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

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

OFFICE OF ADMISSIONS
www.midwestern.edu

Downers Grove Campus
555 31st Street
Downers Grove, Illinois 60515
(800) 458-6253
(630) 515-6171
E-mail: admissil@midwestern.edu
This catalog is published for the convenience of students at Midwestern University (MWU). It is intended to be effective as of June 1, 2007. 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.

Midwestern University is not responsible for loss of or damage to a student’s personal property on premises owned or operated by the University, regardless of cause.

© Copyright Midwestern University 2007.
# CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>President’s Message</td>
<td>5</td>
</tr>
<tr>
<td>Governance</td>
<td>5</td>
</tr>
<tr>
<td>Mission</td>
<td>6</td>
</tr>
<tr>
<td>History</td>
<td>6</td>
</tr>
<tr>
<td>Accreditation</td>
<td>7</td>
</tr>
<tr>
<td>Conferral of Degrees</td>
<td>7</td>
</tr>
<tr>
<td>Facilities</td>
<td>7</td>
</tr>
<tr>
<td>Housing</td>
<td>7</td>
</tr>
<tr>
<td>Americans with Disabilities Act Policy</td>
<td>7</td>
</tr>
<tr>
<td>Criminal Background Checks</td>
<td>8</td>
</tr>
<tr>
<td>Harassment/Hostile Working Environment</td>
<td>9</td>
</tr>
<tr>
<td>Admissions</td>
<td>9</td>
</tr>
<tr>
<td>Student Services</td>
<td>9</td>
</tr>
<tr>
<td>Student Financial Services</td>
<td>11</td>
</tr>
<tr>
<td>Midwestern University Academic Calendar 2007-2008</td>
<td>22</td>
</tr>
<tr>
<td>Arizona College of Osteopathic Medicine</td>
<td>25</td>
</tr>
<tr>
<td>Mission</td>
<td>25</td>
</tr>
<tr>
<td>Accreditation</td>
<td>25</td>
</tr>
<tr>
<td>Admissions</td>
<td>25</td>
</tr>
<tr>
<td>Instructional Program</td>
<td>28</td>
</tr>
<tr>
<td>Curriculum</td>
<td>29</td>
</tr>
<tr>
<td>Course Descriptions</td>
<td>30</td>
</tr>
<tr>
<td>MWU/MATRIX System: An Osteopathic Postdoctoral Training Institution (OPTI)</td>
<td>37</td>
</tr>
<tr>
<td>Student Academic Policies</td>
<td>38</td>
</tr>
<tr>
<td>Faculty</td>
<td>46</td>
</tr>
<tr>
<td>College of Pharmacy-Glendale</td>
<td>49</td>
</tr>
<tr>
<td>Mission</td>
<td>49</td>
</tr>
<tr>
<td>Departments</td>
<td>49</td>
</tr>
<tr>
<td>Conferred of Degrees</td>
<td>50</td>
</tr>
<tr>
<td>Accreditation</td>
<td>50</td>
</tr>
<tr>
<td>Instructional Program</td>
<td>50</td>
</tr>
<tr>
<td>Admissions</td>
<td>50</td>
</tr>
<tr>
<td>Curriculum</td>
<td>55</td>
</tr>
<tr>
<td>Course Descriptions</td>
<td>56</td>
</tr>
<tr>
<td>Awards</td>
<td>63</td>
</tr>
<tr>
<td>Scholarships</td>
<td>64</td>
</tr>
<tr>
<td>Student Academic Policies</td>
<td>65</td>
</tr>
<tr>
<td>Dean’s List</td>
<td>65</td>
</tr>
<tr>
<td>Student Promotion and Graduation Committee</td>
<td>66</td>
</tr>
<tr>
<td>Student Administrative Policies</td>
<td>69</td>
</tr>
<tr>
<td>Faculty Pharmacy Practice</td>
<td>70</td>
</tr>
<tr>
<td>Faculty Pharmaceutical Sciences</td>
<td>71</td>
</tr>
<tr>
<td>College of Health Sciences</td>
<td>73</td>
</tr>
<tr>
<td>Mission</td>
<td>73</td>
</tr>
<tr>
<td>Academic Policies</td>
<td>73</td>
</tr>
<tr>
<td>Physician Assistant Program</td>
<td>85</td>
</tr>
<tr>
<td>Definition of a Physician Assistant</td>
<td>85</td>
</tr>
<tr>
<td>Mission</td>
<td>85</td>
</tr>
<tr>
<td>Program Description</td>
<td>85</td>
</tr>
<tr>
<td>Degree: Master of Medical Science (M.M.S.) in Physician Assistant Studies</td>
<td>85</td>
</tr>
<tr>
<td>Accreditation</td>
<td>86</td>
</tr>
<tr>
<td>Admissions</td>
<td>86</td>
</tr>
<tr>
<td>Graduation Requirements</td>
<td>89</td>
</tr>
<tr>
<td>Certification/Licensure Requirements</td>
<td>89</td>
</tr>
<tr>
<td>Curriculum</td>
<td>89</td>
</tr>
<tr>
<td>Course Descriptions</td>
<td>91</td>
</tr>
<tr>
<td>Faculty</td>
<td>95</td>
</tr>
<tr>
<td>Occupational Therapy Program</td>
<td>97</td>
</tr>
<tr>
<td>Mission</td>
<td>97</td>
</tr>
<tr>
<td>Program Description</td>
<td>97</td>
</tr>
<tr>
<td>Program Objectives</td>
<td>97</td>
</tr>
<tr>
<td>Accreditation</td>
<td>98</td>
</tr>
<tr>
<td>Admissions</td>
<td>98</td>
</tr>
<tr>
<td>Evaluation of Student Performance</td>
<td>101</td>
</tr>
<tr>
<td>Time Limit for Completion of Coursework</td>
<td>101</td>
</tr>
<tr>
<td>Graduation Requirements</td>
<td>101</td>
</tr>
<tr>
<td>Licensure Requirements</td>
<td>101</td>
</tr>
<tr>
<td>Curriculum</td>
<td>101</td>
</tr>
<tr>
<td>Course Descriptions</td>
<td>102</td>
</tr>
<tr>
<td>Faculty</td>
<td>107</td>
</tr>
<tr>
<td>Biomedical Sciences Program</td>
<td>109</td>
</tr>
<tr>
<td>Admissions Requirements</td>
<td>109</td>
</tr>
<tr>
<td>Application Process</td>
<td>110</td>
</tr>
<tr>
<td>Matriculation Process</td>
<td>111</td>
</tr>
<tr>
<td>Graduation Requirements</td>
<td>111</td>
</tr>
<tr>
<td>Bachelor of Biomedical Sciences Degree Program</td>
<td>111</td>
</tr>
<tr>
<td>Master of Biomedical Sciences Degree Program</td>
<td>118</td>
</tr>
<tr>
<td>Master of Arts in Bioethics, Certificate in Bioethics, and Master of Health Professions Education</td>
<td>124</td>
</tr>
<tr>
<td>Graduation Requirements</td>
<td>125</td>
</tr>
<tr>
<td>Master of Health Professions Education Degree Program</td>
<td>126</td>
</tr>
<tr>
<td>Master of Arts in Bioethics Degree Program and Certificate in Bioethics Program</td>
<td>130</td>
</tr>
<tr>
<td>Dual Degree Options</td>
<td>134</td>
</tr>
<tr>
<td>Faculty</td>
<td>134</td>
</tr>
<tr>
<td>Cardiovascular Science Program</td>
<td>137</td>
</tr>
<tr>
<td>Definition of a Perfusionist</td>
<td>137</td>
</tr>
<tr>
<td>Mission</td>
<td>137</td>
</tr>
<tr>
<td>Program Description</td>
<td>137</td>
</tr>
<tr>
<td>Accreditation</td>
<td>137</td>
</tr>
<tr>
<td>Admissions</td>
<td>137</td>
</tr>
</tbody>
</table>
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, or the College of Dental Medicine, 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. Goeppeinger, Ph.D.
President & Chief Executive Officer

GOVERNANCE

Board of Trustees
William D. Andrews,
Chair
Sr. Anne C. Leonard, C.N.D.,
Vice Chair
Gerrit A. van Huisstede,
Secretary/Treasurer
Kathleen H. Goeppeinger, Ph.D.,
President & Chief Executive Officer
The Honorable Jean L. Baxter, J.D.
Michael J. Blend, Ph.D., D.O.
Frank J. DiLeo
John H. Finley, Jr., D.O.
Gretchen R. Hannan
Alexander Irvine
John Ladowicz, M.B.A.
Kevin D. Leahy
Madeline R. Lewis, D.O.
Robert M. Lockhart, Ph.D.
W. Jay Lovelace
Paul M. Steingard, D.O.

Officers and Administrators
Kathleen H. Goeppeinger, Ph.D.
President & Chief Executive Officer
Arthur G. Dobbelaeere, Ph.D.
Executive Vice President & Chief Operating Officer
Gregory J. Gaus
Senior Vice President & Chief Financial Officer
Karen D. Johnson
Vice President, University Relations
Dean P. Malone
Vice President, Business Services
John R. Burdick, Ph.D.
Dean, Basic Sciences, & Vice President, Clinic Operations
George T. Caleel, D.O.
Vice President, Clinical Education

Mary W. L. Lee, Pharm.D., BCPS, FCCP
Vice President & Chief Academic Officer, Pharmacy and Health Sciences Education

Angela L. Marty, PHR
Vice President, Administration & Human Resources

Dennis J. Paulson, Ph.D.
Vice President & Chief Academic Officer, Medical and Dental Education

Teresa Dombrowski, Ph.D.
Dean of Students, Downers Grove Campus

Nancy Fjortoft, Ph.D.
Dean, Chicago College of Pharmacy

Lori A. Kemper, D.O.
Dean, Arizona College of Osteopathic Medicine

Ross J. Kosinski, Ph.D.
Dean of Students & Community Outreach, Glendale Campus

Anne Y. F. Lin, Pharm.D.
Dean, College of Pharmacy–Glendale

Karen J. Nichols, D.O., M.A., FACOI
Dean, Chicago College of Osteopathic Medicine

Richard J. Simonsen, D.D.S., M.S.
Dean, College of Dental Medicine

Jacquelyn M. Smith, Ph.D.
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 21 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, and the College of Dental Medicine (CDM) in 2006. 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 29 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.ncacche.org>). Please refer to the specific college sections of this catalog for further information on program and professional accreditation.

CONFERAL 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 that 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 with the Stagecoach Dining Hall, a weight room, a big screen TV with theater seating, pool and ping pong tables, and administrative offices.
- Midwestern University Clinic, includes family 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.

The planned expansion of the Glendale Campus in 2007/2008 includes:

- Expansion of the library facilities and an additional computer lab in Sahuro Hall.
- A third building to the Barrel Student Center.
- A Recreation and Wellness Hall featuring gymnasium, art and craft rooms, yoga/pilates room, handball courts, exercise equipment and showers/locker rooms.
- Glendale Hall, featuring classroom, labs and faculty offices.
- Expansion of the Foothills Science Center.
- 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 the building and parking locations.

Displaced 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. Procedures relating to application for accommodations for disabilities are outlined in the policy section of the MWU Student Handbook under “Disability Services” (http://mwunet.midwestern.edu/administrative/SS/ssSH_policy.htm).

**CRIMINAL BACKGROUND CHECKS**

Due to growing concerns nationwide regarding the suitability of today’s health care providers, many hospitals and other institutions or businesses 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 care certificates and licenses. Existence of a criminal history may subject an individual to denial of initial license or health care certificates and licenses. Existence of a criminal history in order to apply for certain addition, many state statutes also require disclosure of an individual’s criminal history. In institutions or businesses providing health care services of today’s health care providers, many hospitals and other institutions or businesses 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.

Due to growing concerns nationwide regarding the suitability of today’s health care providers, many hospitals and other institutions or businesses 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 institutions or businesses providing health care services of today’s health care providers, many hospitals and other institutions or businesses 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.

It is the policy of Midwestern University that all students are to 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, CCOM students are required to undergo fingerprinting as part of the criminal background check process.

The criminal background check involves obtaining a waiver from a matriculating or current student to authorize an external agency 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 so the University can make a determination whether the criminal history will negatively impact the student’s admission status or academic progress.

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

1. All matriculating students must fill out the required paperwork in order to authorize the Department of Student Services to conduct the criminal background check. Students who are offered to matriculate are provided with a copy of the policy and criminal background check authorization form as part of the matriculation agreement packet.

2. The Department of Student Services will initiate a criminal background investigation.

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 history of a misdemeanor or felony conviction exists, 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’s 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 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 college 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.
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. Those individuals who believe they have been harassed may obtain redress promptly and equitably through formal and informal procedures of the University, as outlined in the policy section of the MWU Student Handbook (http://mwunet.midwestern.edu/administrative/SS/ssSH_policy.htm).

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

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.

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
Midwestern University
19555 North 59th Avenue
Glendale, AZ 85308
623/572-3215
admissaz@midwestern.edu
http://www.midwestern.edu

Office of Admissions
Midwestern University
555 31st Street
Downers Grove, IL 60515
630/515-6171
800/458-6253
admissil@midwestern.edu
http://www.midwestern.edu

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, Student Activities, Student Counselor 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 office; (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 Organizations
The following student organizations are recognized by the Student Senate, respective Student Councils, and the Dean of Students and have been approved by the Dean of the respective college. Students interested in obtaining more information about any of these organizations or having any questions concerning how to apply for membership, should contact the president(s) of the respective organization(s). A list of the officers is available from the Department of Student Services. Descriptions of each organization are found in the Student Handbook on the Student Services Website at <http://mwunet.midwestern.edu/administrative/SS/ssStuHandbook.htm>.

