Midwestern University College of Dental Medicine uses a rolling admissions process. Applications are reviewed and decisions to interview individual candidates are made at regular intervals during the admissions cycle. Interviews are conducted and the selection process of each candidate for College admission is made until the class is filled. Applicants are notified of their selection status as soon as possible after their interview date, but not prior to December 1 of the year preceding matriculation which is the earliest date the U.S. and Canadian dental schools have agreed to extend a position in the class.

**Admission Requirements**
To be competitive, an applicant should have earned a bachelor’s degree from an accredited college or university and must possess both a science and total GPA over 2.75 (although 3.20 will be generally competitively necessary) on a 4.00 scale. A minimum science and overall GPA of 2.75 on a 4.00 scale is required to receive a supplemental application from the College.

**PREREQUISITE COURSES:**

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<thead>
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</thead>
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<tr>
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<tr>
<td>General Chemistry with lab</td>
<td>8</td>
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<tr>
<td>Organic Chemistry with lab</td>
<td>4</td>
</tr>
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<td>Anatomy with lab</td>
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<td>Microbiology with lab</td>
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<tr>
<td>Biochemistry</td>
<td>3</td>
</tr>
<tr>
<td>English Composition/Technical Writing</td>
<td>6</td>
</tr>
</tbody>
</table>

No grade lower than a C will be accepted for any prerequisite courses (A grade of C- will not be acceptable).

1. Complete above prerequisite courses;
2. Submit competitive scores on the Dental Aptitude Test (DAT)
3. Scores in the area of 18 or higher will be expected for the Academic Average, Reading Comprehension and Perceptual Ability sections
4. The DAT test must have been taken no more than 3 years prior to application
5. Submit three letters of recommendation
6. One must be from either a predental advisory committee or a science professor
7. The others preferentially should be from either someone with a D.O./M.D. or D.D.S./D.M.D. degree and/or someone who can testify to the integrity and ethical standards of the applicant
8. Letters written by immediate family members will not be accepted
9. All letters of evaluation must be submitted directly from the evaluators. The Office of Admissions will not accept letters submitted by students.
10. Demonstrate a sincere understanding of, and interest in, the humanitarian ethos of health care and particularly dental medicine
11. Reflect a people or service orientation through community service or extracurricular activities
12. Reflect proper motivation for and commitment to health care as demonstrated by previous salaried work, volunteer work, or other life experiences
13. Possess the oral and written communication skills necessary to interact with patients and colleagues
14. Agree to abide by Midwestern University Drug-Free Workplace and Substance Abuse Policy
15. Applicants will be subject to a criminal background check. In most cases, a misdemeanor conviction will not affect admission, a felony conviction could affect admission, as could failure to disclose misdemeanor or felony

**International Applicants**
An international student must satisfy all of the requirements for admission to the College or Program that apply to a student who has completed all of his/her prerequisite coursework in the U.S. at a regionally accredited college or university. In addition, an international student must demonstrate proficiency in the English language. This may be accomplished by satisfying both of the following requirements:

1. The international student has completed a minimum of two full time semesters or three full time quarters of instruction at a postsecondary institution in the United States. Completed coursework must include a minimum of 50% of the prerequisite science coursework for the college or program of interest, 6 semester hours of non-remedial English composition, and 3 semester hours of public speaking/speech.
2. The international student must submit official TOEFL scores. A minimum passing score is 550 (paper version, maximum score 677) or 100 (internet version, maximum score 120). The TOEFL scores must be from an exam taken within two years of the anticipated date of matriculation into the college or program.

If the international student wishes to receive credit for prerequisite coursework completed at a college or university outside of the United States, he/she must submit an official, detailed, course-by-course evaluation of this coursework. The student must obtain this evaluation from one of the following services:

1. Educational Credential Evaluators (ECE): 414/289-3400 or Fax 414/289-3411 (www.ece.org, e-mail: info@ece.org)
3. World Education Service (WES): 212/739-6100 or Fax 212/739-6100 (www.wes.org, e-mail: info@wes.org)

Based on the official foreign transcript evaluation and the grade earned in the course(s), the college or program will decide if it will apply any of these credits toward fulfillment of its prerequisites.

Note: The Canadian DAT cannot be substituted for the US DAT.

Competitive Admissions
Within their competitive admissions framework, the College uses multiple criteria to select the most qualified candidates from an applicant pool that exceeds the number of seats available. For the class that will matriculate in the fall of 2009, CDM received over 2800 applications for its 110 seats.

Application Process
To initiate the application process, prospective students must apply directly to AADSAS at 1400 K Street NW Suite 100 Washington, DC 20005; Phone: 202-289-7201; Fax: 202-289-7204 www.adea.org

Students may apply online at http://aadsas.adea.org/aadsas2008/application.html. Students may access an AADSAS application in mid-May of the academic year preceding the year in which they plan to matriculate.

After receiving an applicant’s processed information from AADSAS, the Office of Admissions creates the applicant file. Concurrently, the office sends a supplemental application to applicants meeting the minimum science and total GPA requirement of 2.75 on a 4.00 scale. The Applicant must complete and return the supplemental application as soon as possible; additionally, he/she must request three letters of evaluation. All letters of evaluation must be submitted by the evaluators directly to AADSAS or to MWU - the Office of Admissions will not accept evaluations submitted by students.

Please Note: Status of the application can be tracked on the MWU web site. Instructions for accessing accounts are available from the Office of Admissions. Please send notification of any changes in your mailing address and e-mail address. All requests for withdrawal an application must be done in writing: contact the Office of Admissions via e-mail at admissaz@midwestern.edu.

Application Deadline
The official Associated American Dental Schools Application Service (AADSAS) application deadline is January 1st; however, to be competitive within the rolling admissions process, prospective students should submit their AADSAS applications as early as possible after June 1 of the year prior to their desired matriculation. Even though the AADSAS deadline is January 1 of the matriculation year, typically 75 percent of all admissions offers will be made by the end of December of the year prior to matriculation. The Midwestern University College of Dental Medicine completion deadline (meaning all necessary parts of the application including DAT test scores and MWU-CDM supplemental application form are received by the Office of Admissions prior to this date) is March 1 of the expected matriculation year.

Interview and Selection Process
To be considered for interviews, applicants must meet the admissions requirements listed previously. They must also submit all of the materials necessary to complete their files, e.g., AADSAS applications, supplemental MWU applications, DAT scores, and three letters of recommendation written by a predental advisory committee, a faculty member, a dentist or physician, and by someone who knows the applicant very well.

After the Office of Admissions receives these materials, applicant files are reviewed to determine whether applicants merit interviews based on established criteria of the Admissions Committee. The Chair of the Admissions Committee, with the approval of the Dean, may also place a large number of students on an interview “wait list” pending possible interview openings toward the end of the interview cycle.

When applicants accept interviews, they join several other interviewees to meet with members of a two- or three-person interview panel, which is selected from a volunteer group of basic scientists, administrators, and dental clinicians. Team members question applicants about their academic, personal, and health care preparedness for dental school, and they rate the applicants on a standardized evaluation form relative
to each of these variables. At the conclusion of the interviews, team members forward their evaluations for each applicant to the Admissions Committee. The Committee may recommend to accept, to deny, or to place applicants on either the hold or alternate list. Recommendations are then forwarded to the Dean for final approval. The Dean, via the Office of Admissions, notifies applicants of their status as soon as possible after the interviews, but not before December 1 of the year preceding matriculation, which is the date that all dental schools have agreed would be the first notification date.

The interview process typically begins in the summer prior to matriculation and ends in April or May of the matriculation year.

Technical Standards for Admission
A candidate must have abilities and skills in five areas: I) observation; II) communication; III) motor; IV) conceptual, integrative, and quantitative; and V) behavioral and social. Technological compensation can be made for some limitation in certain of these areas, but a candidate should be able to perform in a reasonably independent manner.

I. Observation: The candidate must be able to accurately make observations at a distance and close at hand. Observation necessitates the functional use of the sense of vision and somatic sensation and is enhanced by the functional use of all of the other senses.

II. Communication: The candidate must be able to communicate effectively, efficiently and sensitively in both oral and written form and be able to perceive nonverbal communication.

III. Motor: The candidate must be able to coordinate both gross and fine muscular movements, maintain equilibrium and have functional use of the senses of touch and vision. The candidate must possess sufficient postural control, neuromuscular control and eye-to-hand coordination to perform profession-specific skills and tasks.

IV. Conceptual, Integrative and Quantitative Abilities: The candidate must be able to problem solve, measure, calculate, reason, analyze, record and synthesize large amounts of information in a timely manner. The candidate must be able to comprehend three-dimensional relationships and understand spatial relationships.

V. Behavioral and Social Attributes: The candidate must possess the emotional health required for full utilization of his/her intellectual abilities, the exercise of good judgment and the consistent, prompt completion of all responsibilities and the development of mature, sensitive and effective relationships. The candidate must be able to tolerate physically, mentally and emotionally taxing workloads and to function effectively under stress. The candidate must be able to adapt to changing environments, to display flexibility, and to learn to function in the face of uncertainties. Compassion, integrity, concern for others, effective interpersonal skills, willingness and ability to function as an effective team player, interest and motivation to learn, are all personal qualities required during the educational process.

Candidates are required to certify that they understand and meet these Technical Standards. Candidates must provide such certification prior to matriculation. Candidates who may not meet the Technical Standards must inform the Director of Admissions, who will then contact the Dean of Students. The Dean of Students, in consultation with the academic dean (and program director), will identify and discuss what accommodations, if any, the College (Program) would need to make that would allow the candidate to complete the curriculum. The College (Program) is not able to grant accommodations that alter the educational standards of the curriculum. Students must meet the Technical Standards for the duration of enrollment in their professional program.

Matriculation Process
To initiate the matriculation process, newly-accepted students must return both their signed matriculation agreement and their initial deposit by the date designated in their matriculation documents. To conclude the matriculation process, students must:

1. Submit deposit monies and administrative fees by the dates designated in their matriculation documents. Deposits are applied toward the first quarter’s tuition.

2. Submit official transcript(s) from all colleges attended post-high school by the date designated in the matriculation documents. (Note: The information provided on AADSAS applications is verified against the information provided on student’s transcripts. If the course and degree information on applications cannot be verified, offers of admission may be revoked.)

3. Submit a completed medical file as instructed in the packet sent by the Office of Student Services.

4. Submit proof of medical and disability insurance coverage. Students may select either a plan offered by Midwestern University College of Dental Medicine or an approved outside carrier of their choice.

5. Non-U.S. citizens/non-permanent residents must provide documentation verifying that sufficient funds have been deposited in a U.S. bank to cover all expenses while attending Midwestern University College of Dental Medicine.

6. Submit additional documents as required by the Office of Admissions.

7. Authorize and pass the Midwestern University criminal background check.
8. Sign and submit Midwestern University’s Drug-Free Workplace and Substance Abuse Policy Statement.
9. Complete a physical exam and submit form.
10. Sign and submit a Credit Policy Statement.

Students who either fail to satisfy these matriculation requirements or omit or falsify information required on official admissions documents automatically forfeit their seat at the College. Students will not receive further notification regarding this forfeiture.

**Articulation Agreement Between Midwestern University Programs**
Students enrolled in a Midwestern University program are guaranteed an admission interview with another Midwestern University program if the student:
1. is currently in good standing in the academic program in which the student is enrolled and does not have any pending misconduct charges against him/her;
2. meets all admission requirements for the professional program of interest;
3. after a minimum of two full time quarters of study, achieves a minimum Midwestern University grade point average, derived from all courses completed at Midwestern, that is equal to or greater than 3.0; AND
4. achieves a score on the professional entrance exam (if required) that is not less than one standard deviation below the mean score for students that matriculated into the professional degree program in the previous year.

A guaranteed interview does not guarantee admission into the professional program.

**Deferred Admission**
Deferments are only considered under extreme circumstances, generally when students are physically unable to begin classes. If granted, students may defer their admission for one year only.

To initiate the deferred admission process, students must send their requests in writing to the Director of Admissions by the date designated in their matriculation agreement. When deferment is appropriate and is the result of a physical condition, requests should be accompanied by letters from physicians that document the conditions that prevent students from beginning their dental education. After consultation with the Dean, the Director of Admissions responds to these requests with a letter detailing the specific conditions associated with deferral. Typically, the conditions include the following:
1. Students must submit their remaining deposit monies by the times specified during the year of their matriculation at the time of their request for deferral.
2. Before matriculation, these students must provide a letter from a physician stating that they can begin their dental education.

Students with approved deferrals are not required to interview again or to resubmit their supplemental application or letters of recommendation.

**Reapplication Process**
After receiving either denial or end-of-cycle letters, applicants may reapply for the next enrollment cycle. Before reapplying, however, applicants should seek the advice of an admissions counselor.

To initiate the reapplication process, applicants must submit their applications to AADSAS. Applications are then processed according to standard application procedures.

**Transfer Admission**
Midwestern University College of Dental Medicine may elect to accept transfer students from other dental schools as long as these students remain in good academic standing and have an acceptable reason(s) for seeking transfer. Typically, transfers are only granted to students desiring to transfer between the second and third years of the dental program.

To be considered for transfer, students must meet the College’s general requirements for admission. Students must also observe the following procedures:
1. All inquiries for transfer to Midwestern University College of Dental Medicine must be submitted to the Office of Admissions.
2. Completed applications are returned to the Office of Admissions and must include transcripts from the previous dental school, class rank (must be in top 50%), a statement of the reason for transfer, a Dean’s letter of “Good Academic Standing,” and a letter of reference from the Dean of Student Affairs.
3. Completed applications are forwarded to the Dean.
4. Applications are reviewed by the Dean, who will conduct interviews with transfer applicants.
5. Applicants are notified by the Dean of final transfer admission decisions.
6. Students applying for transfer must not have been previously rejected for admission to MWU-CDM through the standard admissions process.

**Graduation Requirements**
The degree Doctor of Dental Medicine (DMD) is granted to, and conferred upon candidates who have satisfied all academic requirements including those related to ethical and professional standards; who have passed NBDE Part I; and who have satisfied all financial obligations to Midwestern University, after recommendation of the Dean and approval of the President. A minimum of 44 months must elapse between the date of matriculation and graduation. All graduating students are expected to attend the ceremony at which the degree is conferred, unless excused by the Dean and the President. Students must complete all graduation clearance requirements as instructed by the Office of the Registrar.
**Licensure Requirements**
Dental graduates of U.S. Dental Schools can obtain full practice rights in all 50 states as well as many foreign countries. To obtain licensure, dental clinicians must meet the requirements established by individual states. Typically, states grant licensure in one of two ways:

a. the state accepts a certificate issued by the National Board of Dental Examiners and the state accepts a certificate issued by the Regional Board of Dental Examiners;

b. the state honors a formal, or informal, reciprocity agreement with another state(s) or issues a license by credentialing the certificate from another state.

Postdoctoral requirements vary among states. For further information concerning licensure, please contact the American Dental Association or the individual state licensing board.