MWU-Glendale Clubs/Organizations

Glendale Campus
Family Matters Club
Midwestern University International Student Health Association (MISHA)
Rainbow Network

Arizona College of Osteopathic Medicine
American College of Osteopathic Family Practitioners (ACOFP)
American Medical Student Association
AZCOM HOME (Homeless Outreach Through Medicine & Education)
AZCOM Radiology & Technological Society (RATS):
Christian Medical and Dental Association (CMDA)
Emergency Medicine Club
Integrative Medicine Club
Internal Medicine Club
Maimonides
Medical Spanish Club
Military Medical Student Association (MMSA)
National Osteopathic Women Physicians Association
Oncology Club
Pediatric Medicine Club
Sigma Sigma Phi
Spirituality in Medicine
Sports Medicine Club
Student Osteopathic Medical Association (SOMA)
Student Osteopathic Obstetricians and Gynecologists Association (SOOGA)
Student Osteopathic Surgery Association (SOSA)
Undergraduate American Academy of Osteopathy (UAAO):
Wilderness Medical Society (WMS)

College of Health Sciences-Glendale
Biomed Club

Physician Assistant Program
SAMPAS: (Society of Arizona Midwestern Physician Assistant Students)
The Arizona State Association of Physician Assistants (ASAPA)

Occupational Therapy Program
American Occupational Therapy Association (AOTA)
Arizona Occupational Therapy Association (AZOTA)
Student Occupational Therapy Association (SOTA)

Podiatric Medicine Program
American Podiatric Medical Students Association
American College of Foot and Ankle Surgeons
American College of Foot and Ankle Orthopedics and Medicine
Pi Delta Honor Society
American Association of Women Podiatrists
American Academy of Podiatric Sports Medicine
Student National Association of Podiatric Medicine

College of Pharmacy-Glendale
Academy of Students of Pharmacy (APhA/ASP)
American Society of Health-System Pharmacists (ASHP)
Midwestern University Student Chapter of Health-System Pharmacists (MUSSHSP)
Kappa Psi Pharmaceutical Fraternity
National Community Pharmacist Association (NCPA)
Phi Delta Chi Pharmacy Fraternity

Student Counseling
The Glendale campus has a full-time student counselor. The Student Counselor is 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 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 wellness/recreation facilities located on campus.

On the Glendale campus, these facilities currently include a weight room, sand volleyball court, an outdoor basketball court, a ping-pong table, and, for resident students, a swimming pool and onsite volleyball area. Students are eligible for a discounted membership at LA Fitness, which is located near the campus and provides aerobic exercise classes and equipment, racquetball and basketball courts, a swimming pool and sauna, and a variety of weight machines and programs.

Additionally, students may participate in numerous activities sponsored by the University, including volleyball, soccer, basketball, ping-pong tournaments, softball competitions, and group activities such as martial arts training, yoga, running, and hiking.

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 does not discriminate on the basis of race, color, national and ethnic origin, gender, sexual preference, or handicap in the administration of educational policies, admission policies, financial aid, employment, or any other University program or activity. It admits qualified students to all the rights, privileges, programs, and activities generally accorded or made available to students.

**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 for 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 Office of the Registrar or Student Financial Services.

**Financial Aid On-Line Application**
On-line application instructions for the upcoming financial aid award year are made available on an annual basis during January and February to each continuing class of students. All accepted students who have made their first matriculation deposit will also receive on-line application instructions for the upcoming academic year and 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. Up to $1.5 million in institutional scholarships will be awarded to incoming and returning students from each of the University’s three colleges with funding provided by the University’s School-As-Lender program. The award amount will be $3,500 per student for the 2007-2008 academic year.

**Medical Programs 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 write to 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, P.O. Box 9752, Boulder, CO 80301-9752 (303/541-0210), or the WICHE Web site at <http://www.wiche.edu>.

**Health Science Programs**

1. Federal Pell Grant: Undergraduate students with exceptional financial need who do not possess a baccalaureate degree may qualify for up to $4,310 per academic year from this federally funded program. These monies are a form of grant assistance and do not have to be repaid.

2. National SMART Grant: Third or fourth year undergraduate students who do not possess a baccalaureate degree may qualify for up to $4,000 per academic year from this federally funded program. In order to be considered for this grant, students must be U.S. citizens, eligible for a Federal Pell Grant, majoring in biomedical sciences and enrolled full-time. In addition, the student must also have maintained a cumulative grade point average of at least 3.0 in coursework required for biomedical sciences.

3. Leveraging Educational Assistance Partnership (LEAP) Program: This state grant program awards up to $500 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.

4. Federal Supplemental Education Opportunity Grant: Undergraduate students who do not possess a baccalaureate degree who demonstrate exceptional financial need may qualify for up to $3,017 per academic year from this federally funded, campus-based aid program.
5. Postsecondary Education Grant (PEG) Program: This program is administered by the Arizona Commission for Higher Education. This state grant program awards up to $2,000 per academic year for up to four years. You must be a graduate of an Arizona high school, enrolled at least half-time and have Arizona state residency for the past one year. Only undergraduate students who do not possess a baccalaureate degree may qualify for this program.

6. 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 write to 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, P.O. Box 9752, Boulder, CO 80301-9752 (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 $8.00 per hour for regular work study and $10.00 per hour for community service work study, effective July 1, 2007 through June 30, 2008.

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.

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 law, and is subject to the availability of funds. For the 2007-2008 academic year the amount will be $61,242 per student.

All Programs
1. Federal Perkins Loan: Qualified undergraduate and graduate students with exceptional financial need may borrow up to $2,500 from this campus-based loan at the current 5% interest rate. A student may borrow an aggregate maximum of $40,000 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.

2. Subsidized Federal Stafford Loan: Qualified undergraduate students may borrow up to $5,500 per academic year, with an aggregate maximum of $23,000 for undergraduate study. Qualified graduate or master’s level 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 undergraduate students may borrow up to $10,500 (if independent) or $5,000 (if dependent) per academic year, with an aggregate maximum of $46,000 (if independent) or $23,000 (if dependent) for undergraduate study (including amounts borrowed under the Subsidized Stafford program). Qualified graduate level students may borrow up to $20,500 per academic year with an aggregate maximum of $138,500 for undergraduate and graduate study. First and second year AZCOM and first year AZPod students may qualify to borrow up to $40,500 and first year pharmacy students may qualify to borrow up to $33,000 per academic year with an increased aggregate loan maximum of $189,125, (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 accrue and capitalize while enrolled.
4. Federal Parent Loan for Undergraduate Students (PLUS): Parents of qualified, dependent, undergraduate students may borrow up to the budgeted cost of attendance less other aid. Parents borrowing the PLUS loan must repay their loan at a fixed interest rate of 8.5%. Repayment of the loan begins 60 days after the last disbursement for the loan period occurs. A parent may qualify for a deferment if attending college on at least a half-time basis. Parents should check with the lender for deferment eligibility.

5. Federal Graduate PLUS loan: 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 60 days after the last disbursement for the loan period occurs. A student may qualify for a deferment if attending college on at least a half-time basis. Students should check with the lender for deferment eligibility.

6. Private Loans: 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 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 at <www.midwestern.edu/financialaid> 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 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 continue 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 Student Financial Services Office 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 Student Financial Services Office 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 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.

3. Following the end of each academic year, the Student Financial Services Office 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 Student Financial Services Office 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 Student Financial Services Office 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 dean of their respective college. A student may appeal to the dean based upon the following:

- New information;
- Bias on the part of a committee member; or
- 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:

- New information;
- Bias on the part of a committee member; or
- Procedural error.

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:

- New information;
- Bias on the part of the dean;
- Procedural error.

MWU Standards of Satisfactory Academic Progress for Financial Aid Eligibility

<table>
<thead>
<tr>
<th>Academic Program</th>
<th>Standard Maximum</th>
<th>Expected Program Completion Per Academic Year (% of coursework completed)</th>
<th>Minimum Cumulative GPA Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>AZCOM (full-time)</td>
<td>4</td>
<td>6</td>
<td>17%</td>
</tr>
<tr>
<td>AZCOM (extended studies)</td>
<td>5</td>
<td>7</td>
<td>14%</td>
</tr>
<tr>
<td>CPG-Pharm.D.</td>
<td>3</td>
<td>5</td>
<td>20%</td>
</tr>
<tr>
<td>CHS-Biomedical Sciences (B.B.S.)</td>
<td>2</td>
<td>3</td>
<td>33%</td>
</tr>
<tr>
<td>CHS-Biomedical Sciences (M.B.S.)</td>
<td>2</td>
<td>4</td>
<td>25%</td>
</tr>
<tr>
<td>CHS-PA M.M.S.</td>
<td>2.25 (27 mos.)</td>
<td>3.33 (40.5 mos.)</td>
<td>30%</td>
</tr>
<tr>
<td>CHS-M.O.T.</td>
<td>2.25 (27 mos.)</td>
<td>3.33 (40.5 mos.)</td>
<td>30%</td>
</tr>
<tr>
<td>CHS-Bioethics, (M.A.)</td>
<td>2</td>
<td>5</td>
<td>25%</td>
</tr>
<tr>
<td>CHS-Bioethics Cert.</td>
<td>2</td>
<td>5</td>
<td>25%</td>
</tr>
<tr>
<td>CHS-Cardiovascular Science (M.S.)</td>
<td>2</td>
<td>3</td>
<td>33%</td>
</tr>
<tr>
<td>CHS Podiatric Medicine (D.P.M.)</td>
<td>4</td>
<td>6</td>
<td>17%</td>
</tr>
<tr>
<td>CHS CRNA</td>
<td>2.25 (27 mos.)</td>
<td>3.33 (40.5 mos.)</td>
<td>30%</td>
</tr>
<tr>
<td>CHS-Clinical Psychology (Psy.D.)</td>
<td>4</td>
<td>7</td>
<td>14%</td>
</tr>
</tbody>
</table>

Academic Status Chart for Determining Financial Aid Eligibility

<table>
<thead>
<tr>
<th>Academic Status</th>
<th>credit hours per quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-Time</td>
<td>12 credit hours minimum</td>
</tr>
<tr>
<td>Three-Quarter Time</td>
<td>9-11</td>
</tr>
<tr>
<td>Half-Time</td>
<td>6-8</td>
</tr>
<tr>
<td>Less than Half-Time</td>
<td>5</td>
</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.

The above policy is subject to change during the 2007-2008 academic year. If revised, an addendum will be distributed to all enrolled students.
Leave of Absence Policy and Procedure

A. 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 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 meet 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 Student Financial Services Office 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 prepay 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 per quarter or must establish a payment plan with the Accounts Receivable Office. 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 Student Financial Services Office 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 Student Financial Services Office 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 Student Financial Services Office will perform the following functions:

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

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, Federal Pell Grant, Federal SEOG Grant, LEAP Grant, National SMART 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. Students withdrawing from the University may be eligible for a partial refund of disability insurance fees.
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. Students withdrawing from the University may be eligible for a partial refund of disability insurance fees.

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. All noninstitutional costs (living, personal, transportation, and book/supply expenses)
- Will be prorated based on the percentage of the quarter completed.

G. 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. Federal PLUS Loan
6. Federal Pell Grant
7. National SMART Grant
8. Federal SEOG
9. Other Title IV Aid Programs (LEAP Grant)
10. Other Federal Sources of Aid (PCL)
11. Other state or private aid*
12. Institutional aid (MWU Unmet Need Scholarship, CPG Loan and Dr. Lucas Loan)**
13. 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 noninstitutional funds or who does not have unpaid charges that he/she owes to the Institution.

H. 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).

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

J. 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, except for the Bioethics and Master of Health Profession Education programs, which are all billed on a per credit hour basis. 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.

We encourage all students to pay their bills via our secure site at http://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. University staff will write student ID numbers on checks where a student has not done so already. If you prefer not to have your student ID number written on your check, please submit your payment by cashier’s check, money order, or cash. 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: Office of Student Financial Services
Accounts Receivable Department
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 enrolled in part of an academic year will pay a pro-rated amount. The student services fee is charged annually and funds such areas as recreation, sports and
intramurals, counseling services, operation of the student lounge, student council and 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 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 hours; CHS Graduate >23 hours, CHS Bachelors >21 hours; CHS Podiatric Medicine >27 hours.

Payment Plans
The Student Financial Services Office 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. A student must make arrangements with the Student Financial Services Office during the first week of the academic year.
2. Payment plans will be effective for the entire quarter.
3. It will be mandatory for students to utilize MWU’s electronic billing and payment system, available at http://online.midwestern.edu to set up the payment plan.
4. A fee of $20 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.
5. The plan is interest-free.
6. All financial aid must be applied toward the unpaid balance due first before accepting student payments.
7. A 1% late fee will be applied to accounts at 10 days late and the balance may be accelerated to fully due.
8. The unpaid balance must be paid by the end of each quarter. Example: Student’s balance due is $10,500. The quarter is 3 months long. $10,500/3 = $3,500 payment per month.
9. Student must not have been late on any prior MWU payment plans.
10. Student’s account must be paid in full from the previous quarter.

Prepayment Plans
A prepayment plan for tuition is available to all students. Please contact the Student Financial Services Office for further details.

Credit Cards
The Student Financial Services Office 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 Student Financial Services Office 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 highly recommended. Direct deposits are typically available 2-3 days prior to the date a paper check would be received in the mail. 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 the deposit has cleared prior to writing checks.

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

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

Consequences of past due accounts can include any and all of the items listed below:

1. 1% 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 $5.00 late fee.
2. Past due notices will be sent via email or paper.
3. Follow up phone calls may be made to your residence.
4. Notification of delinquency will be made to your Dean’s office.
5. Dropped from rolls 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. 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 Student Financial Services Office 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., nonarrival of financial aid, scholarship, or grant funds by the due date);
- b. A payment plan has been approved by the Student Financial Services Office;
- c. Any documented extraordinary circumstance that prevents the student from paying his/her account balance on time.

**Returned Checks**

A $25.00 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 2007-2008)**

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% per academic year.

<table>
<thead>
<tr>
<th>Program</th>
<th>Residency</th>
<th>Tuition</th>
</tr>
</thead>
<tbody>
<tr>
<td>AZCOM</td>
<td>In-State &amp; Out-of-State</td>
<td>$41,242</td>
</tr>
<tr>
<td>CPG</td>
<td>In-State &amp; Out-of-State</td>
<td>$33,337</td>
</tr>
<tr>
<td>PA M.M.S.</td>
<td>In-State &amp; Out-of-State</td>
<td>$28,928</td>
</tr>
<tr>
<td>OT M.O.T.</td>
<td>In-State &amp; Out-of-State</td>
<td>$25,436</td>
</tr>
<tr>
<td>Bio. Sci. B.B.S.</td>
<td>In-State &amp; Out-of-State</td>
<td>$18,006</td>
</tr>
<tr>
<td>Bioethics M.A.</td>
<td>In-State &amp; Out-of-State</td>
<td>$503/credit hr.</td>
</tr>
<tr>
<td>MHPE</td>
<td>In-State &amp; Out-of-State</td>
<td>$503/credit hr.</td>
</tr>
<tr>
<td>AZPod</td>
<td>In-State &amp; Out-of-State</td>
<td>$25,918</td>
</tr>
<tr>
<td>CRNA</td>
<td>In-State &amp; Out-of-State</td>
<td>$26,454</td>
</tr>
<tr>
<td>PsyD</td>
<td>In-State &amp; Out-of-State</td>
<td>$21,462</td>
</tr>
<tr>
<td>Dental Medicine <em>(2008-2009)</em></td>
<td>In-State &amp; Out-of-State</td>
<td>$48,881</td>
</tr>
</tbody>
</table>

For the 2007-2008 academic year, all programs (both full-time and part-time) have a yearly $305 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 Dental Medicine has the following additional fees: Student Services Fee $325; Supply fee $3,250; Instrument Rental Fee $1,502; Sim Lab and Clinic Fee $3,924.
**Midwestern University Academic Calendar 2007-2008**

**Summer Quarter 2007**
- Memorial Day *No Class*
- Classes Resume (PSI/PSII)
- OCM IV Didactic Lectures
- Orientation (PAI/NAI)
- Commencement *No Class*
- Classes Begin (PAI/NAI) Resume (OTII/BMS/PMI/PMII)
- OCM III Introduction to Clerkship
- Independence Day *No Class*
- Last Day of Class (PSI/PSII)
- Quarterly Exams (PSI/PSII)
- Last Day of Class (PAI/NAI/OTII/BMS/PMI/PMII)
- Quarter Break (PSII)
- Quarterly Exams (PAI/NAI/OTII/BMS/PMI/PMII)
- Quarter Break (PAI/NAI/OTII/BMS/PMI/PMII)

**Fall Quarter 2007**
- Classes Begin (PSIII)
- Orientation (MSI/PSI/OTI/PMI/BMS/CVSP)
- Program Completion (PAIII)
- Classes Begin (MSI/MSII/PAI/NAI/PMI/PMII/PSI/OTII/BMS/CVSP)
- Labor Day *No Class*
- Last Day of Class (PSIII)
- Quarterly Exams (PSIII)
- Last Day of Class (MSI/MSII/PAI/NAI/PMI/PMII/PSI/OTII/BMS/CVSP)
- Quarterly Exams (MSI/MSII/PAI/NAI/PMI/PMII/PSI/OTII/BMS/CVSP)
- Thanksgiving Break (MSI/MSII/PAI/NAI/PMI/PMII/PSI/OTII/BMS/CVSP)

**Winter Quarter 2007-08**
- Classes Begin (MSI/MSII/PAI/NAI/PMI/PMII/PSI/PSII/OTI/OTII/BMS/CVSP)
- White Coat Ceremony
- Winter Break (MSI/MSII/PAI/NAI/PMI/PMII/PSI/PSII/OTI/OTII/BMS/CVSP)
- Classes Resume (MSI/MSII/PAI/NAI/PMI/PMII/PSI/PSII/OTI/OTII/BMS/CVSP)
- Martin Luther King, Jr. Day
- Last Day of Class (MSI/MSII/PAI/NAI/PMI/PMII/PSI/PSII/OTI/OTII/BMS/CVSP)
- Quarterly Exams (MSI/MSII/PAI/NAI/PMI/PMII/PSI/PSII/OTI/OTII/BMS/CVSP)
- Spring Break (MSI/MSII/PAI/NAI/PMI/PMII/PSI/PSII/OTI/OTII/BMS/CVSP)
**Spring Quarter 2008**

Classes Resume
(MSI/MSII/PAI/NAI/PMI/PMII/PMIII/PSI/PSII/OTI/OTII/BMS/CVSPI)

Last Day of Class
(MSI/MSII/PAI/NAI/PMI/PMII/PMIII/PSI/PSII/OTI/OTII/BMS/CVSPI)

Quarterly Exams
(MSI/MSII/PSII/PAI/NAI/PMI/PMII/PMIII/OTI/OTII/BMS/CVSPI)

OCM III Exam Week (MSIII)

Quarter Break (PSI/PSII)

Quarter Break (NAI/PMI/PMII/OTI/OTII/BMS)

Quarter Break (MSII)

Quarter Break (MSI)

Prep for Clinical Practice (PAI/CVSPI)

Quarter Break (PAI/CVSPI)

COMMENCEMENT *No Class*

---

**March 3, 2008 - May 23, 2008**

March 3, 2008

May 9, 2008

May 12 - 16, 2008

May 19 - 23, 2008

May 17 - June 1, 2008

May 17 - June 8, 2008

May 17 - June 15, 2008

May 17 - September 2, 2008

May 19 - 23, 2008

May 24 - June 8, 2008

June 6, 2008
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).

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

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.

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 2006, AZCOM received nearly 2,400 applications for its 140 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.

Admission Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology with Lab</td>
<td>8 Semester/12 Quarter hours</td>
</tr>
<tr>
<td>General Chemistry with Lab</td>
<td>8 Semester/12 Quarter hours</td>
</tr>
<tr>
<td>Organic Chemistry with Lab</td>
<td>8 Semester/12 Quarter hours</td>
</tr>
<tr>
<td>Physics</td>
<td>8 Semester/12 Quarter hours</td>
</tr>
<tr>
<td>English Composition</td>
<td>6 Semester/9 Quarter hours</td>
</tr>
</tbody>
</table>

1. Complete the above prerequisite courses. No grade less than C will be accepted for any prerequisite course. (A grade of C- will not be accepted.)
2. To be competitive, an applicant should possess both a science and total GPA over 3.00 on a 4.00 scale as well as a bachelor’s degree. A minimum science and overall GPA of 2.75 on a 4.00 scale is required to receive a supplemental application.
3. Complete a bachelor’s degree at an accredited college or university 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.
4. Submit competitive scores on the Medical College Admissions Test (MCAT). Students who entered AZCOM in 2006 had an average MCAT score of 26. The MCAT exam must have been taken no more than 3 years prior to the planned enrollment year. To register for the exam, contact the MCAT Program Office at 319/337-1357 or visit www.aamc.org/students/mcat for information. The exam is offered many times throughout the year.
5. Two letters of recommendation are required. One letter must be from either a premedical advisory committee or
science professor who has taught the applicant. The second letter must be from either a D.O. or an M.D. Letters from osteopathic physicians are strongly recommended. Letters written by immediate family members will not be accepted. All letters of evaluation must be submitted by the evaluators. The Office of Admissions does not accept letters submitted by students.

6. Demonstrate a sincere understanding of and interest in osteopathic medicine.

7. Reflect a people/service orientation through community service or extracurricular activities.

8. Reflect proper motivation for and commitment to health care as demonstrated by previous work, volunteer, or other life experiences.

9. Possess the oral and written communication skills necessary to interact with patients and colleagues.


11. Abide by Midwestern University Drug-Free Workplace and Substance Abuse Policy.

12. Students must sign a statement that they meet the technical standards upon their acceptance. Candidates who may not meet the technical standards are encouraged to contact the Director of Admissions to discuss and identify what accommodations, if any, the College would need to make in order that the candidate might be able to meet the standards.

**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, it follows that 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 certain of these areas, but a candidate should be able to perform in a reasonably independent manner.

1. **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.

2. **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.

3. **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.

4. **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.

5. **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.

**Application Deadline**

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. Typically, 50% of all admissions offers are made by the end of December.

**Application Process**

- **Step One: AACOMAS Application – January 1, 2008 Deadline** To initiate the application process, all applicants must apply online via the centralized application service administered by AACOM at http://aacomas.aacom.org/. The ACOMAS application is typically available in early June. As part of this process, you must submit official MCAT scores (for tests taken no earlier than April 2005) and official transcripts directly to ACOMAS. The Office of Admissions will not accept MCAT scores or transcripts submitted directly to Midwestern University. The deadline for submission of the ACOMAS application is January 1.

- **Step Two: AZCOM Supplemental Application – March 3, 2008 Deadline** Upon receipt of the ACOMAS application from the application service, the Midwestern University Office of Admissions will email the supplemental application to all applicants who
possess both a minimum overall GPA and science GPA of 2.75. Applicants must complete and submit the supplemental application form 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 3, 2008.

Step Three: Letters of Recommendation – March 3, 2008 Deadline Applicants must submit two letters of recommendation. One letter must be from a prehealth advisory committee or science professor who has taught the applicant. The second letter must be from 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 3, 2008. Letters must adhere to the following guidelines:

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

Step Four: Completed Applications – March 3, 2008 Deadline All application materials, including the AACOMAS application, MCAT scores (as reported to AACOMAS), 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 3, 2008. Only completed applications received by the Office of Admissions on or before the deadline date will be reviewed for potential fall 2008 enrollment.

Step Five: Application Review/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 AACOMAS application, official MCAT scores (as reported to AACOMAS), supplemental application materials, processing fee, and both required letters of recommendation. Please complete your file as soon as possible to be competitive in this process and to ensure full consideration of your application.

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 email address. All requests for withdrawing an application must be done in writing. Applicants are expected to act professionally in their interactions with AACOMAS and with AZCOM. Please follow AACOM’s applicant protocol at all times.

Interview/Selection Process
To be considered for an on-campus interview, applicants must meet all of the admissions requirements listed previously. After the Office of Admissions receives all of the required application materials, the applicant’s file is reviewed to determine if the applicant merits an invitation to interview, based on established criteria of the admissions committee. Applicants who are invited to interview will be contacted by the Office of Admissions and instructed on how to schedule their interview via our 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.

If an applicant accepts an interview, he/she joins several other interviewees in meeting 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 each applicant about his/her academic, personal, and health care preparedness for medical school, rating the applicants on a standardized evaluation form relative to each of these variables. At the conclusion of the interviews, the team members forward their evaluation form to the Dean for final approval. The Dean—via the Office of Admissions—notifies the student of his/her status within three or four weeks of the interview.

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

Reapplication Process
After receiving either a denial or end-of-cycle letter, an applicant may reapply for the next enrollment cycle. Before reapplying, however, the applicant should seek the advice of an admissions counselor.

To initiate the reapplication process, the applicant must submit an application to AACOMAS. The application is then processed in the same manner as any other.
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 do the following:

1. Submit deposit monies and administrative fees by the dates designated in his/her matriculation agreement—the entire amount is applied toward the student’s first quarter tuition.
2. Submit official transcript(s) from all colleges attended post–high school by the date designated in his/her matriculation agreement. (Note: The information provided on the student’s AACOMAS application is verified against the information provided on the student’s transcript(s). If the course and degree information on the application cannot be verified, the student’s offer of admission is revoked.)
3. Submit a completed medical file as instructed in the packet sent by the Office of Student Services.
4. Submit proof of medical insurance coverage. The student may select either a plan offered by AZCOM or an AZCOM-approved outside carrier.
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. Pass a criminal background check.
8. Abide by Midwestern University Drug-Free Workplace and Substance Abuse policy.
9. Complete physical exam and submit form.
10. Sign Credit Policy Statement.

If a student either fails to satisfy these matriculation requirements and/or omits/falsifies information required on official admissions documents, the student automatically forfeits his/her seat at the College. The student receives no further notification relative to this forfeiture.

Deferred Admission
Deferments are only considered under extreme circumstances where a student is physically unable to begin classes. If granted, a student may defer their admission for one year only.