**Instructional Program**
The College of Dental Medicine’s goals are:
1. to contribute to the overall growth and academic excellence of Midwestern University by supporting the mission and goals of the University
2. to foster a humanistic and character-developing environment for students
3. to foster a holistic (emphasizing the importance of the whole and the interdependence of its parts) and compassionate approach to patient care
4. to provide interdisciplinary education to allow other health science students to learn about dental education and health, and dental students to learn how to use, and interact with, the other health science professionals
5. to graduate competent dentists who possess the levels of clinical judgment, understanding, empathy, technical skills, and independence to begin professional practice
6. to instill a sense of community in graduating dentists
7. to instill a life-long learning philosophy of dental education in oral health care among students
8. to promote and expand research and scholarly activity among faculty, staff, and students; to integrate research with teaching and clinical care activities within the College and the University
9. to be a leader in development and application of new technologies for education, research, and oral health care
10. to develop and maintain a high quality, innovative, evidence-based, patient-centered, faculty-led, "seamless" oral health educational and delivery system.

**Curriculum**

**First Year/08-09**

**Fall Quarter**

<table>
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<th>Credit Hours</th>
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<td>Integrated Basic Sciences</td>
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<td>DENT 1510</td>
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**Spring Quarter**

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<td>Ethics &amp; Character Dev. II</td>
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**Second Year/09-10**

**Fall Quarter**

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<td>Restorative Dentistry IV Lab</td>
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**Winter Quarter**

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<td>DENT 1627</td>
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Spring Quarter
DENT 1637  Anesthesia I  1.0
DENT 1636  Restorative Dentistry VI  6.0
DENT 1636L Restorative Dentistry IV Lab  5.0
DENT 1635  Oral Pathology II  2.0
DENT 1634  Dental Community Service III  0.5
DENT 1638  Medical Emergencies  1.0
DENT 1633  Ethics & Character Dev. VI  1.0
DENT 1639  Grand Rounds III  1.5
Total  18.0

Third Year/10-11
Summer Quarter
DENT 1721  Removable Partial Dentures  2.0
DENT 1723  Pediatric Dentistry  1.0
DENT 1724  Oral & Maxillofacial Surgery  1.0
DENT 1725  Orthodontics  1.0
DENT 1726  Special Needs  1.0
DENT 1727  Endodontics I  2.0
DENT 1728  Oral Medicine  1.0
DENT 1729  Implantology  0.5
DENT 1730  TMD  0.5
DENT 2000  Intro to Dental Clinics  14.0
Total  24.0

Fall Quarter
DENT 1731  Anesthesia II  1.0
DENT 1732  Restorative Dentistry I  1.0
DENT 1734  Ethics & Character Dev VII  1.0
DENT 1738  Periodontology III  1.5
DENT 1735  Dental Community Services IV  0.5
DENT 2001  Dental Clinic I  19.5
Total  24.5

Winter Quarter
DENT 1741  Anesthesia III  2.0
DENT 1742  Restorative Dentistry II  2.0
DENT 1743  Ethics & Character Dev VIII  1.0
DENT 1744  Periodontology IV  2.0
DENT 1745  Practice Management I  2.0
DENT 1746  Dental Community Services V  0.5
DENT 2002  Dental Clinic II  16.0
Total  25.5

Spring Quarter
DENT 1751  Restorative Dentistry III  3.0
DENT 1752  Hospital Dentistry I  1.5
DENT 1753  Ethics & Character Dev IX  1.0
DENT 1754  Endodontics II  2.0
DENT 1755  Dental Community Services VI  0.5
DENT 2003  Dental Clinic III  18.0
Total  26.0

Fourth Year/11-12
Summer Quarter
DENT 1821  Restorative Dentistry IV  1.0
DENT 1822  Hospital Dentistry II  1.0
DENT 1823  Practice Management II  1.0
DENT 1824  Dental Community Services VII  0.5
DENT 2004  Dental Clinic IV  19.5
Total  23.0

Fall Quarter
DENT 1831  Restorative Dentistry V  1.0
DENT 1832  Ethics & Character Dev. X  1.0
DENT 1833  Hospital Dentistry III  1.5
DENT 1834  Dental Community Service VIII  0.5
DENT 2005  Dental Clinic V  19.5
Total  22.5

Winter Quarter
DENT 1841  Restorative Dentistry VI  1.0
DENT 1842  Ethics & Character Dev. XI  1.0
DENT 1843  Dental Community Service IX  0.5
DENT 2006  Dental Clinic VI  20.0
Total  22.5

Spring Quarter
DENT 1851  Restorative Dentistry VII  1.0
DENT 1852  Dental Community Service X  0.5
DENT 2007  Dental Clinic VII  21.5
Total  23.0

Total credits first year – 68.4
Total credits second year – 56.5
Total credits third year – 106.5
Total credits fourth year – 91.0
TOTAL FOR PROGRAM COMPLETION: 322.4

The Midwestern University College of Dental Medicine reserves the right to alter its curriculum whenever it deems appropriate.

DEPARTMENTS

Organizationally, the College of Dental Medicine is divided into two departments, Preclinical Dentistry and Clinical Dentistry.

COURSE DESCRIPTIONS

These descriptions are for new classes, some of which will be taught with new faculty as yet not hired. Thus, one may assume that there will be changes in content and course descriptions prior to the courses being given.

INTERDISCIPLINARY EDUCATION

CORE 1460, 1470, 1480 Interdisciplinary Education
The Interdisciplinary Health Care course involves the Colleges of Health Sciences, Osteopathic Medicine, Dentistry, and Pharmacy, to teach all clinically-based
BASIC SCIENCES

BASI 1501 Module # 1: Cell Structure and Function
Through a systems approach to the basic sciences the student will be introduced to the fundamentals of cell structure and function. The disciplines of anatomy, histology, embryology, biochemistry and physiology will cover membrane structure, protein chemistry and metabolism. Physiology will cover osmosis, transport and diffusion which will lead to Pharmacology which will cover the general principals of synaptic transmission and receptor pharmacology. Pathology will cover cellular injury and death, apoptosis, inflammation, tissue repair and wound healing.

BASI 1502 Module # 2: Infectious Disease
Microbiology will cover the basics of infectious disease and pharmacology will present chemotherapeutic agents. Pathology will present infective endocarditis, HIV and infections of the CNS. Module #3: Medical Genetics/Embryology There will be an overview of basic embryology and medical genetics. Pathology will look at genetic disorders.

BASI 1503 Module # 4: Nervous System
The embryology and anatomy of the nervous system will be studied including basic histology of this system. Physiology will cover action potentials, ion channels, membrane potential, neurotransmission. Pharmacology will cover the autonomic nervous system and the associated medications. Module #5 Musculoskeletal Histology of muscle, bone, cartilage and osteogenesis. The gross anatomy of the upper extremity will be studied including 3 labs looking at dissections. Physiology will cover the neuron muscular junction of skeletal muscle, E-C coupling, smooth muscle and cardiac muscle. Biochemistry of muscle will be presented as well as the pharmacology of the neuromuscular junction. Pathology will look at diseases of muscle and joints and non-neoplastic bone diseases.

BASI 1504 Module # 6: Epithelium/Connective Tissue/Blood/Integument
There will be an overview of the histology of epithelium, general connective tissue, blood and hematopoiesis and integument. The biochemistry of blood and skin will be covered. Pharmacology will cover anticoagulants and antifungals. Microbiology will cover infections of the skin. Pathology will look at bleeding disorders and diseases of the WBC then skin disorders and diseases. Module # 7: Lymphatics/ Immune System Anatomy will cover the general pattern of lymphatics then present an overview of the histology of the lymphatic system. Microbiology will present an in depth overview of immunology. Pharmacology will cover immunoharmaceuticals and Pathology will look at diseases of immunity including autoimmune diseases and hypersensitivity.

BASI 1505 Module # 8: Cardiovascular
The gross anatomy of the heart and blood vessels will be studied including the general circulation pattern. The histology of blood vessels will be studied and Physiology will cover hemodynamics. Pharmacology will cover cardiac medications and Microbiology will review endocarditis especially as it relates to dentistry. Pathology will look at hemodynamic diseases, thromboembolic disease, diseases of the blood vessels including atherosclerosis and ischemic heart disease.

BASI 1506 Module # 9: Respiratory
Anatomy of the lungs and pleura will be presented and the histology of the respiratory tissues. Biochemistry will talk about surfactants. Physiology will cover aspects of respiration related to acid base balance and heart function. Pharmacology will cover asthma, antihistamines, antibiotics and antivirals for upper respiratory tract infections. Microbiology will look at respiratory infections. Pathology will look at lung abnormalities and obstructive disease, then tumors. Module #10: Urinary Gross anatomy and histology of the urinary system. Physiology will cover acid base and renal function. Pharmacology will cover diuretics, antibiotics for urinary tract infections. Microbiology will look at urinary tract infections. Pathology will cover kidney malformation, glomerular disease and renal tumors.

BASI 1507 Module # 11: Head and Neck
There will be an in-depth gross anatomy course which will cover the head and neck including 28 hours of lab dissection. The primary focus of this module is to provide the fundamental head and neck gross anatomy information required for use in clinical training. Three-dimensional relationships among anatomical structures are reinforced by in-depth dissections of the head and neck. Students are expected to use this anatomical information to elucidate and solve case-based problems commonly seen in dental practice.
This module instructs first year dental students about the detailed structure and function of the head and neck fascia, musculoskeletal, nervous and organ systems. Emphasis is placed on application of that knowledge to case-based clinical problems. The instructional format includes both didactic lectures and in-depth dissection laboratories. Histology of the eye and ear will also be reviewed. Microbiology will present infections of the head and neck. Pathology will introduce the student to general pathology of the head and neck and will lead to oral pathology.

BASI 1508 Module # 12: Clinical Neuroscience
This module focuses on the structure and function of the nervous system. The first part of the module introduces the student to the basic internal anatomy of the central nervous system. The second part of the module provides a detailed look at the major sensory systems within the nervous system, and clinical concerns related to those systems. The third and final part of the module provides a detailed look at the major motor systems within the nervous system, and clinical concerns related to those systems. The module concludes by integrating all three portions in a discussion of cerebral vascular accidents and their possible motor, sensory and higher cognitive deficits.

BASI 1509 Module # 13: Endocrine
This module provides an overview of the structure and function of the Endocrine System. The disciplines of histology and physiology provide an overview of the basic structure and normal function of the endocrine system. Common disorders of the endocrine system are discussed by the pathology faculty. Module #14: GI
This module will provide an introduction to the structure and function of the gastrointestinal system. Topics to be covered include gross anatomy and histology as well as the physiological mechanisms regulating motility, secretion, digestion and absorption. This section will also discuss the pathophysiology, microbiology, and pathology of the gastrointestinal system. Microbiology will look at infections of the GI tract overall. Pathology will examine the esophagus and gastritis, peptic ulcer and tumors of the stomach and move on to infections of the GI tract and finally GI tract tumors.

DENT 1550 Basic Science Board Review
This course will review the information gleaned in Integrated Basic Sciences DENT 1501, 1502, 1503, 1504, 1505, 1506, 1507, 1508 to prepare the dental student for Part I of the National Board Examination that will be taken during the summer between year one and year two.

Clinical Education

DENT 1601, 1621 Dental Pharmacology I, II
This course provides a study of drugs used in dentistry. Emphasis is placed on the physical and chemical properties of the drugs, dosages, and therapeutic effects, methods of administration and indications/contraindications for the use of the drug. A study of dental anesthetics is included.

DENT 1511, 1524, 1535 Introduction to Human Behavior I, II and III
This course begins with an introduction of the dentist-patient relationship. The student will be exposed to patient interviewing techniques. The biopsychosocial model is also covered. The human life cycle will be described, including pregnancy, birth, early infancy, latency period, the adolescent period, the family, early adulthood, and trail of courtship and marriage. Special topics include childhood violence and abuse and domestic violence.

DENT 1510, 1520 Human Health and Prevention I and II
This course is designed to provide the student with a basic understanding of theories and principles in preventive dentistry. Lectures will be supplemented with case studies to prepare the student to develop preventive strategies for both preventive and restorative treatments.

DENT 1638 Medical Emergencies
This course will cover the emergencies likely to be seen in a dental office. Trauma to the oral structures and the subsequent treatment options will be covered in detail.

DENT 1624 Oral Pathology I
Designed to introduce the dental students to the basic concepts of oral pathology, this course stresses altered cellular, genetic, and molecular mechanisms. It is expected that the student will come to understand how the clinical appearance of disease depends on biologic and microscopic features.

DENT 1635 Oral Pathology II
Designed to introduce the dental students to the basic biologic features, microscopic features and clinical features of diseases will be presented as readings and photographs of case examples and tissues. It is expected that this understanding will include how recognition, categorization, and treatment of disease depends upon understanding of principles of biology gained by study at the gross and microscopic levels.

DENT 1512, 1522, 1533, 1614, 1625, 1636 Oral Health Sciences
These continuously running didactic courses will take the student from dental anatomy and occlusion, through basic to advanced clinical dentistry in operative and prosthodontic
restorative procedures, while continuously being oriented from a patient perspective. The courses are organized in a systems approach integrating such topics as growth and development, cariology, radiology, and dental material science into the core of restorative procedures from pediatric to geriatric patients.

DENT 1512L, 1522L, 1533L, 1614L, 1625L, 1636L Oral Health Sciences I, II, III, IV, V, VI Lab
These continuously running laboratory courses, which are simulation clinic modules, will take the student from dental anatomy and occlusion, through basic to advanced clinical dentistry in operative and prosthodontic restorative procedures. The courses are organized in a systems approach integrating such topics as growth and development, cariology, radiology, and dental material science into the core of restorative procedures from pediatric to geriatric patients.

DENT 1732, 1742, 1751, 1821, 1831, 1841, 1851, Restorative Dentistry I, III, IV, V, VI, VII
These courses, which are, will advance the restorative knowledge of clinical dentistry in operative and prosthodontic restorative procedures. Current concepts of restorative dentistry will be introduced and examined. Treatment planning of advanced restorative cases will be included in these courses.

DENT 1637, 1731, 1741, Anesthesia I, II, III
Dental anesthesia and intravenous sedation will be covered in these courses. Didactic and clinical demonstrations and experiences will be included.

DENT 1616, 1626, 1738, 1744 Periodontology I, II, III, IV
Periodontology is the study of the supporting structures of the teeth and these courses will cover the present-day research and clinical techniques for preventing, controlling and treating the disease.

DENT 1723 Pediatric Dentistry
This course will focus on the growth and development of the oral cavity and its structures, as well as the difference in the primary and the permanent dentitions. Prevention of dental caries and restoration with specific materials better suited for young patients will be covered. Children require special attention in terms of behavioral management and special techniques for appropriate treatment of children will be covered.

DENT 1724 Oral and Maxillofacial Surgery
Oral and maxillofacial surgery is that specialty which combines surgical training with dental expertise for the treatment of diseases, injuries, tumors and deformities of the face and jaws. This course covers the basics of primary and permanent tooth extraction, of dental implant placement, and, by observation, the management of facial disfigurements such as cleft lip and palate, and the management of tumors.