To initiate the deferred admission process, a student must make his/her request in writing to the Director of Admissions by the date designated in his/her matriculation agreement. The request must be accompanied by a letter from the student’s physician documenting the conditions that prevent the student from beginning his/her medical education. The Director then responds to the request with a letter detailing the specific conditions associated with deferral. Typically, the conditions include the following:

1. The student must submit his/her remaining deposit monies by the first week of December during the year preceding his/her matriculation at the time of request of deferral.
2. The student must provide a letter from his/her physician stating that the student can begin his/her medical education.

The student is NOT required to interview again or submit another supplemental application or letters of evaluation.

Transfer Admission
AZCOM may elect to accept transfer students from other U.S. osteopathic medical schools as long as these students are in “good academic standing” and have an acceptable reason(s) for seeking a transfer. By the Commission on Osteopathic College Accreditation (COCA) standards, the last 2 years of instruction must be completed within the college of osteopathic medicine granting the DO degree.

To be considered for transfer, a student must meet the College’s general requirements for admission. He/she must also observe the following procedure:

1. All inquiries for transfer to AZCOM must be submitted to the Admissions Office.
2. The Admissions Office will confirm the availability of rotation sites through the Division of Clinical Education.
3. If sites are available, an application is sent.
4. Complete application is returned to the Admissions Office and must also 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 application is forwarded to the Associate Dean for Clinical Education.
6. Application is reviewed by the Associate Dean for Clinical Education who conducts an interview with the applicant and the Chairs.
7. Their recommendation is forwarded to the Dean of AZCOM.
8. Applicant is notified by the Dean of the final decision.

INSTRUCTIONAL PROGRAM
As scientists and practitioners of the healing arts, osteopathic physicians subscribe to a philosophy that regards the body as an integrated whole with structures and functions working interdependently. As an extension of this philosophy, osteopathic physicians treat their patients as unique persons with biological, psychological, and sociological needs—an approach that underscores the osteopathic commitment to
patient-oriented versus disease-oriented health care. In recognition of this approach, AZCOM has developed and continues to refine a four-year curriculum that educates students in the biopsychosocial approach to patient care, as well as the basic medical arts and sciences.

Within this curricular format, AZCOM students spend their first two years both completing a rigorous basic science curriculum and preparing for their clinical studies, including early clinical contact experiences. During their third and fourth years, students rotate through a variety of clinical training sites accruing an impressive 88 weeks of direct patient care experience. By stimulating intellectual curiosity and teaching problem solving skills, the AZCOM curriculum encourages students to regard learning as a lifelong process.

Combined D.O./Master’s Program

Students in good academic standing may apply to the AZCOM Dean for this combined program. Through the Biomedical Sciences Program of Midwestern University, D.O. students may enroll in this 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. The Bioethics program will provide the student the background necessary to understand the process by which ethical decisions are made related to patient care and health care practice. The Health Professions Education program will provide the student with the background necessary to become an effective educator in the field of medicine. Degrees can be completed while simultaneously completing the requirements for the D.O. degree. See the Biomedical Sciences Program catalog or call the Office of Admissions for more details.

### CURRICULUM

#### First Year

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Courses</th>
<th>Credit hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fall Quarter (10 weeks)</strong></td>
<td>CORE 1460 Interdisciplinary Health Care</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>ANAT 1511 Gross Anatomy</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>BIOC 1511 Biochemistry</td>
<td>7.0</td>
</tr>
<tr>
<td></td>
<td>FMED 1511 Clinical Correlates/ICM</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>HIST 1511 Histology/Embryology</td>
<td>4.4</td>
</tr>
<tr>
<td></td>
<td>OMED 1511 Osteopathic Medicine</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>PSYC 1511 Intro. to Human Behavior</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>23.4</strong></td>
</tr>
<tr>
<td><strong>Winter Quarter (10 weeks)</strong></td>
<td>CORE 1470 Interdisciplinary Health Care</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>PHYS 1521 Physiology</td>
<td>5.5</td>
</tr>
<tr>
<td></td>
<td>ANAT 1522 Gross Anatomy</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>BIOC 1522 Biochemistry</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td>FMED 1522 Clinical Correlates/ICM</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>HIST 1522 Histology/Embryology</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>OMED 1522 Osteopathic Medicine</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>PSYC 1522 Intro. to Human Behavior</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>23.0</strong></td>
</tr>
</tbody>
</table>

#### Second Year

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Courses</th>
<th>Credit hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fall Quarter (10 weeks)</strong></td>
<td>MICR 1611 Microbiology</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>PHAR 1611 Pharmacology</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td>PATH 1611 Pathology</td>
<td>6.0</td>
</tr>
<tr>
<td></td>
<td>FMED 1612 Topics in Medicine</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>FMED 1613 OCMI/Early Clinical Experience</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>FMED 1614 Clinical Correlates/Case Presentations</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>ICMD 1614 Intro. to Clinical Medicine</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>OMED 1614 Osteopathic Medicine</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>24.0</strong></td>
</tr>
<tr>
<td><strong>Winter Quarter (10 weeks)</strong></td>
<td>MICR 1622 Microbiology</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>PATH 1622 Pathology</td>
<td>6.0</td>
</tr>
<tr>
<td></td>
<td>PHAR 1622 Pharmacology</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td>FMED 1624 OCMI/Early Clinical Experience</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>FMED 1625 Clinical Correlates/Case Presentations</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>ICMD 1625 Intro. to Clinical Medicine</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>OMED 1625 Osteopathic Medicine</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>22.0</strong></td>
</tr>
</tbody>
</table>

#### Spring Quarter (10 weeks)

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLMD 1631 Osteopathic Clinical Medicine II</td>
<td>3.0</td>
</tr>
<tr>
<td>FMED 1633 Topics in Medicine II</td>
<td>1.5</td>
</tr>
<tr>
<td>PATH 1633 Pathology III</td>
<td>5.0</td>
</tr>
<tr>
<td>PHAR 1633 Pharmacology III</td>
<td>3.0</td>
</tr>
<tr>
<td>PSYC 1634 Psychopathology IV</td>
<td>1.0</td>
</tr>
<tr>
<td>FMED 1636 Clinical Correlates/Case Presentations</td>
<td>3.0</td>
</tr>
<tr>
<td>ICMD 1636 Intro. to Clinical Medicine IV</td>
<td>1.5</td>
</tr>
<tr>
<td>OMED 1636 Osteopathic Medicine VI</td>
<td>2.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20.5</strong></td>
</tr>
</tbody>
</table>

#### Third Year *

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CARD 1701 Cardiology (4 weeks)</td>
<td>4.0</td>
</tr>
<tr>
<td>CLMD 1701 Osteopathic Clinical Medicine III-CE</td>
<td>7.0</td>
</tr>
<tr>
<td>CLMD 1702 Osteopathic Clinical Medicine III-PE</td>
<td>3.0</td>
</tr>
</tbody>
</table>
**Fourth Year**

**Summer, Fall, Winter, and Spring Quarters (44 weeks)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMED 1801</td>
<td>Emergency Medicine (4 weeks)</td>
<td>4.0</td>
</tr>
<tr>
<td>NEUR 1801</td>
<td>Neurology (2 weeks)</td>
<td>2.0</td>
</tr>
<tr>
<td>IMED 1802</td>
<td>Gen. Internal Medicine II</td>
<td>4.0</td>
</tr>
<tr>
<td>SURG 1802</td>
<td>Subspecialty Surgery II</td>
<td>4.0</td>
</tr>
<tr>
<td>CLMD 1803</td>
<td>Osteopathic Clinical Medicine IV</td>
<td>10.0</td>
</tr>
<tr>
<td>IMED 1803</td>
<td>Subspecialty Medicine (4 weeks)</td>
<td>4.0</td>
</tr>
<tr>
<td>IMED 1804</td>
<td>Critical Care (4 weeks)</td>
<td>4.0</td>
</tr>
<tr>
<td>ELECT</td>
<td>Electives (22 weeks)</td>
<td>22.0</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>54.0</td>
</tr>
</tbody>
</table>

Radiology is incorporated into all rotations. Anesthesiology is incorporated into all surgical rotations. Students may arrange academic breaks to attend out of area interviews and study for COMLEX Level II. Students receive one holiday break.

**Total Curricular Hours**

- First Year: 70.9
- Second Year: 66.5
- Elective Credits: 4.0
- Third Year: 54.0
- Fourth Year: 54.0
- Total: 249.4

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 4 credit hours of approved elective courses. 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.

**COURSE DESCRIPTIONS**

**PRECLINICAL EDUCATION**

**Interdisciplinary Education**

**CORE 1460, 1470, 1480 Interdisciplinary Health Care**

Changes in our health care delivery system are creating a growing demand for health professionals with skills in collaboration and teamwork. The Interdisciplinary Health Care course involves the colleges of health sciences, osteopathic medicine, cardiovascular perfusion and pharmacy in order to teach nurse anesthesia, occupational therapy, osteopathic medicine, pharmacy, physician assistant, and podiatric medicine students together about the importance of an interdisciplinary approach to patient care. The course meets for one hour, every other odd week of the fall, winter, and spring quarters for 0.5 credits/quarter. Attendance is mandatory.

**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.

The anatomy department offer several elective courses, including Advanced Gross Dissection and Research. The anatomy faculty also participate in multidisciplinary elective courses including a Developmental Biology elective and an elective, Basic Science Application to Osteopathic Medicine, which are presented in conjunction with the osteopathic medicine faculty. The anatomy faculty have strong research interests in the analyses of the molecular and cellular mechanisms involved in development of the limbs and of the central nervous system as well as in questions concerning how the central nervous system responds to injury. Other areas of research interest include the structure and function of cartilage and bone.
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.

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.

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, muscular tissue, and nervous tissue. After acquiring this basic knowledge, 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 lymphatic, circulatory, respiratory, and gastro-intestinal systems, providing a framework for understanding the pathologic changes in diseases of these systems. In the Embryology component of this course, students will learn the general pattern and principles of normal development and the basic aspects of development of the musculoskeletal, circulatory, and gastrointestinal systems. Coordination of this course with the concurrent Gross Anatomy course provides the student with a comprehensive anatomic view of each region studied. This course uses a lecture and laboratory format and is tested through written and practical examinations.

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 ear. The development of the urogenital system, 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. The lecture and laboratory components of this course are tested through written and practical examinations.

NEUR 1531 Neuroscience
This course utilizes a multidisciplinary approach to provide insight into the fundamental concepts of anatomy and physiology as they relate to the nervous system. The course is divided into three components. In the first unit, a regional approach is used to study the surface landmarks, internal anatomy, and blood supply of the spinal cord, brainstem, and forebrain. This provides the framework and terminology to be used in the second and third units of the course, which adopt a systems approach to the study of the central nervous system. The second unit focuses on the sensory systems, whereas the third unit concentrates on the motor system, limbic system, and higher cortical function. Throughout the second and third units, basic anatomy and physiology are consistently presented in the context of neurologic disorders that involve the particular system being studied. Case studies and lectures by clinicians are utilized to emphasize the correlation of basic and clinical material. Both written and practical examinations are used to assess student progress in the course.

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.

BIOC 1511 Biochemistry I
This course features modules on 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 the storage and expression of genetic information; and intermediary metabolism emphasizing the degradation and synthesis of carbohydrates, lipids, and amino acids. Clinical aspects as well as the regulation and coordination of biologic processes during the fed and fasted states are emphasized. The workshops introduce the biochemical basis of common clinical laboratory tests and/or they illustrate clinical applications of biochemical concepts.

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. Workshops feature a modified problem-based learning environment. Working in teams, students research various aspects of a case and orally present their findings to their small group.

Department of Microbiology
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.

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.

MICR 1611 Microbiology I
The didactic component of the 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; and the methods of laboratory diagnosis, treatment, and control for each infectious agent. Laboratory exercises and demonstrations help students develop the microbiologic skills applicable for clinical practice, acquaint students with available diagnostic laboratory tests and their interpretation, and augment selected lecture presentations.

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

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.

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, cardiovascular, and central nervous system drugs.

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, 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.

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 the various 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.

Medical students interested in research are encouraged to participate in ongoing research projects. Current research interests of the physiology faculty include a variety of areas associated with cardiovascular, neural, and respiratory physiology. Specific areas of faculty expertise include vascular pathophysiology of hypertension and diabetes, ion imbalances associated with eclampsia/preeclampsia, vascular growth and atherogenesis, physiology of seizures, respiratory physiology, and biophysics/biochemistry of cardiac function. Several avenues exist by which students can become involved in research projects. These include volunteering, college work/study, research electives (for credit), and AZCOM’s Summer Research Fellowship Program. Students who are considering research in physiology should discuss their interests with members of the faculty.

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

**PHYS 1532 Physiology II**
This course is a sequel to PHYS 1521 that builds on the physiologic foundations developed during the preceding semester. The initial section of the course presents the function, mechanism of action, regulation, and integration of the renal, respiratory, and gastrointestinal organ systems that maintain body homeostasis through fluid, electrolyte, gas, and nutritional balance. The endocrine section of the course presents the function, mechanism of action, and regulation of specific hormones. Small group discussions continue to refine critical thinking and problem solving skills as the students identify the physiologic and pathophysiologic mechanisms underlying the signs and symptoms described in pertinent clinical case studies.

---

**Department of Clinical Education**

**CMED 1532, OCMII/Early Clinical Experience I**
Students spend two hours every other week working with a practicing physician. The student will assist the physician and observe how a physician interacts with patients, staff, and colleagues. The student’s initial goal will be that of observation. Later the student will begin to practice history and physical examination skills learned in the first year, write SOAP notes, give a case presentation and perform a complete history and physical examination.

**CMED 1613, 1624, OCMII/Early Clinical Experience II**
Students will spend three hours every other week working with a practicing physician. The student will assist the physician and observe how a physician interacts with patients, staff, and colleagues. The student will practice history and physical examination skills, write SOAP notes, give case presentations and perform a complete history and physical examination. In the fall and winter quarters, the student will do a Standardized Patient-History and Physical Examination.

**CLMD 1701 Osteopathic Clinical Medicine III-CE**
The course begins with an introduction to the course during which didactic lectures and laboratories are held in order to prepare students to begin their rotations. Objective Structured Clinical Examinations (OSCE) are conducted at the beginning of the third year to evaluate the student’s history and physical examination skills. After rotations begin, didactic lectures are presented every other week for two hours. These lectures emphasize clinical medicine and its applications. The material is presented in both didactic lectures and case presentations in order to assure a well-rounded approach to important clinical information in a stimulating and interactive format. Faculty and guest lecturers in a variety of fields combine their knowledge and experience in presenting this course. In addition, two hour bi-weekly rotation specific small group learning sessions are provided during all MS-III core rotations.

At the end of the 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.

**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.

**CLMD 1803 Osteopathic Clinical Medicine IV**
Presented in the fourth year, this intensive full day three-week course emphasizes clinical case presentations, didactic lectures and interactive question and answer sessions. It is especially intended to assist the student in acquiring important clinical information as well as helping prepare for COMLEX II, USMLE II and fourth year clinical rotations. Taught by both faculty and guest lecturers, cases are presented to the class in a problem-solving interactive format in order to explore the evaluation and management of multiple clinical presentations. The basic science information supporting the clinical decision making process is integrated into this course.

In addition to the didactic lectures, a day-long OMM review is held and an OMM practical examination is administered. At the end of the three-week course, a Final Examination is given over all of the lecture material.

**CLMD 1631 Osteopathic Clinical Medicine II**
Presented in the spring quarter of the second year, this course combines didactic lectures and laboratories to prepare students for both the COMLEX I and their upcoming clinical rotations. Both lectures and laboratories emphasize clinical knowledge and skills that are essential to making the successful transition to clinical medicine. The subjects presented include Family Medicine, Integrated Medicine with an emphasis on Radiology, Internal Medicine, OB/GYN, Pediatrics, Surgery, Osteopathic Principles and Practices, and Cardiology.

**ELEC 1701 and 1801**
Students are required to complete 4 weeks of elective time during the third year and 22 weeks of electives during the fourth year. Electives may be split into two week blocks. No one week rotations are allowed, but one week blocks may be used for traveling to interviews and study time. Four weeks of elective time may be used for a research elective if the research proposal is approved by the Associate Dean of Clinical Education. Four weeks of elective time may be used for an international rotation, which may be done only during the MS-IV year after approval by the Department of Clinical Education. Additional policies regarding electives are provided in the Clinical Education Policies handbook.

**FMED 1511, 1522, 1533 Osteopathic Medicine-I-III**
Osteopathic Medicine is taught in the fall, winter, and spring quarters. 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. Laboratory periods provide an excellent opportunity for medical students to ask questions. Closed-circuit television is used to enhance the effectiveness of demonstrations.
Musculoskeletal findings and the somatic components of disease covering all organ systems are presented throughout the year. Additional diagnostic procedures and manipulative treatment procedures are taught in the laboratory.

Instruction begins with an orientation to the osteopathic profession (including the history and philosophy of osteopathic medicine) and an examination of the distinctive contribution of the osteopathic profession to the delivery of health care. Normal anatomy and physiology are also emphasized. Early laboratory periods emphasize palpation, identification of anatomic landmarks, evaluation of motion, and evaluation of soft tissues. The course then progresses into the pathophysiology of the musculoskeletal system with a description of the structural-functional disturbances that occur. Multiple classifications of technique are taught to serve the future osteopathic physician for clinical practice and to prepare the student for the National Boards. The techniques covered include articulatory, range of motion, muscle energy, osteopathy in the cranial field, counter strain, myofascial release, and high-velocity thrust technique. Neurobiologic mechanisms in manipulative treatment and their clinical manifestations are also presented.

At the conclusion of the first year, the medical student is expected to demonstrate proficiency in diagnostic palpation and simple basic manipulative procedures. The student is evaluated by weekly quizzes as well as quarterly written and practical examinations.

OMED 1614, 1625, 1636 Osteopathic Medicine-IV-VI

Osteopathic Medicine is taught in the fall, winter, and spring quarters. 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. Laboratory periods provide an excellent opportunity for medical students to ask questions. Closed-circuit television is used to enhance the effectiveness of demonstrations.

Musculoskeletal findings and the somatic components of disease, covering all organ systems, are presented throughout the year. Additional diagnostic procedures and manipulative treatment procedures are taught in the laboratory.

The second year's course of study is an expansion and continuation of the previous year's work. The material is presented in the context of clinical problem solving. The sequence of material given in the second year is coordinated with material presented in other second-year courses. The culmination of six quarters of instruction and practice in Osteopathic Medicine is the "Find it/Fix it" practical examination that simulates the student's ability to diagnose and treat an actual patient. The student is evaluated by weekly quizzes as well as quarterly written and practical examinations.

PATH 1611 Pathology I

Designed to introduce the medical students to the basic concepts of pathology, this course stresses altered cellular, genetic, and molecular mechanisms and attempts to convey to the medical students 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 the medical students with a complete, medical overview of the disease process in relation to its histological, functional, and structural changes. The medical students also 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.

PATH 1622, 1633 Pathology II, 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.

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.

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.

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.

**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.

**Department of Family Medicine**
This Department is responsible for required clinical rotations in family medicine, and rural medicine. 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 public health/preventive medicine, rehabilitation medicine, sports medicine, dermatology, environmental medicine/toxicology, and addiction medicine.

**FMED 1701**
The rotation consists of twelve weeks of family medicine experiences that may include both ambulatory and inpatient settings. This service should expose the student to various aspects of the management of patients in a family medicine practice. These rotation experiences may include reading, mini-lectures, and patient care management. One 4-week block of the 12 weeks will be the OMM-FM block where the student will have an opportunity to hone OMM skills in a primary care setting.

**FMED 1702**
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.

**Department of Integrated Medicine**
This Department is responsible for required clinical rotations in psychiatry, emergency medicine and other 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.

**EMED 1801**
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.

**PSYC 1701**
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.

**Department of Internal Medicine**
This Department is responsible for required clinical rotations in general internal medicine, cardiology, neurology and critical care. 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 cardiology, critical care, rheumatology, gastroenterology, hematology/oncology, neurology, allergy/immunology, endocrinology, infectious disease, pulmonary disease, nephrology and geriatrics.

**NEUR 1801**
This fourth year 2-week rotation provides the student with exposure to patients with neurological disturbances ranging from altered level of consciousness to cranial nerve dysfunctions. The accurate diagnosis of the neurological patient is emphasized by learning and performing a detailed neurological examination and, where indicated, to select appropriate diagnostic testing.

**CARD 1701**
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.

**IMED 1803**
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.
IMED 1804
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.

Department of Obstetrics and Gynecology
This Department 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.

OBGY 1701
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.

Department of Osteopathic Manipulative Medicine
This Department 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
This Department 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.

PEDI 1701
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.

Department of Surgery
This Department 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, anesthesiology, neurological surgery, thoracic/cardiovascular surgery, vascular surgery, and urology.

SURG 1701
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.

SURG 1802
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.

MWU/MATRIX SYSTEM: AN OSTEOPATHIC POSTDOCTORAL TRAINING INSTITUTION (OPTI)
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, AZCOM’s curriculum is broad reaching in scope and encompasses a multifaceted approach to graduate medical education that focuses on primary care. With unique teaching opportunities at some of the finest health care facilities in the country, AZCOM’s affiliated hospitals consistently lead the nation in terms of cutting-edge technology, treatment, and care. Postdoctoral programs include rotating internships; specialty track internships in Internal Medicine, Obstetrics/Gynecology; special emphasis tracks; 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. Interns rotate through the primary services: emergency medicine, family medicine, internal medicine, obstetrics/gynecology, surgery, and pediatrics, some of which may be completed at affiliated hospitals and medical centers.

Residency or fellowship training is offered in the following disciplines:
- Cardiology
- Critical Care
- Emergency Medicine
- Emergency Medicine/Family Medicine
- Emergency Medicine/Internal Medicine
- Family Medicine
- Family Medicine/Osteopathic Manipulative Medicine
- Gastroenterology
- General Surgery
- General Vascular Surgery
- Geriatrics
- Internal Medicine
- Interventional Cardiology
- Neurosurgery
- Obstetrics/Gynecology
- Ophthalmology
- Orthopedic Surgery
- Osteopathic Manipulative Medicine
- Radiology
- Rheumatology
- Urological Surgery

**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, 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 & 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 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.

**Preclinical Promotions Committee Guidelines**

<table>
<thead>
<tr>
<th>Basic Science Courses</th>
<th>Usual Action*</th>
<th>Academic Status</th>
<th>Repeat Course Timing**</th>
<th>Action Following Remediation*</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 Pass-Promote</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Academic Year</td>
<td></td>
</tr>
<tr>
<td>2 Failures (different quarters)</td>
<td>Retake Courses</td>
<td>Warning/or Probation</td>
<td>Summer or Next Academic Year</td>
<td>Fail-ESP or Pass-Promote</td>
</tr>
<tr>
<td>2 Failures (same quarter)</td>
<td>ESP or Suspension</td>
<td>Probation</td>
<td>Summer or Next</td>
<td>Fail-ESP or Dismiss Pass-Promote</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Academic Year</td>
<td></td>
</tr>
<tr>
<td>3 Failures (over more than one academic year)</td>
<td>ESP or Suspension</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></td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>4 Cumulative Failures (in preclinical years)</td>
<td>Dismissal</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>

*May be modified by the Preclinical Promotions Committee

**Course repeat schedule 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

**Preclinical Promotions Committee Guidelines for Students 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 Remediation*</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 Dismiss</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*May be modified by the Preclinical Promotions Committee

**Course repeat schedule 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></td>
<td></td>
</tr>
<tr>
<td>One Failure</td>
<td>Remediate Rotation or Course</td>
<td>Academic Warning**</td>
<td>Fail - Probation, Repeat of Academic Year or Dismissal Pass - Promote or Graduate</td>
</tr>
<tr>
<td>Two Failures</td>
<td>Remediate 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.

**Review of the Entire Academic Record**

When a failure occurs in a four/five/six week rotation and there is a subsequent unsatisfactory grade in one or more categories on the evaluation form in one or more rotations, the Clinical Promotions Committee may recommend repeating an entire academic year or dismissal based upon review of the students’ entire academic record.

**Remediation/Retake**

Remediation/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. 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 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.

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 used in the computation of the overall GPA.

**Academic Warning and 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 probation are ineligible to hold student organizational offices.

<table>
<thead>
<tr>
<th>Academic Warning</th>
<th>Academic Probation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non ESP Students</td>
<td>One failure in a single quarter and up to two failures in an academic year</td>
</tr>
<tr>
<td>ESP Students</td>
<td>One failure in a quarter</td>
</tr>
</tbody>
</table>

**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.
COMLEX Exam Policy
All students with an expected graduation date of 2008 and beyond must pass the National Board of Osteopathic Medical Examiners (NBOME) COMLEX Level I, Level II CE, and Level II PE examinations prior to graduation. The initial attempt to pass the Level I examination must occur within 30 days after the completion of all MS2 course requirements. The initial attempt to pass the Level II CE and Level II PE examinations must occur prior to the end of Block 6 of the MS4 year.

COMLEX Eligibility
Eligibility to attempt the Level I examination requires successful completion of the Winter Quarter of the MS2 year, approval of the Preclinical Promotion Committee (PCP), and approval of the Dean of the osteopathic college. Eligibility to schedule the Level II examinations may occur after the 9th block of the MS3 year. Level II examinations may be taken after July 20 of the MS4 year following successful completion of Level I, and approval by the Dean of the osteopathic college. The United States Medical Licensing Examination (USMLE) is not a substitute for any component of the COMLEX examination.

COMLEX Level I Failure
Any student that fails the Level I examination will be allowed to complete the clinical rotation that he/she is participating in at the time of failure notice. The student will be assigned to a minimum of one month remediation to study for the next attempt. The student will not participate in clinical rotations during this time. The student must meet with his/her faculty mentor and the appropriate Dean as soon as possible to determine the most appropriate course of action to prepare for the second attempt.

Any student that fails the Level I examination a second time will be allowed to complete the clinical rotation that he/she is participating in at the time of failure notice. The student will be assigned to a minimum of three months remediation to study for the third attempt. The student will not participate in clinical rotations during this time. The student must meet with a Task Force (composed of his/her faculty mentor, the Dean of Student Services, selected Chairs of Basic and Clinical Science Departments, and the appropriate Dean) as soon as possible to determine the most appropriate course of action to prepare for the second attempt.

Any student that fails the Level I examination a third time must appear before the CPC to determine the course of action.

COMLEX Level II CE or PE Failure
Any student that fails the Level II CE or PE examination must meet with the Chair of the CPC and the appropriate Dean as soon as possible to determine the most appropriate course of action with regard to whether clinical rotations may or may not be continued and how to prepare for the second attempt.

Any student that fails either component of the Level II examination a second time must appear before the CPC to determine the course of action.