DENT 1725 Orthodontics
This course will demonstrate by a close study of growth and development the diagnosis of correct occlusion, and malocclusion. Students will learn the basic techniques that a general practitioner of dentistry should be able to carry out in tooth movement and in interceptive orthodontics.

DENT 1721 Removable Partial Dentures
This course provides the student with the basic knowledge of the anatomy, dental materials, physiology, and techniques specific to the edentulous patient. Lectures, audiovisuals, and laboratory exercises are utilized to develop and demonstrate the necessary skill. This course provides the students with the skill and the understanding of laboratory procedures required for construction of the complete denture prosthesis. A series of simulated exercises are conducted to prepare the student for the clinical phase of managing edentulous patients.

DENT 1726 Special Needs
Recognizing the unique dental and medical needs of senior citizens, this course helps students develop the knowledge and skills needed to render comprehensive oral health care to this population. Students gain an understanding of the complexities of aging, learn about adaptive devices, and study the role of dentistry in total patient care while learning to manage patients with medical and physical disabilities.

DENT 1728 Oral Medicine
The lectures will be directed toward the presentation and discussion of oral diseases and oral manifestations of systemic disease. Information will be presented concerning the clinical manifestations’ relationship to generalized disease processes and patient management including discussions concerning therapy.

DENT 1729 Implantology
This course is aimed at providing a sound scientific grounding and clinical training in implant dentistry. This is an overview of the clinical science of implant dentistry including etiology, therapy, clinical methods, and record keeping.

DENT 1730 Temporomandibular Dysfunction
This course will provide a systematic process for each patient to determine which patients may be at risk because of the condition of the TM joint. In addition to recognizing and diagnosing TM joint problems, case studies will allow for discussion of different topics of interest in restorative dentistry. Topics may include using orthodontic implants to
facilitate pre-restorative changes to tooth position, using computer generated surgical guides for implant placement, and the use of direct resin to rebuild worn incisal edges.

DENT 1745, 1823 Practice Management I, II
The basics of setting up a private practice along with management skills in hiring and firing staff will be covered.

DENT 1727, 1754 Endodontics I, II
The art and science of pulp therapy and root canal treatment will be covered. The initial course (DENT 1727) will cover the single-rooted teeth, with progression to multi-rooted teeth in both a didactic and laboratory setting.

DENT 1752, 1822, 1833 Hospital Dentistry I, II, III
The diagnosis and treatment of specific patients in the operating room under intravenous sedation and general anesthesia will be covered. Interested students will gain practical experience in patient treatment (including children) in a hospital setting.

DENT 2000 Introduction to Dental Clinic
This course will introduce the student to clinical procedures, the clinic software system, the clinical organization into clinical care units, and to all the sterilization and other facilities that are a part of a large clinical operation.

Each student will experience clinical treatment of patients in seven consecutive quarters. Students will have a broad experience of most age groups and with patients of different treatment difficulty under the supervision of clinical faculty. Rotations through extramural treatment experiences will be a part of the final four quarters of clinical experience.

DENT 1514, 1523, 1534, 1615, 1622, 1633, 1734, 1743, 1753, 1832, 1842 Ethics and Character Development I, II, III, IV, V, VI, VII, VIII, IX, X, XI
The driving theme of this curriculum is based around an ethical framework and character development, to some degree similar to the aura of honor, duty and commitment of the military academies. Dentists in practice must exhibit the highest ideals of integrity and ethics as they are entrusted with making decisions concerning invasive treatment on the general public with no one looking over their shoulders. This course will follow on from an introductory orientation describing the ethical expectations of this school that will be given at the time of matriculation, and will be reinforced with classes every quarter (except perhaps summer quarters) of the curriculum.

DENT 1612, 1623, 1634, 1735, 1746, 1755 Dental Community Service I, II, III, IV, V, VI
Every student is expected to be involved regularly throughout their education with a community service activity.

DENT 1617, 1627, 1639 Grand Rounds I, II, III
This biweekly seminar series allows the dental students to participate in treatment planning options for complex dental cases and requires them to work up treatment plans and alternate treatment plans for complex patients likely to be seen in a general practice. This course runs for three quarters during the second-year curriculum where cases will become more and more challenging.

DENT 1824, 1834, 1843, 1852 Dental Community Service VII, VIII, IX, X
Students will have a broad experience of most age groups and with patients of different treatment difficulty under the supervision of clinical faculty in rotations through extramural treatment experiences as part of the final four quarters of clinical experience.

STUDENT ACADEMIC POLICIES

Academic Policies
The following academic policies apply to all CDM students who matriculate during the academic year of this catalog publication. These policies will apply throughout the entire time a student is enrolled in the College. In the event that these policies need to be revised as the result of new accreditation requirements, mandates by the Department of Education, or other unforeseen circumstances, students will be notified in writing prior to the effective date of the new policy.

Academic Leave of Absence
An academic leave of absence is intended to cover the temporary interruption of the student’s academic program due to failure of two courses in one semester or three failures in an academic year. The reason(s) for requesting a Leave of Absence must be consistent with University policy and guidelines, and with the guidelines of the student’s academic program.

An Academic Leave of Absence may be issued by the University based on a recommendation by the Student Promotion Committee and acceptance of the Dean of the College of Dental Medicine for individual students experiencing academic difficulties that have exhibited potential based on their previous academic performance. If granted, this Academic Leave of Absence is extended for no more than 3 quarters. Students on an Academic Leave of Absence will be required to re-enroll in any failed class during the following academic year. Students on Academic Leave of Absence must pass previously failed courses on their first attempt or they will be recommended for dismissal from the College of Dental Medicine.
Academic Review & Progression
Two faculty committees of CDM will review the academic performance of students: the Preclinical Student Promotions Committee for the first two years and the Clinical Student Promotions Committee for the third and fourth years.

Academic Warning and Probation
An academic warning is a formal notification of substandard, quarterly academic performance, which cautions the student that continued performance at this level may result in the student being placed on academic probation. To return to good academic standing, a student must correct deficiencies and incur no further failures. An academic warning is issued by the Preclinical Promotions Committee when a student has failed (grade of less than 70) one class in a quarter or upon the unsuccessful completion of a probationary quarter. When a student is placed on academic warning, it is noted in the student’s academic file. Subsequently, when a student is returned to good academic standing, this is also noted in the student’s file. Academic warning is not noted on transcripts. Students on academic warning are ineligible to hold student organizational offices unless appealed to, and approved by, the Dean. A student on warning is also formally assigned a faculty member to mentor them through the period of warning (to be arranged through the appropriate Associate Dean).

Academic Probation represents notice that continued inadequate academic performance might result in dismissal. If a student on academic probation successfully completes a probationary quarter, his/her academic status reverts to academic warning. To return to good academic standing, a student must correct deficiencies and incur no further failures. When a student is placed on academic probation, it is noted in the student’s academic file. Subsequently, when a student is returned to good academic standing, this is also noted in the student’s file. Academic warning is not noted on transcripts. Students on academic probation are ineligible to hold student organizational offices unless appealed to, and approved by, the Dean. A student on probation is also formally assigned a faculty member to mentor them through the period of probation (to be arranged through the appropriate Associate Dean).

Advanced Standing
All requests for advanced standing by admitted, transfer or enrolled students are processed on a course-by-course basis by the Office of the Dean. Courses must be at the graduate level to be considered for advanced standing. A student should submit a letter to the Office of the Dean in which the student lists the course(s). The student must provide an official course description(s), a transcript, and a syllabus(syllabi) of the course(s) previously taken. It is expected that a minimum grade equal to a “B” would have been achieved in the class being petitioned. The decision to grant or deny advanced standing will be made by the department in consultation with the CDM Dean’s Office.

Appeal Process
Following notification of a decision for dismissal for Academic Leave of Absence or dismissal, a student may appeal in writing the decision within three working days from notification of the decision to the Dean of the College of Dental Medicine. The Dean makes the final decision. The Dean may grant an appeal only if a student can demonstrate one of the following:
1. bias of one or more committee members
2. material information not available to the committee at the time of its initial decision
3. procedural error.

During the appeal process, the student must continue to attend classes.

Attendance Policy
Midwestern University College of Dental Medicine encourages students to attend all lectures, laboratory activities, and clinical assignments. First- and second-year students should attend all components (lecture or lab) for each course during each quarter. Third- and fourth-year students must attend all clinical sessions and rotations.

Course Credit
Course credits are generally determined according to the following formulation: one credit is assigned to a course for 3-4 laboratory contact hours per week; two contact hours per week involving interactive group problem-solving or discussion sessions; or one contact hour of formal lecture per week. Two credits are given for each week of clinical rotations.

Clinical Promotions Committee
This committee meets as needed to review academic and professional progress of students in the third and fourth years. Students with academic failures are required to meet with the committee. The Chair of this Committee will be a representative of the Dean’s Office and will be appointed by the Dean. Notification of the date, time, and place of the committee meeting is sent to the student at least 48 hours in advance by priority email and/or telephone. Students will be invited to the meeting to give a statement or asked to teleconference into the meeting by telephone or through e-mail or a writing to give a statement should they so desire. Decisions of the Committee forwarded to the Dean and e-mailed or mailed to the students. The right of appeal exists and is described elsewhere in this handbook. Appeals must be filed with the Dean within three working days following.
official notification of the committee decision. Students who have successfully completed their clinical training, passed the NBDE Part I, and paid all tuition and fees, will be recommended for graduation to the Faculty Senate.

Course Prerequisites
Prerequisites for courses may be established by the course director who administers the course. Prerequisites are recommended to the Curriculum Committee for approval and are listed with the course description in the University Catalog. On a case-by-case basis, prerequisites may be waived upon approval by the Associate Dean for Academic Affairs or the Dean.

Criminal Background Checks
Some facilities now require criminal background checks of students who are rotating through their system. The criminal background check is valid for one year only, so it must be performed within the year prior to starting the rotation. The Student Services Department of Midwestern University will perform the background check. The costs are included in the student activity fee.

Disciplinary Warning/Probation
Disciplinary warning/probation occurs for student acts of professional misconduct as defined in Appendices 2 and 4 of the Student Handbook. Disciplinary probation is not noted on transcript but is kept in the student’s disciplinary file. Disciplinary probation information will be shared with clinical sites that are affiliated with MWU educational programs.

Dismissal
Students who fail three or more courses in a single academic year during the DENT I and DENT II years or students who fail two or more courses in a single quarter usually receive a recommendation for an academic leave of absence or dismissal. Students who fail two or more clinical rotations or experiences during the DENT III and DENT IV years usually receive a recommendation for dismissal.

Matriculation and participation in dental school is a privilege, not a right. Therefore, a student can be dismissed for the following reasons:

1. failure to achieve minimum academic standards (preclinical or clinical promotions committees)
2. failure to exhibit the personal qualifications and ethical standards necessary to the practice of dentistry (student judicial process)
3. violation of Midwestern University College of Dental Medicine rules and regulations that are grounds for dismissal (student and administrative judicial process).

Students who accumulate three failures over more than a single academic year or two failures in a single quarter may be recommended for an academic leave of absence or dismissal. They are required to retake failed courses during the regular academic year and are not eligible for summer remediation courses either at CDM or at any other dental school.

NOTE: Students will be assessed full tuition for any additional years.

Faculty Advisor Program
The advisor program plays an important role at Midwestern University College of Dental Medicine. Students and faculty work closely together in the academic arena. This kind of educational interaction permits students to get to know their faculty and vice versa. Students are encouraged to use the advice, expertise, and help of the faculty. Students should feel free to contact a faculty member of their choice for advice, encouragement, and support. Students experiencing academic difficulty are assigned an academic advisor through the appropriate Associate Dean’s Office.

Failure Policy for First-and Second-Year Students
The faculty provides didactic programs and measures students’ performance in subject areas deemed necessary to become dental practitioners. Students who do not demonstrate minimum competencies assume the obligation and responsibility to make up academic failures. First-year students must successfully pass all failed courses before they can be promoted to the second year. Likewise, second-year students can only begin clinical rotations and be promoted to the third year if they pass all requirements of the preclinical curriculum, and National Boards Part I.

Grade Appeals Policy
I. Appeal of Non-Failing Course Grades
A student who wishes to appeal a non-failing course grade must make a written appeal to the Course Director within one week following receipt of the grade. The Course Director must act upon the student’s appeal within one week following receipt of that appeal. An appeal must be based on one of the following premises:

1. alleged bias
2. mathematical error in calculating the final grade
3. factual errors in course assessment tools.

If the appeal is denied, the student has the right to appeal the decision to the Course Director’s immediate supervisor within one week of receipt of the Course Director’s denial.
The Course Director's supervisor should notify the student of his/her decision within one week following receipt of the student's re-appeal. The decision of the Course Director's supervisor is final.

II. Appeal of Course Grades Subject to Academic Review
A student whose academic progress will be subject to review by his/her Promotions/Academic Review Committee and who wishes to appeal a grade must do so in an expedited manner prior to the scheduled meeting of the Committee. In this case, an appeal of a course grade must be submitted within 24 hours following release of the grade and must be based on one of the premises stated above. The course director must act on this appeal within 24 hours. Any appeal of this decision will be addressed by the Course Director’s supervisor. The student is responsible for notifying the chair of the Student Promotions Committee that a grade appeal has been filed prior to the meeting of the Committee. All appeals and decisions must be communicated in written form.

Grading System
Students receive letter grades corresponding to the level of achievement in each course, based on the results of examinations, required course work, and, as applicable, other established criteria. The letter grades, percent ranges, and quality points per credit are as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percent (%)</th>
<th>Quality Points (per credit)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>93–100</td>
<td>4.00</td>
<td>—</td>
</tr>
<tr>
<td>A–</td>
<td>90–92</td>
<td>3.67</td>
<td>—</td>
</tr>
<tr>
<td>B+</td>
<td>87–89</td>
<td>3.33</td>
<td>—</td>
</tr>
<tr>
<td>B</td>
<td>83–86</td>
<td>3.00</td>
<td>—</td>
</tr>
<tr>
<td>B–</td>
<td>80–82</td>
<td>2.67</td>
<td>—</td>
</tr>
<tr>
<td>C+</td>
<td>77–79</td>
<td>2.33</td>
<td>—</td>
</tr>
<tr>
<td>C</td>
<td>70–76</td>
<td>2.00</td>
<td>—</td>
</tr>
<tr>
<td>F</td>
<td>&lt; 70</td>
<td>0</td>
<td>For professional programs</td>
</tr>
<tr>
<td>I</td>
<td>—</td>
<td>0</td>
<td>An Incomplete (I) grade may be assigned by a course director when a student’s work is of passing quality but incomplete, or if a student qualifies for re-examination. It is the responsibility of the student to request an extension from the course instructor. By assigning an “I” grade, it is implied that an instructor agrees that the student has a valid reason and should be given additional time to complete required coursework. To resolve an incomplete grade, an instructor must fill out and submit a Change of Grade form to the Registrar. All incomplete grades must be resolved within 10 working days starting from the first Monday following the end of the quarter unless written authorization by the Dean to extend the deadline. If an incomplete grade remains beyond the 10 days, it may be converted to a grade of “F,” which signifies failure of the course.</td>
</tr>
<tr>
<td>IP</td>
<td>—</td>
<td>0.00</td>
<td>An In Progress (IP) grade may be assigned by a course director when a student qualifies for re-examination. It is the responsibility of the student to request an extension from the course instructor. By assigning an &quot;IP&quot; grade, it is implied that an instructor agrees that the student has a valid reason and should be given additional time, up to one month to complete required coursework. The &quot;IP&quot; in progress is used when extenuating circumstances make it necessary to extend the grade completion period past 10 days (illness, family death, etc). The completion period should not exceed one quarter with notification to the Registrar.</td>
</tr>
</tbody>
</table>

Grade Point Average
The grade point average is a weighted average computed using the number of credits assigned to each course and the quality points corresponding to the letter grade earned in each course. It is determined by calculating the total number of quality points earned and dividing them by the total number of credits carried. The total quality points earned for each course is determined by multiplying the quality points earned per credit (corresponding to the letter grade) by the number of credits assigned to the course. The student’s cumulative grade point average is computed and recorded by the Office of the Registrar. It is calculated beginning at the end of the first quarter of enrollment, and does not include any grades or credits for courses audited or accepted for transfer, or courses with a grade of withdrawal (W), withdrawal failing (WF), pass (P) or failed (F) that were later repeated.
<table>
<thead>
<tr>
<th>Grade</th>
<th>Percent (%)</th>
<th>Quality Points (per credit)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>—</td>
<td>0.00</td>
<td>Pass; designation indicates that the student has made satisfactory progress or completed required coursework satisfactorily. Grade of 'P' is counted toward credit hour accruals for graduation but is not counted in any GPA calculations.</td>
</tr>
<tr>
<td>W</td>
<td>—</td>
<td>0.00</td>
<td>Withdrawal can be given during the third to the eighth weeks of the quarter. There is no penalty and no credit.</td>
</tr>
<tr>
<td>W/F</td>
<td>—</td>
<td>0.00</td>
<td>Withdrawal/Failing is given after the third week of the quarter; grade indicates that the work completed up to the time of withdrawal was unsatisfactory. This grade is not counted in any GPA calculations and is not counted in credit hour accruals for graduation. W/F may be considered as a failure by a Program Student Academic Review Committee. Students are not allowed to withdraw from a course after the end of the eighth week of class.</td>
</tr>
<tr>
<td>AU</td>
<td>—</td>
<td>0.00</td>
<td>This designation indicates an audited course, that is, a student registered for a course with the understanding that neither academic credit nor a grade is earned. The possibility does not exist to change the course status from audit to full credit after the start of the quarter. The designation AU is not counted in the GPA calculation.</td>
</tr>
<tr>
<td>AP</td>
<td>—</td>
<td>0.00</td>
<td>This designation indicates the decision of a college to award academic credit that precludes a student from taking required course work. The designation of Advanced Placement (AP) is applied toward credit hour accruals, but is not counted in the GPA calculation.</td>
</tr>
</tbody>
</table>

These grading scales apply to all courses unless otherwise noted in the course syllabus.

**Graduation Walk-Through Policy**

1. A student who has not satisfied academic requirements for a particular degree may seek permission to participate in a graduation ceremony for his/her program/college if the student will complete all academic requirements for the degree within the one quarter immediately following the official scheduled end of the academic program for his/her class.

2. To seek permission, the student must submit a formal, signed letter of request in writing to participate in the graduation ceremony. The letter should be addressed to the CDM Dean. The letter must state the reason for the request, a timeline for completion of all academic requirements for the degree which shows that all degree requirements will be met within the one quarter immediately following the official scheduled end of the academic program. The letter should be submitted no later than eight weeks prior to the official graduation date for his/her program/college.

3. The Dean is responsible for verifying that all of the requisite information is in the letter, and that the information is correct. The Dean then forwards the letter to the program/college academic review/student promotion and graduation committee for consideration.

4. The academic review/student promotion and graduation committee is responsible for reviewing the student’s request. Each request is considered based on its individual merits. If approved, the committee will add the student to the proposed list of candidates for graduation, denote on the listing that the student will not have completed the academic requirements by the official graduation date, and then forward the list of candidates to the Dean. The Dean will then forward the list of candidates for graduation to the MWU Faculty Senate for review and approval at an appropriately scheduled meeting, prior to the official graduation date.

10. The Senate will forward the list of approved candidates for degrees to the University President for review and approval by the Board of Trustees. Students in CDM programs on the Glendale campus that officially complete their degree program in May-June, may participate in the graduation ceremony scheduled for May-June prior to the end of their academic program. The Student Clinical Promotions Committee will forward to the Dean of CDM a list of candidates for graduation to be forwarded to the MWU Faculty Senate for review and approval at an appropriately scheduled meeting prior to the official graduation date. The Senate will forward the list of approved candidates for degrees to the University President for review and approval by the Board of Trustees.

**Immunization Policy for CDM**

Full-time students are required to have all immunizations as outlined in the general policy section of this handbook.

**Leave of Absence**

The Dean’s Office initiates leaves of absence or withdrawals with a conditional approval. Leaves of absence consist of two types: mandatory and voluntary. There are three types of mandatory leave of absence: academic, medical and administrative probation.
Mandatory academic leave of absence may occur when a student has failed one or more courses or has accumulated two or more quarters of cumulative GPA less than required by his/her program. Mandatory academic leave of absence may or may not be proceeded by academic probation. This action entails the removal of the student from all academic courses for a period of up to one year, or until all program requirements for re-entry have been fully met. Mandatory academic leave of absence is noted on the student’s transcript.

The student who has been on leave of absence does not have to reapply for admission and is guaranteed reentry into his/her academic program upon successful completion of all deficient courses and/or when all programmatic requirements are met. Upon reentry to the academic program, the student is routinely placed on academic probation for the following quarter.

Voluntary leaves of absence include four types: medical, maternity, personal, and military.

The student must be cleared by all departments for a mandatory or voluntary leave to become final. The criteria for student clearances are determined by each department.

When a student returns from mandatory or voluntary leave, the Dean’s Office initiates the return with a conditional approval. All departments must approve the final return from leave.

National Boards Policy

All Midwestern University College of Dental Medicine students must pass NBDE Part I in order to qualify for graduation from MWU/ Midwestern University College of Dental Medicine. All students are required to sit for the NBDE Part I examination at the end of year 1 and to make up failures prior to initiating patient care. If a student encounters a catastrophic event that prevents him/her from taking the examination during that timeframe, the Dean may allow him/her to enter the clinic schedule and take the examination at a later date (mutually agreed to by the student and Dean).

Students who fail to pass the NBDE Part I examination on their first attempt will be allowed to continue as registered students as noted below. The student:

• will be provided with a list of available resources in order to adequately prepare for a repeat examination. The student will be advised to take a formalized board review course. Any associated expenses and arrangements are the student’s responsibility.

Students who fail to pass the NBDE Part I examination on their second attempt will be allowed to continue as registered students as noted below. The student:

• will meet with the Dean of Basic Sciences, the Dean of Student Services, the Associate Dean, MWU CDM, and selected Basic Science course directors to discuss a strategy for retaking and passing the NBDE Part I examination. The student will be required to retake the examination at a date approved by the Dean upon recommendation of the above individuals.

• may be required to take an Independent Study Elective or Leave of Absence in order to prepare for the retake of NBDE Part I at the date specified by the Dean. The Independent Study Elective may include a long-term board preparation course. Tuition, related expenses, and arrangements are the student’s responsibility.

• is required to sit for the NBDE Part I examination (third attempt) and if successful, is then eligible to begin patient care.

Students who fail to pass NBDE Part I examination for the third time need to wait one full year prior to re-taking the examination per National Board rules and will be remanded to come before the Preclinical Student Promotions Committee. The Committee may recommend a further remediation plan or recommend dismissal for failure to meet the academic requirements of MWU/ MWU CDM. The student will be charged tuition on a prorated basis for additional months of education.

Passing any portion of a licensing examination is not a substitute for passing a Midwestern University course.

Preclinical Promotions Committee

This committee meets at the end of each academic quarter to assess the academic status of students with an academic failure, an incomplete, or an in-progress grade. The committee assesses the progress of each student at the end of each academic quarter. Students who attain satisfactory academic and professional progress are promoted to the next academic quarter, provided all tuition and fees have been paid.

Students with one or more failures in a single academic quarter will be given the opportunity to meet with the Preclinical Student Promotions Committee. The Chair of this Committee will be a representative of the Dean’s Office and will be appointed by the Dean. Notification of the date, time, and place of the committee meeting is sent to the student at least 48 hours in advance by priority email and/or telephone. Students will be invited to the meeting to give a
Retake/Make-Up Courses
Retake occurs when formal repetition of an entire course or a portion of the course is required due to course failure. A failed course may be retaken due to:

1. Course failure with no reexamination offered by the department.
2. Course failure followed by failure of the reexamination.
3. Course failure and failure to meet eligibility criteria for reexamination.

The course may be repeated at MWU or at an outside institution if it is offered. The course at the outside institution must be approved by the department/program as a satisfactory replacement for the failed course. It is the decision of the Student Promotion Committees of each program to recommend retake of the failed course. The Program Student Academic Review Committee, following department approval, will determine the time frame for completion of the repeated course.

Retake or make-up courses must fulfill the same performance requirements of the regular academic year and will be billed for tuition and fees accordingly. Failures are made up in one of three ways: 1. students retake the failed course if it is offered through Midwestern University College of Dental Medicine; 2. students may take the failed course at an accredited institution that offers comparable course content and curriculum as reviewed and approved by the Dean (the grade is accepted as transfer credit and is calculated as Pass/Fail); or 3. if offered, students can take a faculty-supervised directed readings program. The directed readings program will cover the learning objectives of the course, periodic meetings, periodic self-testing, and direct access to faculty. A written examination(s) will be given by the department to assess academic competency.

Students are limited to the second and third options if Midwestern University College of Dental Medicine does not offer a makeup course. They are limited to the second option if the college chooses not to offer a directed readings program.

If the student passes a repeated course, the original failure remains on the transcript as an "F." The failed course is no longer used in the computation of the GPA following repeat of the course. If the course is retaken at MWU, the student will be required to pay tuition for the course. If the student passes the course a grade of "C" will be entered onto the transcript and this grade will be factored into the overall GPA.

Satisfactory Academic Progress
As required by federal law, reasonable standards of satisfactory academic progress have been established by Midwestern University College of Dental Medicine for the Doctor of Dental Medicine program. These standards apply to all students applying for, or currently receiving, financial assistance. The policy and procedure for assessing financial aid status is noted in the Student Financial Services section of this handbook.

Travel for Clinical Education/Fieldwork
The professional programs of CDM require that the students receive instruction in a clinical setting. As a result, it will be necessary for students to make arrangements for transportation and lodging to clinical facilities in rotations that may be off the Midwestern University campus. The University does not generally provide for the cost of transportation or lodging. Travel arrangements are the sole responsibility of the student. Students are not considered an agent or an employee of the University and are not insured for any accidents or mishaps that may occur during any traveling that is done as part of the student’s professional program. Students are responsible for all expenses associated with clinical education, such as transportation, meals, housing, professional attire, laboratory fees, etc.

Withdrawal from Courses
Any student who wishes to withdraw from one or more courses must first receive approval from their respective Course Director. Following approval by the Course Director, the withdrawal must be approved by the Associate Dean for Academic Affairs and the CDM Dean. If the approval is granted, the student receives one of the following grades: W (withdrew) or W/F (withdrew failing).

Between the start of the fourth week and the end of the eighth week of the quarter, if work completed up to the time of withdrawal is satisfactory, the student will receive a Withdrawal (W) grade. This grade is not counted in any GPA calculations and is not counted in credit hour accruals for graduation. Between the start of the third week of the quarter and end of the eighth week of the quarter, if work completed up to the time of withdrawal is satisfactory, the student will receive a Withdrawal (W) grade. This grade is not counted in any GPA calculations and is not counted in credit hour accruals for graduation. W/F may be considered as a failure by the Preclinical Promotion Committee when reviewing the academic status of a student. Multiple F's and W/F's can be grounds for dismissal.
Students are not allowed to withdraw from a course after the end of the eighth week of class, unless there are exceptional circumstances.

Withdrawal from the College/University
The decision to withdraw from the University is a serious matter. Any student who withdraws from a college or program is dropped from the rolls of the University. As such, if he/she decides at some later date to reenter the program, he/she must reapply for admission and, if accepted, assume the status of a new student.

Students contemplating withdrawal must inform the Dean of the decision to voluntarily withdraw and voluntarily relinquish his/her position in the program. The student must contact the Dean’s Office and must complete the appropriate clearance procedures. The withdrawal process includes the clearing of all financial obligations of MWU and an exit interview. Following completion of these withdrawal procedures, the designation "Withdrawal" will be placed in the student’s permanent record. The designation "Unofficial Withdrawal" is placed in the permanent record of any student who withdraws from his/her program without complying with the above procedures. For more information, see the Student Financial Services sections on Notification of Withdrawal and Return of Title IV Funds/MWU Refund Policy.

FACULTY
Dental and Preclinical
Richard J. Simonsen, DDS, MS
University of Minnesota, School of Dentistry
Dean and Professor
Russell O. Gilpatrick, DDS
University of the Pacific School of Dentistry
Associate Dean for Academic Affairs and Professor
Robert T. Coffey, DDS
Case Western Reserve University
Assistant Professor
Allan Dovigi, DDS, MS
University of Toronto, St. Michael’s College
Associate Professor
Robert W. Hasel, DDS
University of Minnesota, School of Dentistry
Associate Professor
Christine Halket, DDS, MA Ed.
Baylor College of Dentistry
Associate Professor
James Pashayan, DDS, MA Ed.
Case-Western Reserve University
Associate Professor
Howard Polk, DDS
University of Illinois at Chicago, College of Dentistry
Associate Professor
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Lisa Schnaidt, DMD
University of the Pacific School of Dentistry
Associate Professor
P. Bradford Smith, DDS
Washington University School of Dental Medicine
Assistant Professor
Martin Zais, DDS
University of California, San Francisco
Associate Professor
Adjunct Faculty
Mark Abzug, DDS
University of the Pacific
Ronald Giordan, DDS, MAGD
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Anh Kov, DDS
University of Minnesota School of Dentistry
Kuong Kov, DDS
Marquette University College of Dentistry
Cory Kruckenberg, DDS
University of Minnesota School of Dentistry
Mark Lavoy, DDS
University of Southern California
Joe Mehranfar, DMD, MS
Temple University School of Dentistry
Kevin Mueller, DMD
Southern Illinois University School of Dentistry
Sam Palmer, DDS, MS
Washington University School of Dentistry
Mark Passell, DDS, MS
Case-Western Reserve School of Dentistry
Leigh-Ann Schuerman, DMD
Southern Illinois School of Dentistry
Louis Sommerhalter, DDS
University of Tennessee of Dentistry

Basic Science
Layla Al-Nakkash, Ph.D.
University of Newcastle-Upon-Tyne
Associate Professor

Thomas L. Broderick, Ph.D.
University of Alberta
Professor

John R. Burdick, Ph.D.
Iowa State University
Dean of Basic Sciences and Professor

Richard F. Collins, Ph.D.
University of Oklahoma Health Sciences Center
Professor

Dana Devine
University of Health Sciences Kansas City
Associate Professor

Wade A. Grow, Ph.D.
University of Idaho
Associate Professor

Christopher P. Heesy, Ph.D.
University of New York at Stony Brook
Assistant Professor

Lauritz Jensen, MS, DA
University of Northern Colorado
Professor

Sam Katzif, Ph.D.
Georgia State University
Assistant Professor

Laszlo Kerecsen, M.D.
Medical School of Debrecen
Professor

Tyler A. Kokjohn, Ph.D.
Loyola University
Professor

Kathryn J. Leyva, Ph.D.
Northern Arizona University
Associate Professor

David F. Mann, Ph.D.
Michigan State University
Professor

Gregory A. Mihailoff, Ph.D.
Ohio State University
Professor

Randall L. Nydam, Ph.D.
University of Oklahoma
Associate Professor

Robin R. Parmley, Ph.D.
Rush University
Assistant Professor

Pamela E. Potter, Ph.D.
Dalhousie University
Professor

Michael Quinlan, Ph.D.
Arizona State University
Associate Professor

Fred Romano, Ph.D.
Loyola University of Chicago
Professor

Linda M. Walters, Ph.D.
Loyola University, Stritch School of Medicine
Professor

Y. Gloria Yueh, Ph.D.
University of Connecticut
Associate Professor

Clinical Psychology
Philinda Hutchings, Ph.D., ABPP
Program Director and Professor

M. Elicia Nademin, Ph.D.
Assistant Professor

Deborah Lewis, Ph.D., ABPP
Professor
MISSION
Arizona College of Optometry (AZCOPT) fosters lifelong learning through excellence in education, postgraduate programs and scholarship. The College encourages the development of professional attitudes and behaviors to prepare optometrists who will provide exemplary patient care, serve the needs of the public and improve the health and well-being of society.