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.

Criminal Background Check
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 perform 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.

Dismissal
Students who fail four or more courses in a single academic year, and ESP students who accumulate two failures in one quarter or three failures in the same academic year, 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.

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

Disciplinary Warning/Probation
Disciplinary warning/probation occurs for student acts of professional misconduct as defined in Appendices 2 and 4 in the Student Handbook. Disciplinary warning/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.

**Extended Studies Program (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 and on academic probation. They are required to retake failed courses during the regular academic year and are not eligible for summer remediation courses either at AZCOM or at any other medical school. The Preclinical Promotions Committee individually reviews ESP students who fail academic courses. Students who voluntarily enter the ESP (see below) may be allowed to remediate courses over the summer, at AZCOM or another approved institution, at the discretion of the Preclinical Promotions Committee.

**Voluntary.** Students have the option of voluntarily entering the 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 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 Promotion Committee’s options for recommendation for dismissal. Thus, the student may be dismissed for academic reasons while in the ESP.

NOTE: Students will be assessed full 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 for First-and Second-Year Students**

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

---

**Grade Appeals 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.

**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 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 an "F" entry. Upon repetition of a failed course, the original grade remains on the transcript and the repeated course and grade are entered on the transcript. The grade for a course that is repeated at an outside institution and passed will be recorded as a transfer credit with a grade of C. For all the repeat courses during the MS I and MS II years passed at MWU, a grade of C will be recorded on the transcript. For all repeat clinical rotations during the MS III and MS IV years passed at MWU a score of "P" (pass/fail course/rotation) will be recorded on the transcript.

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>3.750</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>F</td>
<td>&lt; 70</td>
<td>0.000</td>
<td>—</td>
</tr>
</tbody>
</table>

I — 0.000 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 the 10 days, it may be converted to a grade of “F,” which signifies failure of the course.

P — 0.000 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.

W — 0.000 Withdrawal can be given during the first three weeks of the quarter. There is no penalty and no credit.

W/P — 0.000 Withdrawal/Passing 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 satisfactory. This grade is not counted in any GPA calculations and is not counted in credit hour accruals for graduation.

W/F — 0.000 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.

AU — 0.000 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.

AP   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.

These grading scales apply to all courses unless otherwise noted in the course syllabus.
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 complete all graduation clearance requirements as instructed by the Office of the Registrar.

Effective for the entering class of 2004 with an expected graduation date of 2008, 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.

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, signed letter of request in writing to participate in the graduation ceremony. The letter should be addressed to the Dean of AZCOM. 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.

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 forwards the letter to the Clinical Promotions Committee (CPC) for consideration. The CPC is responsible for reviewing the student’s request. Each request is considered 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 no have completed the academic requirements by the official graduation date, and then forward the list of candidates to the Dean. The Dean will 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 handbook.

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.

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). 800/621-1773; <www.osteopathic.org>.

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 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.
Remedial Courses
Summer remediation courses are only open to students with one or two failures in a given academic year. 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 remediation courses offered on the Glendale campus by the AZCOM Departments.

Students are limited to the second option if the department does not offer a remedial 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.

Satisfactory Academic Progress
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.

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.

Suspension
Academic suspension 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. Academic suspension may or may not be preceeded 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. Academic suspension is noted on the student’s transcript.

The student who has been suspended 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.

Travel for Clinical Education/Fieldwork
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), W/P (withdrew passing), or W/F (withdrew failing).

Withdrawal (W) can be given only during the first three weeks of the course. There is no penalty and no credit. 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/Passing (W/P) 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 fourth week and the end 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 receiving 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, PhD**
Iowa State University  
Dean of Basic Sciences  
Vice President for Clinic Operations  
Professor

**Lori A. Kemper, DO**
Kirksville College of Osteopathic Medicine  
Dean, Arizona College of Osteopathic Medicine  
Associate Professor

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

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

**Department of Anatomy**

**Wade A. Grow, PhD**
University of Idaho  
Associate Professor

**Christopher Heesy, PhD**
State University of New York at Stoney Brook  
Assistant Professor

**Gregory A. Mihailoff, PhD**
Ohio State University  
Professor

**Randall L. Nydam, PhD**
University of Oklahoma

Associate Professor

**Linda M. Walters, PhD, Chair**
Loyola University, Stritch School of Medicine  
Professor

**Myriam Zylstra, PhD**
University of Toronto  
Assistant Professor

**Department of Biochemistry**

**David F Mann, PhD, Chair**
Michigan State University  
Professor

**Y. Gloria Yueh, PhD**
University of Connecticut  
Associate Professor

**Department of Clinical Education**

**Thomas O. O’Hare, DO**
Midwestern University  
Chicago College of Osteopathic Medicine  
Associate Dean of Clinical Education  
Professor

**Debra D. Sullivan, PhD**
Capella University  
Director of Assessment  
Associate Professor

**Department of Family Medicine**

**Donald R. Middleton, Jr. DO**
Western University of Health Sciences  
Clinical Associate Professor

**Tracy O. Middleton, DO, Chair**
Oklahoma State University College of Osteopathic Medicine and Surgery  
Clinical Associate Professor

**Alan Schalsha, DO**
Midwestern University, Arizona College of Osteopathic Medicine  
Clinical Assistant Professor

**Anthony M. Will, DO**
Midwestern University  
Chicago College of Osteopathic Medicine  
Clinical Assistant Professor

**Department of Integrated Medicine**

**Charles A Finch, DO, Chair**
Des Moines University Osteopathic Medical Center  
Clinical Associate Professor

**Sheldon P Wagman, DO**
Philadelphia College of Osteopathic Medicine
Clinical Professor  
*Department of Medicine*  
**Frank LoVecchio, DO**  
New York College of Osteopathic Medicine  
Clinical Associate Professor  

**Howard M. Shulman, DO, Chair, Associate Dean of GME**  
Kansas City University of Medicine and Biosciences College of Osteopathic Medicine  
Clinical Associate Professor  

**Gene Winfield, DO**  
UHS-COM, Kansas City  
Clinical Assistant Professor  

*Department of Obstetrics and Gynecology*  
**Farshad Agahi, MD**  
University of Gondi-Shapoor School of Medicine  
Clinical Assistant Professor  

*Department of Osteopathic Manipulative Medicine*  
**William H Devine, DO, Chair**  
University of Health Sciences  
Clinical Associate Professor  

**L Markham McHenry, DO**  
University of Osteopathic Medicine and Health Sciences  
Clinical Assistant Professor  

**Kyle Patrick, DO**  
Kirkville College of Osteopathic Medicine  
Clinical Assistant Professor  

**Sean Reeder, DO**  
University of Health Sciences College of Medicine  
Clinical Instructor  

**Carlton Richie, DO**  
Midwestern University  
Chicago College of Osteopathic Medicine  
Clinical Associate Professor  

**Victoria Troncoso, DO**  
Des Moines University of Osteopathic Medicine and Health Sciences  
Clinical Assistant Professor  

**Anthony M Will, DO**  
Midwestern University, Chicago College of Osteopathic Medicine  
Clinical Assistant Professor  

**Katherine Worden, DO**  
Michigan State University  
Clinical Associate Professor  

*Department of Pediatrics*  
**Alissa Craft, DO, Chair**  
Kirkville College of Osteopathic Medicine  
Clinical Assistant Professor  

*Department of Surgery*  
**Dana S Devine, DO**  
University of Health Sciences  
Clinical Associate Professor  

**David M. Parrack, DO, Chair**  
Kansas City University of Medicine and Biosciences College of Osteopathic Medicine  
Clinical Assistant Professor  

*Clinical Faculty*  
Robert Aaronson, MD  
Stephen Anthony, MD  
George Armendariz, MD  
Ali Askari, MD  
Stephen Bair, DO  
Nancy Barnett, MD  
John Belden, DO  
Larry Blattner, DO  
Ronald Blonder, DO  
Aaron Boor, DO  
Jonathan Borjeson, DO  
John Brothwell, MD  
Alvin Burstein, MD  
Jeffery Bushman, DO  
William Calderwood, MD  
David Carfagno, DO  
John Curley, DO  
Regina D’ambrosio, MD  
Derek DeTemple, DO  
Matthew Duke, DO  
Brian Dursteler, MD  
John Ellis, DO  
Michael Epstein, MD  
Michael Flam, DO  
John Garofalo, MD  
David Glassman, DO  
Larry Griffith, MD  
Melissa Gurley, MD  
Raymond Hemmert, DO  
Barry Hendin, MD  
George Hobeich, MD  
Angela Johansson, DO  
Farha Khan, MD  
Jana Lee, MD  
Mark Mathurin, MD  
Steven McRunels, DO  
Donald Middleton, DO  
May Mohity, MD  
Chet Monder, MD  
Paul Montanarella, MD  
T. Samuel Nwafor, MD
Jeffrey Pakula, DO
Rawel Randhawa, MD
Michael Reitz, DO
Carlton Richie, DO
Michael Rollins, MD
Jordan Ross, DO
Scott Schleifer, DO
David Shoup, DO
Deborah Solomon, DO
Kenneth Stephan, DO
Riyaz Sumar, MD
Neil Superfon, DO
Atul Syal, MD
Babak Tehranchi, DO
Ruben Valdez, MD
Vinodh Vasudevan, MD
Michael Vines, MD
Anthony Will, DO
Roger Willcox, MD
John Williams, MD
Thomas Wills, DO
Mark Winograd, MD
Barry Wiss, DO
Jan Zieren, DO

Pamela E Potter, PhD, Chair
Dalhousie University
Professor

Latchezar Todorov, PhD
Bulgarian Academy of Sciences
Associate Professor

Department of Physiology
Layla Al-Nakkash, PhD
University of Newcastle-Upon-Tyne
Assistant Professor

Thomas L Broderick, PhD
University of Alberta
Associate Professor

Michael Quinlan, PhD
Arizona State University
Associate Professor

Fred Romano, PhD, Chair
Loyola University
Professor

Department of Microbiology and Immunology
Richard F Collins, PhD
University of Oklahoma Health Sciences Center
Professor

Lauritz A Jensen, DA, Chair
University of Northern Colorado
Professor

Sam Katzif, PhD
Georgia State University
Assistant Professor

Tyler A Kokjohn, PhD
Loyola University
Professor

Kathryn J Leyva, PhD
Northern Arizona University
Associate Professor

Robin R Parmley, PhD
Rush University
Assistant Professor

Department of Pharmacology
Gerald Call, PhD
University of Kansas Medical Center
Assistant Professor

Laszlo Kerecsen, MD
Medical School of Debrecen
Professor
MISSION
The mission of Midwestern University College of Pharmacy–Glendale (MWU-CPG) 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.

DEPARTMENTS

Department of Pharmaceutical Sciences
The Department of Pharmaceutical Sciences (PSCI) subsumes several specialty areas: pharmaceutics/pharmacokinetics, medicinal chemistry, and pharmacology.

Pharmaceutics/pharmacokinetics are the areas of pharmacy associated with the following: designing and preparing various dosage forms for delivery of drugs; determining drug product stability and performance; and evaluating the effects of administration and formulation factors on the absorption, distribution, metabolism, and excretion of drugs in humans.

Medicinal chemistry is a science that is unique to pharmacy because it is a hybridization of the physical, chemical, biochemical, analytical, and pharmacological principles employed in explaining the mechanisms of drug action and drug design. The application of principles associated with medicinal chemistry provides the professional student with a firm basis for his/her career in pharmacy.

Pharmacology is the study of drugs and their interactions with biological systems. It encompasses the chemical properties of drugs as well as their biological effects, therapeutic uses, and toxicities. It is fundamental to pharmacy and the appropriate use of medications for optimal outcomes.

Department of Pharmaceutical Sciences Mission
The mission of the Department of Pharmaceutical Sciences is to empower students with the foundational knowledge that is essential to the professional pharmacy curriculum. The faculty provide the highest quality instruction in basic biomedical and pharmaceutical sciences. The faculty serve 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 the 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 (PPRA) is comprised of faculty who provide education in the administrative and clinical sciences, as well as patient care experiences. Required courses in the 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 topics in the area of nonprescription medications, drug literature evaluation, pharmacotherapeutics, and a professional practice laboratory that emphasizes communication skills, 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.
Department of Pharmacy Practice Mission
The mission of the Department of Pharmacy Practice is to prepare and empower pharmacy students and pharmacists to become competent providers of pharmacist care in all practice settings. This mission is achieved through a combination of innovative didactic coursework, experiential training, mentoring, scholarship, and community service in partnership with students, pharmacy practitioners, and the medical and lay communities. The Department serves the professional community through the development and evaluation of innovative pharmacy practice models that promote the role of the pharmacist as an integral member of the health care team.

Conferral of Degrees
The parent institution of MWU–CPG, Midwestern University, has been granted authority by the Arizona State Board for Private Postsecondary Education to confer the Doctor of Pharmacy degree.

Accreditation
The College of Pharmacy—Glendale’s 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. The accreditation status of the College is reviewed by ACPE on a regular basis and is open to student and public comment.

The accreditation standards may be found at the ACPE website (http://www.acpe-accredit.org/). Comments or complaints regarding program compliance with the accreditation standards should be submitted to the Dean’s Office in writing. Complaints will be reviewed on a timely basis, and a response or plan of resolution will be communicated to individuals interested in the issue. Programmatic comments and complaints are kept on file in the President’s Office and are available for review by ACPE reviewers.