GOALS
• To have a critical mass of faculty who are dedicated to the discovery and dissemination of new knowledge.
• To have graduates who understand commonly used research methods so that they can best practice evidence-based eye and vision care.
• To promote interdisciplinary educational programming so that students can appreciate their role and the role of other health professionals in the health care team.
• To ensure that students gain a strong basic and vision science foundation of knowledge.
• To promote the involvement of students in community service during the program.
• To create a high quality optometry residency program.
• To create an eye institute which meets the vision care needs of the Glendale-Phoenix community.

ACCREDITATION
AZCOPT has been granted the pre-accreditation classification of "Preliminary Approval" by the Accreditation Council on Optometric Education (ACOE), of the American Optometric Association (AOA), 243 N. Lindbergh Blvd., St. Louis, MO 63141-7881. "Preliminary Approval" is the only classification available to a new professional program.

ADESRIPTION
Midwestern University is accredited by The Higher Learning Commission, A Commission of the North Central Association of Colleges and Schools, located at 30 North LaSalle St., Suite 2400, Chicago, Illinois 60602; 312/263-0456.

DEGREE DESCRIPTION
AZCOPT awards the degree Doctor of Optometry upon successful completion of the four-year professional curriculum in optometry. The first and second years of the curriculum emphasize basic health sciences, optics and visual science and students are introduced to clinical practice in simulation laboratories and through introductory courses. Visual consequences of disease are introduced in the second year. The third year, divided between a didactic and clinical setting, emphasizes the diagnosis and treatment of ocular dysfunction and disease. The fourth year is intensive clinical training that will include some on campus and off campus externship rotations. Clinical settings for external rotations may include military facilities, veteran administration hospitals, public health service hospitals and specialty and/or private practices or clinics. Satisfactory completion of the curriculum will qualify the graduate to take the state licensing examination that is offered in each of the 50 states and Puerto Rico.

ADMISSIONS
AZCOPT considers for admission those students who possess the academic, professional, and personal qualities necessary for development as exemplary optometrists. AZCOPT uses multiple criteria to select the most qualified candidates including cumulative and prerequisites grade point averages (GPAs), Optometric Admission Test (OAT) scores, personal experiences and character, ability to communicate, familiarity with the profession, volunteer/community involvement, research experience, and other considerations. AZCOPT uses a competitive, rolling admissions process.

Admission Requirements
Students seeking admission to AZCOPT must submit the following documented evidence:
1. Possess a minimum cumulative GPA and prerequisite coursework GPA of 2.75 on a 4.00 scale
2. Complete a baccalaureate degree from regionally accredited institutions. A B.A. degree is acceptable but a B.S. degree is preferred.
3. Submit the results of the Optometry Admission Test (OAT).
A minimum Academic Average and Total Science standard score of 300 are required of all applicants. In order to be considered for the class to be admitted in the Fall of 2010 the OAT must be taken and results submitted by June 15, 2010. OAT scores from tests prior to 2005 are not acceptable.

11. Complete the necessary course prerequisites. All prerequisite courses must be completed with grades of C or better. Pass/fail courses are not acceptable for prerequisite courses. Only courses designed for science majors or pre-professional students are acceptable for the science prerequisites.

12. Provide two letters of recommendation.
13. Have a good understanding of optometric medicine. Candidates are strongly encouraged to shadow and observe a practicing optometric physician in the clinical setting.

14. Participate in extracurricular and/or community activities that indicate a well-rounded background and demonstrate a service orientation.
15. Have interpersonal and communication skills necessary to relate effectively with others.
16. Pass the Midwestern University criminal background check.
17. Have a commitment to abide by the Midwestern University Drug-Free Workplace and Substance Abuse Policy.

PREFERRED COURSES

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology with lab</td>
<td>8 Sem/12 Qtr hours</td>
</tr>
<tr>
<td>General/inorganic chemistry with lab</td>
<td>8 Sem/12 Qtr hours</td>
</tr>
<tr>
<td>Organic chemistry with lab</td>
<td>4 Sem/6 Qtr hours</td>
</tr>
<tr>
<td>Biochemistry</td>
<td>3 Sem/5 Qtr hours</td>
</tr>
<tr>
<td>Physics</td>
<td>6 Sem/10 Qtr hours</td>
</tr>
<tr>
<td>Calculus</td>
<td>3 Sem/5 Qtr hours</td>
</tr>
<tr>
<td>Microbiology</td>
<td>3 Sem/5 Qtr hours</td>
</tr>
<tr>
<td>Statistics</td>
<td>3 Sem/5 Qtr hours</td>
</tr>
<tr>
<td>Psychology</td>
<td>3 Sem/5 Qtr hours</td>
</tr>
<tr>
<td>English</td>
<td>6 Sem/9 Qtr hours</td>
</tr>
</tbody>
</table>

Students are strongly encouraged to take courses in Human Anatomy, Human Physiology, Histology and Spanish.

International Applicants
An international student must satisfy all of the requirements for admission to the college or program that apply to a student who has completed all of his/her prerequisite coursework in the U.S. at a regionally accredited college or university. In addition, an international student must demonstrate proficiency in the English language. This may be accomplished by satisfying both of the following requirements:

1. The international student has completed a minimum of two full time semesters or three full time quarters of instruction at a postsecondary institution in the United States. Completed coursework must include a minimum of 50% of the prerequisite science coursework for the college or program of interest, 6 semester hours of non-remedial English composition, and 3 semester hours of public speaking/speech.

2. The international student must submit official Test of English as a Foreign Language (TOEFL) scores. A minimum passing score is 550 (paper version, maximum score 677) or 100 (internet version, maximum score 120). The TOEFL scores must be from an exam taken within two years of the anticipated date of matriculation into the college or program.

If the international student wishes to receive credit for prerequisite coursework completed at a college or university outside the United States, he/she must submit an official, detailed, course-by-course evaluation of this coursework. The student must obtain this evaluation from one of the following services:

1. Education Credential Evaluators (ECE): 414/289-3400 or Fax 414/289-3411 (www.ece.org, e-mail: info@ece.org)
3. World Education Service (WES): 212/966-6311 or Fax 212/739-6100 (www.wes.org, e-mail: info@wes.org)

Based on the official foreign transcript evaluation and the grade earned in the courses(s), the college or program will decide if it will apply any of these credits toward fulfillment of its prerequisites.

Application Process and Deadlines
AZCOPT uses a two-step application process. Applicants must submit both a completed application from the Optometry Centralized Application Service (OptomCAS) and a College supplemental application.

1. OptomCAS Application:
   Applicants are required to submit online applications and application fees to OptomCAS by April 1, 2010. In addition to the online application and application fees, an applicant must forward to OptomCAS official transcripts from all colleges and universities attended by the April 1 date. OptomCAS will begin the verification process as official transcripts are received, however an application will not be considered complete until all official transcripts are received. (Students who have taken coursework and/or earned a degree from a foreign institution must also submit a course-by-course evaluation of their transcript from an OptomCAS-approved evaluation service.)

   Students must apply for admission via OptomCAS at www.opted.org or www.optomcas.org. Please refer to the OptomCAS application instructions for specific details about completing the OptomCAS application, required documents, and processing times. OptomCAS applications are available starting July 15, 2009 for
applicants seeking admission in August 2010. Due to the large number of applicants and the limited number of seats available, students are strongly encouraged to complete their OptomCAS application and their AZCOPT supplemental application early in the cycle. AZCOPT will consider completed applications on a first-come, first-served basis until all seats are filled.

2. Optometry Admission Test (OAT):
Applicants must arrange for scores from the OAT to be sent directly to Midwestern University. Only test scores received directly from the testing agency and scores earned from the test offered in 2005 or more recently will be accepted. OAT scores from tests prior to 2005 are not acceptable.

This examination includes questions on biology, general chemistry, organic chemistry, physics, quantitative reasoning and reading comprehension. The test can be taken at numerous centers in the United States, Canada, and Puerto Rico. An examinee may take the examination up to four times during the year. Additional information on the OAT may be found at www.opted.org or in writing to:

Optometry Admission Testing Program
211 East Chicago Avenue, suite 600
Chicago, Illinois 60611-2678
800/232-2159

3. Letters of Recommendation:
Applicants must submit two letters of recommendation from professionals to OptomCAS (www.optomcas.org). One letter must be from a practicing optometrist. The other letter must be from a prehealth advisor, a science professor, an employer or extracurricular activity advisor. Letters of recommendation from relatives, personal and/or family friends are not acceptable.

4. Supplemental Application:
After receiving OptomCAS applications from the centralized application service, the Office of Admissions will e-mail a supplemental application to all applicants who meet the minimum cumulative and prerequisite coursework GPA requirement of 2.75 on a 4.00 scale. Applicants must complete and submit their supplemental applications with the required information and their application fee through the online portal to Midwestern University Office of Admissions on or before April 30, 2010.

5. Completed Application:
All application materials, including the OptomCAS application, OAT scores (as reported to Midwestern University), two letters of recommendation (as submitted to OptomCAS), and supplemental application materials with the application fee must be received by the Office of Admissions on or before April 30, 2010. Only completed applications received by the Office of Admissions on or before the deadline date will be reviewed for potential entrance into the program.

Please Note: Applicants are responsible for tracking the receipt of their application materials and verifying the status of their applications on the University web site. The Office of Admissions will send qualified applicants instructions for checking the status of their application materials online.

Applicants are responsible for notifying the Office of Admissions of any changes in their mailing address or e-mail address.

Midwestern University
Office of Admissions
19555 North 59th Avenue
Glendale, Arizona 85308
623/572-3215 or 888/247-9277
admissaz@midwestern.edu

Rolling Admissions
AZCOPT uses a rolling admissions process in which applications are processed and reviewed during regular intervals in the admissions cycle until the class is filled.

Interview Process
Before an invitation is issued to attend an on-campus interview, applicants must meet the admission requirements listed previously. After the Office of Admissions receives all required application materials, applicant files are reviewed to determine whether an applicant merits an invitation for an interview. Applicants may also be placed on a waiting list pending possible openings toward a later part of the admissions cycle. Interviews are typically held between September and May. Invited applications must attend an on-campus interview to achieve further consideration in the interview process.

An on-campus visit, which includes an interview session, generally takes four hours. Each interviewee will meet with at least two interviewers. Applications will be evaluated on verbal communication skills, understanding of the optometry profession, commitment to patient care, and other elements as determined by the College. Applicants will also learn more about Midwestern University and AZCOPT, financial aid programs, student services, campus housing; and tour the Glendale Campus.

Following the interview, an applicant’s file will be forwarded to the Admissions Committee for review. The committee may recommend to accept, to deny, or to place students on an alternate list. Recommendations are then forwarded to the Dean for final approval. The Dean, via the Office of Admissions, notifies applicants of their status within four weeks of their interview.

Students who have been accepted for a given year must matriculate during that year. No admission deferments will be granted. Students who fail to matriculate must reapply for admission to the College the following year.

All requests for application withdrawal must be made in writing.
**Technical Standards**

A candidate for the degree of Doctor of Optometry must have abilities and skills in five areas: I) observation; II) communication; III) motor; IV) intellectual, conceptual, integrative, and quantitative; and V) behavioral and social. Technological compensation can be made for some limitation in certain of these areas, but a candidate should be able to perform in a reasonably independent manner.

I. Observation: The candidate must be able to accurately make observations at a distance and close at hand. Observation necessitates the functional use of the sense of vision and somatic sensation and is enhanced by the functional use of all of the other senses.

II. Communication: The candidate must be able to communicate effectively, efficiently and sensitively in both oral and written form and be able to perceive nonverbal communication.

III. Motor: Candidates must be able to coordinate both gross and fine muscular movements, maintain equilibrium and have functional use of the senses of touch and vision. The candidate must possess sufficient postural control, neuromuscular control and eye-to-hand coordination to perform profession-specific skills and tasks.

IV. Intellectual, Conceptual, Integrative and Quantitative Abilities: The candidate must be able to problem solve, measure, calculate, reason, analyze, record and synthesize large amounts of information in a timely manner. The candidate must be able to comprehend three-dimensional relationships and understand spatial relationships.

V. Behavioral and Social Attributes: The candidate must possess the emotional health required for full utilization of his/her intellectual abilities, the exercise of good judgment, the consistent, prompt completion of all responsibilities, and the development of mature, sensitive and effective relationships. Candidates must be able to tolerate physically, mentally and emotionally taxing workloads and to function effectively under stress. The candidate must be able to adapt to changing environments, to display flexibility, and to learn to function in the face of uncertainties. Compassion, integrity, concern for others, effective interpersonal skills, willingness and ability to function as an effective team player, and interest and motivation to learn are all personal qualities required during the educational process.

Candidates are required to certify that they understand and meet these Technical Standards. Candidates must provide such certification prior to matriculation. Candidates who may not meet the Technical Standards must inform the Director of Admissions, who will then contact the Dean of Students. The Dean of Students, in consultation with the academic dean, will identify and discuss what accommodations, if any, the College would need to make that would allow the candidate to complete the curriculum. The College is not able to grant accommodations that alter the educational standards of the curriculum. Students must meet the Technical Standards for the duration of enrollment in their professional program.

**Matriculation Process**

To initiate the matriculation process, newly accepted students must return both their signed matriculation agreement and their initial deposit by the date designated in their matriculation agreement. To conclude the matriculation process, a student must also:

1. Submit deposit monies by the date designated in their matriculation agreements. Deposits are applied toward the first quarter’s tuition.
   d. Submit official final transcripts from all colleges attended post-high school by the deadline of two weeks (14 calendar days) prior to the first day of classes. Students who are accepted to MWU less than one month prior to the first day of classes will have 30 calendar days from the date of their acceptance to submit all official transcripts to the Office of Admissions.
   e. Successfully complete all outstanding prerequisites with the grades of C or better (grades of C- are not acceptable).
   f. Submit documented laboratory proof of the completed required immunizations.
   g. Submit proof of medical and disability insurance coverage. Students may select either a plan offered by an MWU-approved carrier or a comparable plan offered by an outside carrier of their choice.
   h. Meet the Technical Standards for the College.
   i. Provide documentation verifying that sufficient funds have been deposited in a U.S. bank to cover all expenses while attending Midwestern University (applies only to non-U.S. citizens/nonpermanent residents).
   j. Provide documentation that any additional coursework or service requirements stipulated by the School has been completed.
   k. Submit additional documents as required by the Office of Admissions.
l. Authorize and pass the Midwestern University criminal background check.
m. Sign and submit a Midwestern University Drug-Free Workplace and Substance Abuse Policy Statement.
n. Complete the physical exam and submit the form.
o. Sign and submit a Credit Policy Statement.

Students who either fail to satisfy these matriculation requirements or omit or falsify information required on official admissions documents will automatically forfeit their seats at AZCOPT. Students accepted for admission who do not comply with stated timelines for submission of all required materials will not receive further notification from AZCOPT regarding forfeitures.

Articulation Agreement Between Midwestern University Programs
Students enrolled in a Midwestern University program are guaranteed an admission interview with another Midwestern University program if the student:

1. is currently in good standing in the academic program in which the student is enrolled and does not have any pending misconduct charges against him/her;
2. meets all admission requirements for the professional program of interest;
3. after a minimum of two full time quarters of study, achieves a minimum Midwestern University grade point average, derived from all courses completed at Midwestern, that is equal to or greater than 3.0; AND
4. achieves a score on the professional entrance exam (if required) that is not less than one standard deviation below the mean score for students that matriculated into the professional degree program in the previous year.

A guaranteed interview does not guarantee admission into the professional program.

Reapplication Process
After receiving either denial or end-of-cycle letters, applicants may reapply for the next enrollment cycle. Before reapplying, however, applicants should seek the advice of an admissions counselor.

Transfer Admission Policy
AZCOPT may elect to accept transfer students from other U.S. accredited schools of optometry for students who remain in good academic standing and provide acceptable reason(s) for seeking transfer. Typically, students will transfer at the beginning of the second year of the curriculum.

Students requesting transfers must meet the College’s general requirements for admission. They must also submit the following:

1. A letter to the Director of Admissions outlining the reasons for requesting transfer and explaining any difficulties encountered at the previous institutions
2. Course outlines for all optometry coursework for which advanced standing credit is requested
3. Official scores from the Optometric Admissions Test (OAT)
4. Official transcripts from all schools attended - undergraduate, graduate, and professional
5. A letter from the dean of the college in which the student is enrolled that describes current academic status and terms of withdrawal or dismissal
6. Additional documents or letters of recommendation as determined necessary by the Director of Admissions or Dean

Following receipt of these materials, a decision by the Dean is made regarding whether or not the student merits an on-campus interview. If the student receives an invitation, he/she interviews with an appropriate interview team. The interview team then makes an admissions recommendation to the Dean who approves both the student’s admissions status and class standing.

The transfer application must be received sufficiently early to allow for processing of the application, interview, and moving of the student prior to the start of the next academic term.

Graduation Requirements
To be eligible for graduation and receive the degree Doctor of Optometry, the student must meet the following requirements:

- Follow an approved course of study acceptable to the College’s Student Promotion and Graduation Committee and leading to the completion of all academic requirements for the degree;
- Satisfactorily complete all academic requirements with a cumulative GPA of at least 2.00;
- Pass Part I and take Part II of the National Boards administered by the National Board of Examiners in Optometry;
- Be recommended for conferral of the degree Doctor of Optometry by the University Faculty Senate;
- Settle all financial accounts with the University; and
- Complete all graduation clearance requirements as instructed by the Office of the Registrar.

Licensure Requirements
To obtain licensure, graduates must have completed the requirements established by each state or national licensing board. Licenses require successful passage of the National Board Examinations and may require the passage of an additional state licensing exam. Postdoctoral requirements may vary among states. The National Board of Examiners
(NBEO) administers complete integrated examinations in three parts that reflect the different stages of a candidate’s optometric education and training. Part I covers Applied Basic Science, Part II covers Patient Assessment and Management and Part III covers Clinical Skills. Part I and Part II are approximately 1.5 days in length and Part III is 1.0 day in length. The earliest date for a student candidate to take the Part I examination is March of the third professional year in an accredited institution. A Board Review Course is incorporated into the curriculum to help the student prepare for Part I. The earliest date for a candidate to take the Part II examination is in December during the candidate’s fourth year at an accredited institution. A second board review course is incorporated into the curriculum to prepare the candidate for Part II. All students are required to pass Parts I and to take Part II of the National Boards to graduate. Students are eligible to take the Part III examination at the conclusion of their fourth year. However, scores for Part III will not be released until the National Board of Examiners has received notification from the candidate’s institution that the candidate has graduated. For additional information regarding licensure, contact the web site, www.optometry.org or

National Board of Examiners in Optometry
200 S. College Street, #1920
Charlotte, NC 28202
Phone: 800-969-EXAM(3926)
704-332-9565
FAX: 704-332-9568
E-mail: nbeo@optometry.org

CURRICULUM
The College reserves the right to alter the curriculum as it deems appropriate.

First Year

<table>
<thead>
<tr>
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| Introduction to Clinical Care II |
| OPTO 1560:           | 2             |
| Ocular Anatomy       |

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<td>Anomalies of Binocular Vision, Strabismus And Amblyopia</td>
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<td>Board Review: Applied Basic Science</td>
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<td>Vision Therapy and Sports Vision</td>
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<td>Advanced Contact Lens Practice and Prosthetic Eyes</td>
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<td>OPTO 1782</td>
<td>Evidence Based Medicine/Ocular Emergencies</td>
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<tr>
<td>OPTO 1745</td>
<td>Epidemiology, Public Health and the Optometric Profession</td>
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<td>OPTO 1792</td>
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<td>Vision Perception and Learning Disabilities</td>
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<td>OPTO 1755</td>
<td>Legal and Professional Aspects of Optometry</td>
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<td>OPTO 1765</td>
<td>Optometric Practice Management</td>
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**Course Descriptions**

Prerequisites are listed for those courses with such requirements. When no prerequisite is listed in a course description it is implied that there is no prerequisite.

**BASI 1501 Integrated Basic Science I: Cell Structure and Function**

The disciplines of histology, biochemistry, physiology, pharmacology and pathology cover the fundamentals of cell structure and function. Topics include osmosis, transport, diffusion, synaptic transmission, receptor pharmacology, cellular injury and death, apoptosis, inflammation, tissue repair and wound healing.

4 credits

**BASI 1502 Integrated Basic Science II: Infectious Disease/Medical Genetics and Embryology**

The disciplines of microbiology, pharmacology and pathology cover the basics of infectious disease and chemotherapeutic agents. Topics include infective
endocarditis, HIV and infections of the central nervous system. Disciplines of embryology, biochemistry and pathology cover the basic principles of embryology, medical genetics and genetic disorders.

4.5 credits

BASI 1503 Integrated Basic Science III: Nervous System/Musculoskeletal System
The disciplines of embryology, gross anatomy, histology, physiology, pharmacology and pathology cover the basic structure and function of the nervous system. Topics include the development and histology of the nervous system, ion channels, membrane potential, action potential, neurotransmission, diseases of the peripheral and central nervous systems and medications. The disciplines of histology, gross anatomy, physiology, biochemistry, pharmacology and pathology cover the basic principles of musculoskeletal structure and function. Topics include histology of muscle and bone, gross anatomy of the upper extremity, neuromuscular junction, muscle metabolism and pharmacology of neuromuscular junction. In addition, non-neoplastic bone diseases and diseases of muscle and joints are presented.

5 credits

BASI 1504 Integrated Basic Science IV: Epithelium/Connective Tissue/Blood
The disciplines of histology, biochemistry, pharmacology, microbiology and pathology cover the structure, function and pathology of these tissues. Topics include bleeding disorders, relevant diseases of the skin and blood, anticoagulants and antifungal medications. The disciplines of gross anatomy, microbiology, immunology, pharmacology and pathology cover the basic structure and function of lymphatic system and immunologic concepts. Topics include gross anatomy and histology of the lymphatic system, general immunology, hypersensitivity, disorders of immune system and immunopharmaceuticals.

7.5 credits

BASI 1505 Integrated Basic Science V: Cardiovascular System
The disciplines of histology, gross anatomy, physiology, pharmacology, microbiology and pathology cover the basic structure and function of the cardiovascular system. Topics include gross anatomy and histology of the cardiovascular system, hemodynamics, disorders and diseases of cardiovascular system and cardiovascular medications.

3 credits

BASI 1506: Integrated Basic Science VI: Respiratory System/Urogenital System
The disciplines of gross anatomy, histology, biochemistry, physiology, pharmacology, microbiology and pathology cover the basic structure and function of the respiratory system. Topics include the gross anatomy, histology and biochemistry of the respiratory system, acid-base balance, pulmonary circulation, disorders and diseases of the respiratory system and respiratory medications. The disciplines of gross anatomy, histology, physiology, pharmacology, microbiology and pathology cover the basic structure and function of the urinary system. Topics include the gross anatomy and histology of urinary system, acid-base balance, renal physiology, disorders and diseases of the urinary system and treatment medications.

5 credits

BASI 1507 Integrated Basic Science VII: Head and Neck
This module covers gross anatomy and function of the head and neck. The instructional format includes both didactic lectures and in-depth dissection laboratory.

3.5 credits

BASI 1508 Integrated Basic Science VIII: Clinical Neuroscience
The module covers gross anatomy and function of the central and peripheral nervous systems with special emphasis on cranial nerve distribution and function.

3.8 credits

BASI 1509 Integrated Basic Science IX: Endocrine and Gastrointestinal
The disciplines of gross anatomy, histology, physiology, microbiology, pharmacology and pathology cover the basic structure and function of the endocrine systems. Topics include gross anatomy, histology and physiology of endocrine system, disorders and diseases of the system and medications. The disciplines histology, gross anatomy, physiology, pharmacology, microbiology and pathology cover the basic structure and function of the gastrointestinal (GI) system. Topics include the histology, gross anatomy and physiology of the GI system to include chewing, swallowing, and digestion. The disorders and diseases of the GI system and the medications use to treat these maladies are also presented.

5.1 credits

BMED 474 Pharmacology I
This course deals with the general principles of pharmacology; all aspects of absorption, distribution, metabolism, and elimination of drugs; mechanisms of drug actions; drug testing in humans; and prescription writing. In addition, this course describes in great detail the pharmacologic actions and clinical uses of autonomic, cardiovascular, and central nervous system drugs.

3 credits

BMED 475 Pharmacology II
This course introduces the major drugs used to treat cardiac conditions. The focus will be on the treatment of
arrhythmias, angina, congestive heart failure, hypertension, and disorders of coagulation.

3 credits
Prerequisite: BMED 474 Pharmacology I

CORE 1460, 1470, 1480 Interdisciplinary Health Care
The Interdisciplinary Health Care course involves the Colleges of Health Sciences, Osteopathic Medicine, Dental Medicine, Optometry, and Pharmacy in order to teach all clinically-based students about the healthcare of an interdisciplinary approach to patient care. Lectures will be given in a seminar format, in conjunction with panel presentations and discussions by interdisciplinary team members.
0.5 credits each course

OPTO 1500 Wellness in Daily Living
The principles of the balance of the physical, mental, social and spiritual needs for the achievement of health and happiness are discussed. Included are topics in personal goal setting, nutrition and diet, exercise, relaxation, and meditation among others.
2 credits

OPTO 1510 Introduction to Clinical Care I
This course is an introduction to the primary optometric examination including medical and ocular history, visual acuity, color vision, cover test, depth perception, pupillary reaction, external ocular examination, retinoscopy and ophthalmoscopy. Students will receive instruction on use of an electronic patient record and patient appointment software.
2 credits

OPTO 1520, 1530 Introduction to Clinical Care II, III
This course sequence is an introduction to the primary optometric examination including medical and ocular history, visual acuity, color vision, cover test, depth perception, pupillary reaction, external ocular examination, retinoscopy and ophthalmoscopy. Students will be required to use an electronic patient record and patient appointment software.
2 credits each course
Prerequisite for OPTO 1520 Introduction to Clinical Care II: OPTO 1510 Introduction to Clinical Care I
Prerequisite for OPTO 1530 Introduction to Clinical Care III: OPTO 1520 Introduction to Clinical Care II

OPTO 1540, 1550 Geometric and Physical Optics I, II
The optics of reflection, refraction at single spherical surfaces, thick lenses, prisms, and thin lenses will be covered in this sequence. Characteristics of electromagnetic waves, diffraction, interference and polarization will be explained.