The Accreditation Council on Pharmacy Education (ACPE) is also available to students who feel their complaint has been unresolved by the University. A requirement of the ACPE states that such a complaint against a college or school of pharmacy must be related to the standards or policies and procedures of ACPE and must be submitted in writing to the Executive Director of the ACPE. Under existing practices, when a complaint is received, it is submitted to the college for response. If, thereafter, based upon the complaint and the response, the Executive Director determines that a complaint is not related to the standards or policies, the complainant is so advised in writing with a copy to the college, and the matter is treated as resolved. Anonymous complaints pertaining to accreditation matters are retained and, depending on circumstances, may or may not be forwarded to the school or college involved, depending somewhat on the severity of the complaint. This decision is made by the Executive Director. Where a complainant has threatened or filed legal action against the institution involved, ACPE will hold complaints in abeyance pending resolution of the legal issues and the complainant is so advised. Complaints to ACPE should be filed via e-mail to either of the two following addresses: csinfo@acpe-accredit.org (regarding a professional degree program); ceinfo@acpe-accredit.org (regarding a continuing education provider).

Instructional Program
At MWU–CPG, students pursue the Doctor of Pharmacy (Pharm.D.) degree. MWU–CPG’s 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 years at MWU–CPG. During their three years at MWU–CPG, students complete, on a year-round basis, a total of 194 quarter hours of credit: 121.5 hours in required courses, 12 credit hours in elective professional courses, and 60.5 credit hours in clinical/experiential education.

Admissions
Note: Several major changes to the college’s admissions requirements have been made for the summer 2007 application cycle. The most significant of these changes are an earlier application deadline, earlier program start date (June 2008), and the addition of several new prerequisite requirements. These changes have been necessitated by the new ACPE accreditation standards and are in line with a nationwide movement within pharmacy education. Please take note of these changes as you review the following admissions information.

Midwestern University, College of Pharmacy - Glendale (MWU-CPG) considers for admission those applicants who possess the academic and professional promise necessary to become outstanding members of the pharmacy profession. The admissions process is highly selective; approximately 1,900 applications were received for the 2007 entering class. The next application deadlines are January 1, 2008 for the PharmCAS application and February 15, 2008 for the MWU-CPG application (see the Application Process section); however, applicants are strongly encouraged to apply early in the process as approximately 75% of the class is expected to be filled by January 1st.

Evaluation of completed applications will begin in July 2007 and continue until all seats in the class are filled. This initial evaluation will determine which applicants are eligible for an on-campus interview; a final evaluation will determine which applicants are eligible for acceptance. Given the competitive
admissions environment, multiple criteria are used to select the most qualified candidates from an applicant pool that exceeds the number of seats available. Grade point averages, PCAT scores, letters of evaluation, professional preparedness and motivation, personal qualities, communication skills, ability to be a team player and decision making will all be considered when reviewing an applicant’s file.

Admission Requirements for Applicants Seeking Summer 2008 Start Date
To be considered for admission to MWU–CPG, an applicant must:

1. Have completed or be in the process of completing 62 semester hours or 90 quarter hours of non-remedial, prerequisite coursework from a regionally accredited U.S. college or university, or recognized post secondary Canadian institution that uses English as its primary language of instruction and documentation. The student must earn a grade of C (not C-) or better in each prerequisite course.

2. All pre-pharmacy coursework requirements must be completed by May prior to matriculation to MWU–CPG.

3. Submit scores from the Pharmacy College Admissions Test (PCAT) directly to PharmCAS (see Application Process Section). Note: Only test scores earned in June 2005 or more recently will be accepted.

4. Earn a minimum cumulative grade point average and science grade point average of 2.50 on a 4.00 scale. PharmCAS calculates the overall and science grade point average. Grades from all non-remedial courses completed post-high school are used to calculate the grade point average.

5. Reflect a people/service orientation through community service or extracurricular activities.

6. Reflect proper motivation for and commitment to the pharmacy profession as demonstrated by previous work, volunteer, or other life experiences.

7. Possess the oral and written communication skills necessary to interact with patients and colleagues.

8. Complete MWU–CPG’s on-campus interview process (by invitation only).

9. Pass the Midwestern University criminal background check.

10. Abide by Midwestern University Drug-Free Workplace and Substance Abuse Policy.

PREREQUISITE COURSES

<table>
<thead>
<tr>
<th>Course(s)</th>
<th>Semester Hrs</th>
<th>Quarter Hrs</th>
</tr>
</thead>
<tbody>
<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 (for science majors - mechanics, heat, force, and motion must be included in the course)</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Calculus</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Statistics</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Speech (public speaking)</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Economics (micro, macro, or general)</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Social Sciences (divided among psychology, sociology, anthropology, or political sciences)</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>General Education courses (divided among the social and behavioral sciences, 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>
</tr>
</tbody>
</table>

INTERNATIONAL APPLICANTS: If an applicant has completed coursework at a foreign college or university, or a recognized post secondary Canadian institution that does not use English as its primary language of instruction and documentation, the student 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 (www.ece.org, e-mail: info@ece.org)
- Josef Silny & Associates International Education Consultants: 305-273-1616 (www.jsilny.com, e-mail info@jsilny.com)
- World Education Services (WES): 212/966-6311 (www.wes.org, e-mail: info@wes.org)

*Note: Foreign transcript evaluations should be sent directly to PharmCAS (see Application Process section). International applicants must also complete at least 30 semester hours of his/her prerequisite coursework (including at least 15 semester hours in the sciences, 6 hours in non-remedial English composition, and 3 hours of speech/public speaking) at a regionally accredited college or university in the United States, or from a recognized post secondary Canadian institution that uses English as its primary language of instruction and documentation.
Technical Standards for Admission
The technical standards for admission set forth by 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: 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 certain of these areas, but a candidate should be able to perform in a reasonably independent manner.

1. **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.

2. **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.

3. **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.

4. **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.

5. **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 must provide certification that they understand the technical standards upon their acceptance. Candidates who may not meet the technical standards are encouraged to contact the Director of Admissions to discuss and identify what accommodations, if any, MWU–CPG would need to make in order that the candidate might be able to meet the standards.

Application Process
MWU-CPG uses a two-step application process. The applicant must submit both a completed PharmCAS application and a College Supplemental Application and meet both the PharmCAS application deadline (January 1, 2008) and the MWU-CPG application deadline (February 15, 2008).

1. **PharmCAS Application**:
   Applicants must apply via the Web-based PharmCAS application (www.pharmcas.org) which is available usually in June of the academic year preceeding the year in which they plan to matriculate. Applicants must send transcripts directly to the offices of PharmCAS. Applicants who have taken coursework and/or earned a degree from a foreign institution must also submit to PharmCAS an evaluation of their transcripts from an approved foreign transcript evaluation service (See Admission Requirements).

   The deadline for submitting the PharmCAS application is January 1, 2008. In addition to the on-line application and application fee, applicants are strongly encouraged to also forward official transcripts from all colleges and universities attended to PharmCAS by the January 1st date. PharmCAS will not consider an application complete and will not begin the verification process until all official transcripts are received.

2. **Pharmacy College Admissions Test (PCAT)**:
   Arrange for scores from the Pharmacy College Admissions Test to be sent directly to PharmCAS using PCAT code 104. This exam is offered by Harcourt Assessment (1-800-211-8378, www.pcatweb.info). 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. Only test scores earned in June 2005 or more recently will be accepted.

   *Note*: It is highly recommended that applicants take the June or August PCAT exams in the year prior to which they are seeking entry. For first time test takers, January PCAT exams taken in the year in which an applicant seeks entry will not be accepted. Please check with Harcourt Assessment for more details regarding the exam dates.

3. **Letters of Evaluation**:
   The applicant must request letters of evaluation from two professionals to be submitted directly to PharmCAS. MWU-CPG will only accept letters received directly from PharmCAS. It is preferred that one letter be from a college professor who has actually taught the applicant or a pre-health advisor/committee, science professor, or health professional who knows the applicant well. The deadline for submission of the letters of evaluation is February 15, 2008.
4. **Supplemental Application:**

After receiving an applicant’s processed information from PharmCAS, the Midwestern University Office of Admissions will send a supplemental application form to applicants who meet the minimum cumulative GPA requirement of 2.50 on a 4.00 scale. The deadline for submitting the College supplemental application to the Office of Admissions is on or before February 15, 2008.

**Note:** All application materials, the PharmCAS application, verification of transcripts by PharmCAS, PCAT scores (as reported to PharmCAS), two letters of evaluation (submitted to PharmCAS), and MWU-CPG Supplemental Application with the application fee must be received in the Office of Admissions on or before February 15, 2008. Only completed applications received by the Office of Admissions on or before the deadline date will be reviewed for potential entrance into the program.

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

5. **On-Campus Interview:**

Once an applicant’s file is complete, the Director of Admissions and the Admissions Committee review an applicant’s GPA and PCAT scores to determine the applicant’s interview eligibility. If they consider the applicant eligible for an on-campus interview, an invitation will be sent to the applicant. All interviews are scheduled on a first-call/first-scheduled basis. No interviews will be granted until an individual’s application process is complete. Interview invitations are typically extended from September through February.

The PharmD program at MWU-CPG is rigorous and challenging. In light of this, the Admissions Committee will assess the quality and rigor of the pre-pharmacy academic records presented by each applicant. When assessing an applicant’s pre-pharmacy academic record, the Admissions Committee will:

a. View applicants with cumulative and science grade point averages below a 2.75 on a 4.00 scale with particular concern. While 2.50 on a 4.00 scale is the minimum overall and science grade point average for consideration, to be competitive for admission, a higher overall grade point average is recommended. The average overall and science grade point averages of applicants admitted 2002–2006 were 3.37 on a 4.00 scale.

b. View component and composite PCAT scores below the 50th percentile with particular concern. While there are no minimum PCAT scores, the average composite PCAT score of applicants admitted 2002–2006 was in the 80th percentile.

c. Pay special attention to applicants that include pre-pharmacy math and science coursework that was completed more than 10 years ago. It is preferred that applicants have recent (within five years) pre-pharmacy math and science coursework.

d. Consider the institution where coursework was taken, the extent to which science prerequisites have been completed, the credit load per term, the difficulty of coursework taken, and trends in grades as factors when evaluating the quality and rigor of an applicant’s pre-pharmacy academic record.

During the interview process, the applicant will meet with an interview panel consisting of pharmacy faculty members, pharmacists and/or pharmacy students. Panel members will evaluate the applicant’s professional motivation and preparedness, personal qualities, communication skills, and decision-making ability by rating the applicant on a standardized evaluation scale. The interview panel members will also review each interviewee’s MWU-CPG Supplemental Application to facilitate the interview process. After reviewing the applicant’s completed application and interview evaluation, the Admissions Committee can recommend accepting, denying, or placing the applicant on an alternate list. This recommendation is 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 are strongly encouraged to apply early in this process as approximately 75% of the class is expected to be filled by January 1st.

**Note:** An applicant who has been accepted for a given year must matriculate during that year. No admission deferments are allowed. If a student fails to matriculate, the student must reapply the following year if he/she wishes to be admitted to the College.

**Professionalism**

Pharmacy applicants are expected to act professionally in all of their dealings with Admissions Office staff and College personnel. Applicants are expected to follow instructions properly and meet deadlines. Responsible behavior, respect for others, good judgment, and cooperation are qualities valued by the pharmacy profession. Applicants should demonstrate these qualities beginning with the application process.

**Reapplication Process**

After receiving either a denial or end-of-cycle letter, an applicant may reapply to MWU–CPG for the next academic year. Before reapplying, however, the applicant should seek the advice of an admissions counselor.
To initiate the reapplication process, the applicant must submit a new application to PharmCAS. The application is then processed in the same manner as any other application.

**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 are in good academic standing and have legitimate reasons for seeking a transfer.

All requests for transfer information should be referred to the Office of the Dean, MWU–CPG so that the potential transfer applicant can be counseled prior to submitting an application.

To be considered for transfer, a student must meet MWU–CPG’s general requirements for admission. He/she must also submit the following documents by April 1:

1. A letter to the Director of Admissions indicating why he/she wishes to transfer and explaining any difficulties encountered at his/her current institution;
2. A completed MWU-CPG transfer application;
3. Official transcripts from all schools attended—undergraduate, graduate, and professional;
4. A catalog and a detailed pharmacy syllabus 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. The letter must indicate the student’s current academic status and/or terms of withdrawal/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 necessary by the Director of Admissions or Dean of MWU–CPG.

The Office of Admissions will collect and forward the student’s portfolio to the Office of the Dean, MWU–CPG for review. If the review is positive, the Dean will instruct the Admissions Committee to interview the transfer student applicant. The Admissions Committee will provide its recommendation to the Dean. If the transferring student is admitted and requests advanced standing, the Dean’s Office will forward the student’s request 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 Dean’s Office prior to enrolling in the required advanced pre-pharmacy 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 pre-pharmacy level or higher at a regionally accredited U. S. college or university;
3. Earn a grade of at least C (not C–) in all courses taken; and
4. Maintain a cumulative GPA of 2.50 or greater.

Students fulfilling these requirements will be permitted to reapply to the University and MWU–CPG. The student should obtain the application from the Dean’s Office and not through PharmCAS. A completed readmission application must be submitted by April 1 to the Dean’s Office. The completed application of a reapplying PS-1 student will be forwarded to the Admissions Committee for review and recommendation. The completed application of a reapplying PS-2 or PS-3 student will forwarded by the Dean’s Office to the Student Promotion and Graduation Committee for review and recommendation. The respective committees will review the application for evidence of improved academic potential. Each committee’s recommendations are forwarded to the Dean for action.