Students will gain an appreciation of optics of telescopes, microscopes, other instruments, and the human eye.
4 credits each course
Prerequisite for OPTO 1550 Geometric and Physical Optics II: OPTO 1540 Geometric and Physical Optics I

OPTO 1560 Ocular Anatomy
The course presents a detailed discussion of ocular gross and microscopic anatomy as a basis for understanding systemic and ocular pathophysiology as well as some anomalies of monocular and binocular visual processes. A general review of histology is presented as background for an intensive consideration of the microscopic anatomy of the normal eye.
2 credits

OPTO 1580 Ocular Physiology
The course allows the student to understand and appreciate the physiology and pathophysiology of the tissues and physiological units of the eye including the eyelids, ocular tear film, cornea, aqueous humor, iris, lens, vitreous, retina and the visual pathways. Students will gain an understanding of the relationship of ocular physiology to ocular pharmacology and ocular pathophysiology.
2 credits
Prerequisite: OPTO 1560 Ocular Anatomy

OPTO 1620 Visual Science: Monocular Function
The basic aspects of monocular vision, including light and dark adaptation, color vision, spatial and temporal resolution will be discussed. Gross electrical potentials and photometry will be explained. Students will learn how to measure visual performance and understand its application to clinical optometry.
3 credits

OPTO 1622 Visual Science: Ocular Motility
This course focuses on characteristics, control, and deficits of the five somatic eye movement systems (convergence, saccadic version, pursuit, version, fixation maintenance, vestibular reflex) and the autonomic systems subserving accommodation, pupillary diameter and reflexes. The physiology of the extraocular muscles and their relationship to strabismus is included in the course.
2 credits

OPTO 1624 Visual Science: Binocular Function
Students will learn about binocular sensory mechanisms of vision. This course will focus on the geometry of space and stereovision, and the underlying neuroanatomy and physiology of binocular vision. This course will include a discussion of the horopter, retinal correspondence, stereopsis, fusion, fixation disparity, rivalry and aniseikonia.
3 credits
OPTO 1630, 1632 Ophthalmic Optics I, II
This course sequence covers design and application of ophthalmic materials; study of the physical and optical characteristics of ophthalmic single vision and multifocal lens designs; ophthalmic prisms; absorptive lenses; and the measurement and fitting of lenses and frames.
4 credits each course
Prerequisite for OPTO 1632 Ophthalmic Optics II: OPTO 1630 Ophthalmic Optics I

OPTO 1640, 1642, 1644 Ocular Disease I, II, III
This course sequence covers in depth signs and symptoms, pathophysiology, clinical course, differential diagnosis, treatment and management of ocular diseases including the anterior and posterior segment and ocular adnexa.
3 credits each course
Prerequisite for OPTO 1642 Ocular Disease II: OPTO 1640 Ocular Disease I
Prerequisite for OPTO 1644 Ocular Disease III: OPTO 1642 Ocular Disease II

OPTO 1650, 1652, 1654 Primary Eyecare Procedures I, II, III
This course sequence covers instrumentation, examination methods, psychophysical techniques, appropriate patient instructions, protocols and recording of findings. Instruction is provided to foster progressive development of basic examination techniques and assessment of binocular skills, ocular health and primary low vision, vision therapy and contact lens evaluation. Students must successfully complete a proficiency examination at the end of each course before progressing into the next course in the sequence.
3 credits each course
Prerequisite for OPTO 1652 Primary Eyecare Procedures II: OPTO 1650 Primary Eyecare Procedures I
Prerequisite for OPTO 1654 Primary Eyecare Procedures III: OPTO 1652 Primary Eyecare Procedures II

OPTO 1670 Research Design and Biostatistics
Principles of research design and the application of biostatistical methods will be discussed. The course will include an overview of potential studies that the student may choose for their capstone project.
3 credits

OPTO 1672 Capstone Project: Literature Search and Study Design
The student will decide on a project hypothesis, conduct a literature search and design the study. The project may be an extensive literature review, a series of clinical cases or an experiment of basic or clinical research design under the mentorship of a faculty member.
2 credits

OPTO 1675 Visual Neurophysiology
This course presents a discussion of the neurophysiological aspects of vision. Basic neurophysiological principles will be reviewed as well as retinal anatomy as a basis for understanding ocular visual neuro-pathophysiology to allow for a better understanding of some anomalies of monocular and binocular visual processes.
2 credits

OPTO 1690, 1692 Community Optometry Clinics I, II
Students will participate in and provide vision screening, primary eye care and ocular health promotion services to nursing homes, schools, community centers and other facilities.
2 credits each course

OPTO 1691 Ocular Pharmacology
This course focuses on the pharmacology of diagnostic and therapeutic agents. Specific topics include pharmacokinetics of the eye, use of autonomic agents, anti-allergic, anti-inflammatory and anti-infectious agents, and agents used to treat glaucoma. In addition, ocular effects of systemic medications will be presented.
2 credits
Prerequisite: BMED 475 Pharmacology II

OPTO 1695 Professional Communication and Cultural Competence
This course covers principles of patient interviewing, patient education, techniques to enhance adherence, effective written communication and inter-professional referrals. Students will gain an understanding and be able to manage patients from diverse cultural backgrounds such as children, the elderly, individuals with disabilities and ethnic minorities.
2 credits

OPTO 1700 Principles and Methods of Physical Assessment
Students learn how to collect a comprehensive health history and conduct a physical examination with emphasis on head, ear, eye, nose and throat neurological screening. This course discusses the relationship of findings from the health history and physical examination to ocular health conditions and their medical management. Students learn how to interpret clinical chemistry tests results; recognize criteria for referral of patients to other providers; and learn principles of cardiopulmonary resuscitation, continuous chest compression and emergency office procedures.
3 credits

OPTO 1720 Anomalies of Binocular Vision, Strabismus and Amblyopia
This course is an overview of the diagnosis and principles of management of non-strabismic oculomotor, accommodative...
and vergence anomalies. Principles of evaluation and management of strabismus and amblyopia are covered.
4 credits

OPTO 1722 Vision Therapy and Sports Vision
This course emphasizes diagnosis, treatment and management of accommodative, binocular, perceptual, integrative and visual cognitive dysfunctions. Students gain an appreciation of the application of this knowledge to the enhancement of sports-related visual skills.
4 credits

OPTO 1723 Visual Perception and Learning Disabilities
This course is a study of the role of visual function, perception, sensory integration and cognition in the learning process. The management of visually related learning problems and disabilities, and the communication about such disabilities with parents, educators, and other professionals will be emphasized.
2 credits

OPTO 1725 Pediatric Optometry
Examination techniques, diagnosis, treatment and management for the infant and child are the focus of this course.
2 credits

OPTO 1730 Ocular Therapeutics
The course presents an overview of the treatment and management of ocular disease with emphasis on the appropriate dosages, interactions and contraindications of pharmaceutical agents. Laser procedures, how they work, their indications and adverse effects are discussed.
3.0 credits
Prerequisite: OPTO 1691 Ocular Pharmacology

OPTO 1745 Epidemiology, Public Health and the Optometric Profession
This course is an introduction to the epidemiology of ocular anomalies, overview of public and community health planning and care, and the role of the optometrist in community health promotion.
2 credits

OPTO 1750 Cornea and Contact Lenses
This course is a review of ocular anatomy and physiology as it applies to contact lens wear, corneal topography, design of materials, fabrication, modification of contact lenses, fitting and evaluation of contact lens wear; counseling and follow-up care.
4 credits

OPTO 1752 Advanced Contact Lens Practice and Prosthetic Eyes
This course focuses on applications of contact lenses including, but not limited to, the fitting and care of patients requiring specialty contact lenses, correcting astigmatism, use of tinted and cosmetic lenses, fitting the presbyopic patient, fitting infants and children, fitting keratoconic patients, fitting postsurgical and other distorted corneas, use of haptic lenses and cosmetic shells. The art and science of adaptation of prosthetic eyes is also covered.
3 credits
Prerequisite: OPTO 1750 Cornea and Contact Lens

OPTO 1755 Legal and Professional Aspects of Optometry
This course covers legal, ethical, and professional concerns of optometric practice, including legal decision making, the regulatory role of government and administrative agencies, licensing procedures, professional liability and malpractice, ethical considerations, and the legal rights of patients in optometric practice.
2 credits

OPTO 1760 Capstone Project: Data Collection and Analysis
This course is a continuation of OPTO 1672. The student will further develop the capstone project, collect the data and perform statistical data analysis on data results.
2 credits

OPTO 1765 Optometric Practice Management
This course is an overview of the socio-economic considerations in the provision of primary and specialized optometric care. Invited lecturers in the field of finance, marketing and law along with established practitioners will provide the background for the development of successful optometric practices.
2 credits

OPTO 1770, 1771, 1772, 1773 Primary Eye Care Clinic I, II, III, IV
The student will provide primary eye care services under the supervision of clinical faculty. OPTO 1770 will emphasize the patient’s medical and ocular history, proper examination procedures and the correct recording of findings. OPTO 1771, 1772 and 1773 will emphasize the progressive mastery of the diagnosis, treatment and management of visual dysfunctions and ocular conditions.
3 credits each course

OPTO 1780 Board Review: Applied Basic Science
This is a review course in preparation of Part I (Applied Basic Science) of the National Boards.
2 credits
OPTO 1782 Evidence Based Medicine/Ocular Emergencies
The course will present the diagnostic and treatment strategies for common ocular emergencies ranging from minimal trauma to sudden vision loss. Students will gain skills in practicing evidence-based medicine in the management of ocular disease.
3 credits

OPTO 1785 Visual Rehabilitation
This course is an overview of the epidemiology, examination and management of patients with significant visual impairment. The use of optical, non-optical and electronic devices in the rehabilitation process and the role of other professionals such as occupational therapists and mobility specialists will be discussed.
4 credits

OPTO 1787 Neuro-optometry
Diagnosis, treatment and management of neuro-eye diseases, ocular manifestations of neurological diseases, and principles of neurooptometric rehabilitation are discussed.
2 credits

OPTO 1788 Optometric Gerontology and Special Populations
This course includes discussion of the effects of aging on the visual function, perception and cognition, functional consequences of vision and aging, and interdisciplinary aspects of care and community resources and the treatment options that are available. Examination needs of special populations such as the mentally and physically impaired are also covered.
2 credits

OPTO 1790, 1792 Clinical Case Analysis I, II
Case presentations from the college clinic or optometric literature that introduce clinical diagnosis, treatment and management of patients using evidence-based clinical protocols will be the focus.
3 credits each course

OPTO 1800, 1805 Optometric Patient Care I, II
This is the first in a series of full time rotation courses. Students will provide primary eye care services in primary eye care service clinics or specialty clinics of the College’s Eye Institute or selected rotation sites.
6 credits each course

OPTO 1801 Board Review: Patient Assessment and Management
This is a review course in preparation of Part II (Clinical Science) of the National Boards.
2 credits

OPTO 1810, 1815, 1820, 1825, 1830, 1835 Optometric Patient Care III, IV, V, VI, VII, VIII
These six are full time rotation courses. Students will provide primary eye care and advanced optometric care at the College’s Eye Institute or selected state, regional, national or international rotation sites. Clinical care will be complemented by case discussions. Each rotation is 4 or 6 weeks long, depending on the rotation site. Students must complete two rotations per quarter. Students must complete a minimum total of 24 weeks of full time rotation for OPTO 1810, 1815, 1820, 1825, 1830, and 1835.
6-9 credits each course
12 credits per quarter, minimum

OPTO 1812 Capstone Project Completion
Beginning in the second year, students will develop the skills to design a project and perform statistical analysis of data. The project may be an extensive in depth literature review, a series of clinical cases or experiments of basic or clinical research. Students will be mentored by a faculty member and devote a year to conduct the necessary literature review and collect data. Finally, students will present their manuscript in a publishable format, and deliver a public presentation of the work during the summer of their fourth professional year.
3 credits

Electives
Prerequisites are listed for those courses with such requirements. When no prerequisite is listed in a course description, it is implied that there is no prerequisite.

OPTO 1680 Conversational Spanish I
Students develop basic communication skills in Spanish. This course emphasizes the vocabulary associated with the optometric examination. This course is for students with minimal knowledge of the Spanish language.
3 credits

OPTO 1681 Conversational Spanish II
This is a continuation of OPTO 1682. Students develop greater skill in basic communication in Spanish. This course emphasizes the vocabulary associated with the optometric examination. This course is for students with minimal knowledge of the Spanish language.
3 credits

Prerequisite: OPTO 1680 Conversational Spanish I

OPTO 1682 Selected Studies
This course allows students to pursue their special interests. This may include writing of abstracts or a review of current vision science literature. This may be repeated for credit with permission of the instructor.
1-3 credits (repeatable)
Prerequisite: permission of the course director
OPTO 1795 Third Year Clinical Skills Enhancement
Individualized supervised clinical experiences to enhance the examination skills of students are the focus of this course.
1-3 credits

OPTO 1895 Fourth Year Clinical Skills Enhancement
Individualized supervised clinical experiences to enhance the examination skills of students are the focus of this course.
1-3 credits

Student Academic Policies
The following academic policies apply to all AZCOPT students who matriculate during the academic year of this catalog publication. These policies will apply throughout the entire time a student is enrolled in the College. In the event that these policies need to be revised as the result of new accreditation requirements, mandates by the Department of Education, or other unforeseen circumstances, students will be notified in writing prior to the effective date of the new policy.

Student Promotion and Graduation Committee
The Student Promotion and Graduation Committee (SPGC) is composed of the Assistant or Associate Dean and members of the College faculty. It is responsible for enforcing the published academic and professional standards established by the faculty and for assuring that they are met by all students enrolled in each program. As such, this Committee establishes the criteria and procedures for student advancement and graduation, as well as academic probation, dismissal, and readmission. This Committee meets at a minimum at the end of each academic quarter to review the academic progress and performance of students enrolled in the programs in relation to institutional academic policies. At the end of the academic year, the Committee assesses the academic and professional progress and performance of each student. If the student’s progress is satisfactory, the student is promoted to the next academic year, provided all tuition and fees have been paid. Finally, the Committee also identifies and recommends to the MWU Faculty Senate candidates for graduation.

If a student fails to make satisfactory progress in completing the prescribed course of study, the Committee shall take appropriate action to correct the deficiency(ies). In instances involving repeated failures of a student to maintain satisfactory academic/professional progress, the Committee may recommend dismissal.

Among the options available to the Committee in regard to unsatisfactory student performance are:
1. That a written caution be provided to the student.
2. That the student:
   a. be placed on academic probation for a specified period of time;
   b. take an alternative approved course offered at another college or university;
   c. be considered for re-examination;
   d. repeat the course(s) in which there is a failure when the course is offered again in the curriculum;
   e. be placed in an extended program; or
   f. be dismissed from the College.

Academic Standards
An annual didactic grade point average will be used as the central measure of academic performance. It is calculated from all didactic courses for a particular professional year. Grades earned in courses taken prior to matriculation in the professional program, grades earned for courses taken at another institution while enrolled in the professional program, and grades earned for courses taken at the College in a more advanced professional year than that in which the student is enrolled, are not included in the calculation of this annual grade point average.

Students must maintain an annual grade point average of 2.00 in their professional program to remain in good academic standing. If a student’s annual grade point average drops below 2.00 at the end of any quarter during the academic year, or the student earns a grade of F in one or more courses, the student is notified, in writing that he/she is being placed on academic probation for the next academic quarter. Probation represents notice that continued inadequate academic performance may result in dismissal from the program and the College.

If the student has an annual grade point average less than 2.00 at the end of an academic year, or has earned a grade of F in one or more courses that year, the student will be either dismissed or given the option to be in an extended program and repeat all of the courses in that year in which grades of F were received. This extended program year must take place in the year immediately following. A student is allowed to go through an extended program only once.

If the student does not meet the criteria for satisfactory academic performance at the end of the extended program, he/she will be dismissed. To be returned to good academic standing, a student must raise his/her annual grade point average to 2.00 or above at the end of the repeat year. Such a student re-enters the next professional year curriculum and resumes a full load. A re-entering student must achieve a cumulative grade point average of 2.00 at the end of each quarter to continue at AZCOPT.

The following policies also guide decisions made by the Student Promotion and Graduation Committee:
1. Any student with a prerequisite deficiency at the time of matriculation must complete any and all deficiency(ies) prior to the beginning of the second professional year. Failure to do so will result in a delay in the start of the second professional year. Only under extraordinary circumstances are time extensions permitted by the
Committee during its deliberation. The student being evaluated may request to appear before the
Committee if a student can demonstrate one of the following:

1. Bias of one or more Committee members.
2. Material information not available to the Committee at the time of its initial decision.
3. Procedural error.

The student being evaluated may request to appear before the Committee during its deliberation.

Appeal Process
Following notification of a decision for dismissal or academic deceleration, a student may appeal, in writing, the decision to the Dean. Such appeals must be received by the Dean within three working days after the student is officially notified of the dismissal or deceleration decision. The Dean makes the final decision on appeals. The Dean may grant an appeal only if a student can demonstrate one of the following:

1. Bias of one or more Committee members.
2. Material information not available to the Committee at the time of its initial decision.
3. Procedural error.

The student being evaluated may request to appear before the Committee during its deliberation.

Dismissal
A student may be dismissed from the College for academic reasons upon the recommendation of the Student Promotion and Graduation Committee. The dismissal is based on the determination by the Committee that the student has not satisfactorily demonstrated that he or she possesses the aptitude to successfully achieve the standards and requirements set forth in the academic policies and professional expectations for the program.

Externship (refers to OPTO 1800, 1805, 1810, 1815, 1820, 1825, 1830 and 1835 Optometric Patient Care I-VIII)
When a student either fails or receives a withdrawal failure (WF) in an externship he/she must petition the Student Promotion and Graduation Committee within 30 calendar days after the last day of the failed or withdrawn failed externship to retake the same type of externship. After consideration of the circumstances of the failure or WF, the Student Promotion and Graduation Committee may exercise any of the following options:

1. Require the student to take coursework;
2. Recommend that the student take coursework;
3. Recommend that the student undergo a period of independent study; or
4. Require the student to wait a defined time period before repeating the externship.

The Committee's options are not limited to the above and will be determined on a case-by-case basis. The timing of the retake will be as early as possible once the student has satisfied the Committee's requirements and is subject to availability of sites as determined by the College. The retake, if granted, must be completed within 12 calendar months of the date the petition is received by the Dean's Office. If the student fails or receives a WF for the externship on the retake, he/she is dismissed from studies at AZCOPT. Students are allowed only one failed or withdrawn failed externship and one retake of the failed or withdrawn failed externship while enrolled at AZCOPT.

Extended Program
Problems may arise that may necessitate the deceleration of a student's academic course load. Accordingly, an individual's academic course load may be reduced so that the student enters what is termed an extended program or split academic course of study. Such a program rearranges the course schedule so that the normal time period for the program is extended, usually by one additional year. Only enrolled students may enter an extended program. To enter an extended program, either one or both of the following conditions must be met:

1. Personal hardship. If a student is experiencing unusual stresses in life and an extended academic load could alleviate added stress, the student may petition the Student Promotion and Graduation Committee for an extended program. This petition is not automatically granted and is approved only in exceptional circumstances. The Committee is responsible for evaluating the petition and submitting a recommendation concerning a student's request for an extended program to the Assistant or Associate Dean, AZCOPT. The Assistant or Associate Dean is responsible for reviewing and assessing the Committee's recommendation, then notifying the student of a decision.

2. Academic. As described above, a student ending an academic year with an annual GPA of less than 2.00 may be given the option to repeat courses from that year in which F grades were received. A student may be placed on an extended program for academic reasons at the discretion of the Student Promotion and Graduation Committee. A student placed on an extended program for academic reasons is automatically placed on academic probation and may not be returned to good academic standing until the extended program is completed.

If a student is placed on an extended program, such action does not modify or limit the committee's actions for dismissal. Thus, the student may be dismissed for academic reasons while on an extended program.

A student placed on an extended program for academic reasons will be returned to good academic standing when he/she reenters the prescribed academic program and completes all courses that were unsatisfactory and are required for graduation.
A re-entering student must achieve a cumulative grade point average of 2.00 at the end of each quarter to continue at the college. A student is allowed to go through an extended program only once.

**Prerequisites for Courses**

Prerequisites for courses may be established by the department that administers the course. Prerequisites are recommended to the Curriculum Committee for approval and are listed with the course description in the catalog. On a case-by-case basis, prerequisites may be waived upon approval by the assistant/associate dean of the department that delivers the course.

**Withdrawal from College/University**

The decision to withdraw from the University is a serious matter. Any student who withdraws from a college or a program is dropped from the rolls of the University. As such, if he/she decides at some later date to reenter the program, he/she must reapply for admission and, if accepted, assume the status of a new student. Students contemplating withdrawal must inform the Dean of the decision to voluntarily withdraw and voluntarily relinquish his/her position in the program. The student must contact the Dean’s Office and must complete the appropriate clearance procedures. The withdrawal process includes the clearing of all financial obligations of MWU and an exit interview. Following completion of these withdrawal procedures, the designation “Withdrawal” will be placed in the student’s permanent record. The designation “Unofficial Withdrawal” is placed in the permanent record of any student who withdraws from his/her program without complying with the above procedures. For more information, see the Student Financial Services sections on Notification of Withdrawal and Return of Title IV Funds/MWU Refund Policy.

**STUDENT ADMINISTRATIVE POLICIES**

**Advanced Standing**

All requests for advanced standing by newly admitted, transfer, or enrolled students are processed on a course-by-course basis by the Student Promotion and Graduation Committee. The Dean’s Office provides staff support for such evaluations. To request such consideration, a student should submit a letter of request to the Dean in which the student lists a course(s) previously taken at an accredited college or university which might be similar in content to a professional course(s) that he/she is scheduled to take. The student is advised to provide an official course description(s) and a syllabus(sylabii) of the course(s) previously taken, as well. For some courses, a student may be required to take a comprehensive challenge exam. All requests must be submitted at least three weeks prior to the start of the course being considered. The decision of the committee is forwarded to the Dean as a recommendation to either grant or deny advanced standing. Advanced standing will be considered for coursework taken in which a letter grade of C or better has been earned. A C– letter grade is not acceptable for advanced standing consideration.

No advanced standing will be awarded for professional coursework completed at a foreign college.

**Attendance**

Upon acceptance to AZCOPT, students are expected to devote their entire efforts to the academic curriculum. The College actively discourages employment that will conflict with a student’s ability to perform while didactic courses and externships are in session and will not take outside employment or activities into consideration when scheduling classes, examinations, reviews, field trips, or individual didactic or experiential course functions. Class attendance is mandatory for all students during externship.

**Class Standing**

To achieve the status of a second-year student in the professional program, students must have successfully completed all requisite first-year courses and earned an annual GPA of 2.00. To achieve the status of a third-year student in the professional program, students must have successfully completed all requisite second-year courses and earned an annual GPA of 2.00. To achieve the status of a fourth-year student in the professional program, students must have successfully completed all requisite third-year courses, earned an annual GPA of 2.00, and successfully passed Part I of the NBEO exam.

**Course Credit**

Course credits are generally determined according to the following formula: one credit is assigned to a course for three laboratory contact hours per week; two case discussion, recitation, or workshop contact hours per week; one formal lecture contact hour per week; or three contact hours of other activities per week. Each week (40 hours) of full time rotation is equivalent to 1.5 credits. Exam time could be considered part of contact time such that the instructor would have the option to count time spent on assessments as part of contact time.

**Course Withdrawal**

Unless there are exceptional circumstances, a student will not be allowed to withdraw from a course after the end of the 8th week of the quarter. In the event of exceptional circumstances, the student who withdraws from a course will get a W or WF based on performance.

**Disciplinary Probation**

Disciplinary probation occurs for student acts of professional misconduct as defined in Appendices 2 and 4 of the Midwestern University Student Handbook. Disciplinary probation is not noted on the transcript but is kept in the
student’s file. Disciplinary probation information may be shared with clinical sites that are affiliated with Midwestern University educational programs.

Grades
Letter grades corresponding to the level of achievement in each course are assigned based on the results of examinations, required coursework, and, as applicable, other criteria established for each course as follows. Individual faculty have the prerogative to use a plus/minus letter grading system or a whole letter grading system. Elective courses may be offered as pass/fail upon the direction of the faculty.

Courses are recorded in terms of quarter hour(s) of credit. Multiplication of the credits for a course by the numeric value for the grade awarded gives the number of quality points earned for a course. Dividing the total number of quality points earned in courses by the total number of credits in those courses gives the grade point average.

Grades reported as W, WF, and P are recorded on a student’s permanent record but are not used in the calculation of a student’s grade point average. Similarly, a grade of I may be assigned and is used only when special/extenuating circumstances exist (e.g., prolonged illness, family crisis, etc), which prevent a student from completing the necessary course requirements on time in order to receive a grade. Under such circumstances, the student is responsible for providing the department with a written request notifying the department of the circumstances, documenting the problem(s), and asking for authorization to extend the time allotted to complete the unfinished coursework. Unless otherwise specified, a grade of I must be resolved within 10 calendar days starting from the last day of final exams for the quarter or the incomplete grade is automatically converted into a grade of F, which signifies failure of the course.

If a student receives an F grade in a course, that grade will be recorded on his/her transcript. This deficiency may be corrected as recommended by the Student Promotion and Graduation Committee in one of two ways: repetition or re-examination of the course. The decision to permit a student to repeat or to take a re-examination of the course rests with the department offering the course and the Committee. Following either successful repetition or re-examination of the course, the permanent record of the student will be updated to indicate that the failing grade has been successfully corrected.

If re-examination of the course was successfully completed, a grade of C or P if the course is a pass/fail course, is registered in place of the F, and the student’s cumulative grade point average will reflect the change.

If a student repeats a course, the course is entered twice in the permanent record of the student. The grade earned each time is recorded, but only the most recent grade is used in the computation of the student’s cumulative grade point average.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Quality Points Per Credit</th>
<th>Grade</th>
<th>Quality Points Per Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4.00 Superior Attainment</td>
<td>I</td>
<td>Incomplete Course</td>
</tr>
<tr>
<td>A-</td>
<td>3.67</td>
<td>P</td>
<td>Passing</td>
</tr>
<tr>
<td>B+</td>
<td>3.33</td>
<td>W</td>
<td>Withdrawal with no penalty and no credit</td>
</tr>
<tr>
<td>B</td>
<td>3.00 Meritorious Attainment</td>
<td>W/F</td>
<td>Withdrawal/Failing</td>
</tr>
<tr>
<td>B-</td>
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</tr>
<tr>
<td>C+</td>
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<td>2.00 Adequate Attainment</td>
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</tr>
<tr>
<td>F</td>
<td>0.00 Failure</td>
<td>0.00</td>
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Grade Appeals Policy
1. Appeal of Non-failing Course Grades
A student who wishes to appeal a non-failing course grade must make the appeal to the course director within one week following receipt of the grade. The course director must act upon the student’s appeal within one week following receipt of that appeal. A narrative explaining the basis of the appeal must accompany the request. An appeal must be based on one of the following premises:
   p. bias
   q. mathematical error in calculating the final grade
   r. factual errors in course assessment tools

If the appeal is denied, the student has the right to appeal the decision to the course director’s immediate supervisor within one week of receipt of the course director’s denial. The course director’s supervisor should notify the student of his/her decision within one week following receipt of the student’s reappeal. The decision of the course director’s supervisor is final and must occur prior to the start of the subsequent quarter.

2. Appeal of Course Grades Subject to Review by the Student Promotion and Graduation Committee
A student whose academic progress will be subject to review by the College’s Student Promotion and Graduation Committee and who wishes to appeal a grade must do so in an expedited manner prior to the scheduled meeting of the Committee. In this case, an appeal of a course grade must be submitted within 24 hours following receipt of the grade and must be based on one of the premises stated above. The course director must act on this appeal within 24 hours. Any appeal of this decision will be addressed by the course director’s
supervisor. The student is responsible for notifying the chair of the Student Promotion and Graduation Committee that a grade appeal has been filed prior to the meeting of the Committee.

All appeals and decisions must be communicated in a written form.

**Graduation Walk-Through Policy**

A student who has not satisfied academic requirements for a particular degree may seek permission to participate in a graduation ceremony for his/her program/college if the student will complete all academic requirements for the degree within the one quarter immediately following the official scheduled end of the academic program for his/her class.

To seek permission, the student must submit a formal, signed letter of request in writing to participate in the graduation ceremony. The letter should be addressed to the Dean. The letter must state the reason for the request, a timeline for completion of all academic requirements for the degree which shows that all degree requirements will be met within the one quarter immediately following the official scheduled end of the academic program. The letter should be submitted no later than eight weeks prior to the official graduation date for his/her program/college.

The Dean is responsible for verifying that all of the requisite information is in the letter, and that the information is correct. The Dean then forwards the letter to the Student Promotion and Graduation Committee for consideration.

The Student Promotion and Graduation Committee is responsible for reviewing the student’s request. Each request is considered based on its individual merits. If approved, the committee will add the student to the proposed list of candidates for graduation, denote on the listing that the student will not have completed the academic requirements by the official graduation date, and then forward the list of candidates to the Dean.

The Dean will then forward the list of candidates for graduation to the MWU Faculty Senate for review and approval at an appropriately scheduled meeting, prior to the official graduation date.

The Senate will forward the list of approved candidates for degrees to the University President for review and approval by the Board of Trustees.

In all cases, students who walk through will not receive a diploma, until all graduation requirements are met.

**Re-examination (Retest)**

Re-examination occurs when a student fails a course, but qualifies for a re-examination. It is the prerogative of the course director to offer or not offer a re-examination for a course failure and to determine the eligibility criteria for a re-examination. If a course director has a re-examination policy, it should be stated in the course syllabus.

If a student qualifies for a re-examination, a grade of “I” should be submitted to the Registrar at the end of the quarter. The re-examination(s) must be completed within 10 working days beginning from the first Monday following the end of the quarter. If the student passes the re-examination, the grade of “I” will be converted to the minimal passing grade of the college/program. If the student fails the re-examination, the grade of “I” will be converted to a grade of “F.” If the Registrar does not receive a change of grade form within 10 working days, the “I” will automatically be changed to a grade of “F.”

**Retake**

Retake occurs when formal repetition of an entire course or a portion of the course is required due to course failure. A course may be retaken when:

1. no reexamination is offered by the department.
2. the student has failed the reexamination.
3. the student fails to meet eligibility criteria for reexamination, if offered by the course director.

It is the decision of the Student Promotion and Graduation/Academic Review Committee of each college/program to recommend a Retake of a course. The academic review committee following department approval will determine the nature of the Retake and the time frame for completion of the repeated course. The course may be repeated at MWU or at an outside institution. The options for repeating a course at MWU may include a directed readings remedial course with examinations to repeating the course in its entirety the next academic year. In either case, the student must be registered for the course and will be charged the appropriate tuition. A repeated course at an outside institution must be approved by the department/program as a satisfactory replacement for the failed course. A student must earn a minimum grade of C (not C-) in a replacement course completed at an outside institution in order to apply the credit toward MWU degree requirements. Students are responsible for all costs associated with repeating a failed course at another institution.

**Retention of Tests or Written Assignments**

Instructors will retain examinations or written assignments not returned to students for a period of one year following the start of the quarter in which a course is given. After that time, materials are discarded.

**Transportation to/from Externship Sites**

It is the student’s responsibility to assure that he/she has appropriate arrangements for transportation to/from externship sites throughout the curriculum. Transportation is not provided by the College.
FACULTY

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New England College of Optometry
Dean and Professor

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