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

**Matriculation Process**

The matriculation process begins after a student receives notification of his/her acceptance. The student must return his/her signed matriculation agreement. The student must also do the following:

1. Submit deposit monies by the dates designated in his/her matriculation agreement. The entire amount is applied toward the student’s first quarter’s tuition.
2. Submit an official copy of all college transcript(s) that verify that the student has satisfactorily completed all prerequisite course requirements for admission by May 30 of the year of matriculation.

**Note:** PharmCAS does not forward transcripts to MWU–CPG.

3. Complete a medical file as requested by the Office of Student Services.
4. Submit proof of medical and disability insurance coverage. The student may select either a plan offered by an MWU-approved outside carrier or a comparable plan offered by an outside carrier of the student’s 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 a student visa only).
6. Sign an authorization form allowing for a criminal background check.
7. Sign 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.


If a student either fails to satisfy the above matriculation requirements or omits/falsifies information required on official admissions documents, the student automatically forfeits his/her seat at MWU–CPG. The student receives no further notification from MWU–CPG relative to this forfeiture.

**CURRICULUM**

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

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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORE 460</td>
<td>Interdisciplinary Health Care</td>
<td>0.5</td>
</tr>
<tr>
<td>PHYS 501</td>
<td>Human Physiology I</td>
<td>4</td>
</tr>
<tr>
<td>PSCI 551</td>
<td>Biochemistry I</td>
<td>3.5</td>
</tr>
<tr>
<td>PSCI 541</td>
<td>Pharmaceutics I</td>
<td>4</td>
</tr>
<tr>
<td>PPRA 571</td>
<td>Health Care Systems</td>
<td>3</td>
</tr>
<tr>
<td>PPRA 591</td>
<td>Intro. to Professional Practice</td>
<td>2</td>
</tr>
<tr>
<td>PPRA 594</td>
<td>Intro. Pharmacy Practice Experience</td>
<td>0.5</td>
</tr>
</tbody>
</table>

**Winter Quarter, First Year (17 qhrs-17.5 qhrs)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORE 470</td>
<td>Interdisciplinary Health Care</td>
<td>0.5</td>
</tr>
<tr>
<td>PHYS 502</td>
<td>Human Physiology II</td>
<td>4</td>
</tr>
<tr>
<td>PSCI 552</td>
<td>Biochemistry II</td>
<td>3.5</td>
</tr>
<tr>
<td>PSCI 542</td>
<td>Pharmaceutics II</td>
<td>4</td>
</tr>
<tr>
<td>PPRA 572</td>
<td>Research Methods and Epidemiology for Health Care</td>
<td>3</td>
</tr>
<tr>
<td>PPRA 592</td>
<td>Intro. to Professional Practice II</td>
<td>2</td>
</tr>
<tr>
<td>PPRA 594</td>
<td>Intro. Pharmacy Practice Experience</td>
<td>0.5</td>
</tr>
</tbody>
</table>

**Spring Quarter, First Year (18 qhrs)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORE 480</td>
<td>Interdisciplinary Health Care</td>
<td>0.5</td>
</tr>
<tr>
<td>MICR 513</td>
<td>Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>PPRA 523</td>
<td>Applied Pharmaceutical Care I</td>
<td>4.5</td>
</tr>
<tr>
<td>PSCI 553</td>
<td>Immunology</td>
<td>3</td>
</tr>
<tr>
<td>PHID 501</td>
<td>Integrated Sequence I</td>
<td>6</td>
</tr>
<tr>
<td>PPRA 593</td>
<td>Intro. to Professional Practice III</td>
<td>1</td>
</tr>
</tbody>
</table>

**Summer Quarter, First Year (17 qhrs)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPRA 524</td>
<td>Pharmacy Law</td>
<td>2</td>
</tr>
<tr>
<td>PPRA 544</td>
<td>Applied Pharmaceutical Care II</td>
<td>2</td>
</tr>
<tr>
<td>PSCI 564</td>
<td>Pharmacokinetics and Biopharmaceutics</td>
<td>3</td>
</tr>
</tbody>
</table>

**Fall Quarter, Second Year (15 qhrs)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHID 502</td>
<td>Integrated Sequence II</td>
<td>4</td>
</tr>
<tr>
<td>PPRA 534</td>
<td>Public Health and Service Learning</td>
<td>2</td>
</tr>
<tr>
<td>PHID 503</td>
<td>Integrated Sequence III</td>
<td>4</td>
</tr>
</tbody>
</table>

**Winter Quarter, Second Year (17 qhrs)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPRA 694</td>
<td>Intro. Community Experience</td>
<td>7.5</td>
</tr>
<tr>
<td>PPRA 695</td>
<td>Intro. Institutional Experience</td>
<td>7.5</td>
</tr>
</tbody>
</table>

**Spring Quarter, Second Year (16.5 qhrs)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPRA 675</td>
<td>Pharmacy Practice Management</td>
<td>3</td>
</tr>
<tr>
<td>PHID 606</td>
<td>Integrated Sequence VI</td>
<td>5</td>
</tr>
<tr>
<td>PHID 607</td>
<td>Integrated Sequence VII</td>
<td>5.5</td>
</tr>
<tr>
<td>PPRA/ PSCI 6xx</td>
<td>Electives</td>
<td>3</td>
</tr>
</tbody>
</table>

**Summer Quarter, Second Year (17 qhrs)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPRA 657</td>
<td>Disease Management I</td>
<td>3</td>
</tr>
<tr>
<td>PPRA 667</td>
<td>Complementary Medicine</td>
<td>2</td>
</tr>
<tr>
<td>PPRA 677</td>
<td>Health Economics and Outcomes Assessment</td>
<td>3</td>
</tr>
<tr>
<td>PHID 608</td>
<td>Integrated Sequence VIII</td>
<td>6</td>
</tr>
<tr>
<td>PPRA/ PSCI 6xx</td>
<td>Electives</td>
<td>3</td>
</tr>
</tbody>
</table>

**Fall Quarter, Third Year (14 qhrs)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPRA 737</td>
<td>Disease Management II</td>
<td>3</td>
</tr>
<tr>
<td>PHID 709</td>
<td>Integrated Sequence IX</td>
<td>4.5</td>
</tr>
<tr>
<td>PPRA 701</td>
<td>Acute Care Management</td>
<td>3.5</td>
</tr>
<tr>
<td>PPRA/ PSCI 6xx</td>
<td>Electives</td>
<td>3</td>
</tr>
</tbody>
</table>

**Winter and Spring Quarters, Third Year (45 qhrs)**

Advanced Pharmacy Practice Experience Rotations: 29 weeks for a total of 45 qhrs.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPRA 791</td>
<td>Advanced Pharmacy Practice Experience</td>
<td>7.5</td>
</tr>
<tr>
<td>PPRA 792</td>
<td>Advanced Pharmacy Practice Experience</td>
<td>7.5</td>
</tr>
<tr>
<td>PPRA 793</td>
<td>Advanced Pharmacy Practice Experience</td>
<td>7.5</td>
</tr>
<tr>
<td>PPRA 794</td>
<td>Advanced Pharmacy Practice Experience</td>
<td>7.5</td>
</tr>
<tr>
<td>PPRA 795</td>
<td>Advanced Pharmacy Practice Experience</td>
<td>7.5</td>
</tr>
<tr>
<td>PPRA 796</td>
<td>Elective Experience</td>
<td>7.5</td>
</tr>
</tbody>
</table>
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:

- **PSCI/PPRA 601**  Special Project/Research  1.5 qhrs
- **PSCI/PPRA 602**  Special Project/Research  3.0 qhrs
- **PSCI 606**  Dangerous Plants and Animals  1.5 qhrs
- **PPRA 611**  Advanced Cardiac Life Support  3.0 qhrs
- **PPRA 613**  Managing Prescription Benefits  1.5 qhrs
- **PPRA 616**  Issues in Infectious Diseases  1.5 qhrs
- **PSCI 619**  Medical Spanish  1.5 qhrs
- **PSCI 621**  Contemporary Compounding  1.5 qhrs
- **PPRA 626**  Clinical Toxicology  1.5 qhrs
- **PPRA 629**  Applications of Handheld PCs in Health Care  1.5 qhrs
- **PPRA 638**  Pharmacy-Based Health Screenings  1.5 qhrs
- **PPRA 639**  History of Pharmacy in America  1.5 qhrs
- **PSCI 642**  Introduction to Classical Homeopathy  1.5 qhrs
- **PPRA 644**  Entrepreneurism in Pharmacy Practice  3.0 qhrs
- **PPRA 646**  Diabetes: A Patient’s Perspective  1.5 qhrs
- **PSCI 647**  Pharmaceutical Formulation and Analysis  1.5 qhrs
- **PPRA 648**  Personal Finance for the Health Care Professional  1.5 qhrs
- **PPRA 649**  Pain and Symptom Management In Terminally Ill Patients  1.5 qhrs
- **PPRA 650**  Journal Club  1.5 qhrs
- **PSCI 652**  Recent Advances in Pharmacology  1.5 qhrs
- **PPRA 653**  Applied Microbiology for Healthcare Professionals  1.5 qhrs
- **PSCI 654**  Sterile Products  1.5 qhrs
- **PPRA 655**  Applied Healthcare for Spanish Speaking Populations  1.5 qhrs
- **PSCI 710**  Advanced Endocrine Toxicology  1.5 qhrs
- **PPRA 711**  Pharmacological Management of Chronic Pain  1.5 qhrs

Experiential Rotations

Students must successfully complete 60.5 credit hours of experiential rotations during the academic program. Students are required to complete introductory shadow experiences, one introductory community experience, one introductory institutional experience, and six advanced pharmacy practice experiences. (One advanced rotation 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.

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**
  Changes in our health care delivery system are creating a growing demand for health professionals with skills in collaboration and teamwork. This course involves the Colleges of Health Sciences, Osteopathic Medicine, and Pharmacy in order to teach cardiovascular sciences, nurse anesthetist, biomedical, occupational therapy, osteopathic medicine, pharmacy, physician assistant, and podiatry students together about the importance of an interdisciplinary approach to patient care.
  0.5 credit

- **MICR 513 Microbiology**
  A basic knowledge of clinical microbiology is provided so that students can understand the interaction between the host and pathogenic microorganisms. Emphases include the rational management, prevention, and control of infectious diseases.
  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, 6 credits, Prerequisite: PHYS 501, 502; Physiology I, II; PSCI 552 Biochemistry II
  PHID 502, 4 credits, Prerequisite: PHID 501
  PHID 503, 4 credits, Prerequisite: PHID 502
  PHID 604, 5 credits, Prerequisite: PHID 503
  PHID 605, 4 credits, Prerequisite: PHID 604
  PHID 606, 5 credits, Prerequisite: PHID 605
  PHID 607, 5.5 credits, Prerequisite: PHID 606
  PHID 608, 6 credits, Prerequisite: PHID 607
  PHID 709, 4.5 credits, Prerequisite: PHID 608
**PHYS 501 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 endocrine system. Basic and applied terminology as well as the basic morphology of systems is discussed; also, the relationship between anatomy and function of the systems considered is included.
4 credits

**PHYS 502 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, reproductive, respiratory, and gastrointestinal systems. Basic and applied terminology as well as the basic morphology of systems is discussed as well as the relationship between anatomy and function of the systems considered.
4 credits

**PPRA 523 Applied Pharmaceutical Care (APC) I**
This course focuses on the application of pharmaceutical care principles, pharmaceutical knowledge, and professional communication techniques to solve prescription problems and provide patient-focused drug therapy management in the ambulatory care (community) pharmacy environments. Areas of emphasis include prescription dispensing, communication and counseling, and the recognition of medication errors and omissions. APC provides basic knowledge of medication dosage forms, administration devices, monitoring devices, and OTC product selection.
4.5 credits
Prerequisite: PSCI 542 Pharmaceutics II

**PPRA 524 Pharmacy Law**
The basic principles of law are reviewed as they relate to the practice of pharmacy under federal, state, and local regulations. The special problems involving the control of narcotics, poisons, and other controlled substances are reviewed. Some laws relative to business activities and discussions of professional ethics are also included.
2 credits

**PPRA 534 Public Health & Service Learning**
This course is designed to teach the pharmacy student the role of public health, the factors driving population health and its determinants, and the role of the pharmacist in the public health field. This course focuses on population-based health care and involves identifying and addressing the health needs of specific populations. Using health promotion and disease prevention strategies, students will identify the multiple roles that pharmacists play in public health. Service learning is a core component of this course. The service learning experience includes interacting with different community leaders, providing health education, identifying community needs and resources. The experience is designed to provide students with the opportunity to interact with community agencies to address community and specific population needs.
2 credits

**PPRA 544 Applied Pharmaceutical Care II**
This course focuses on the application of pharmaceutical care principles, pharmaceutical knowledge, and professional communication techniques to solve medication problems and provide patient-focused drug therapy management in acute care pharmacy environments. Areas of emphasis include professional communication, recognition of adverse drug events and medication errors, and the basic operational activities performed by pharmacists in acute care settings. This workshop-based course requires students to get involved in the application of pharmaceutical care skills in various case scenarios as well as workshop role plays, discussions, and presentations.
2 credits
Prerequisite: PPRA 523 Applied Pharmaceutical Care I

**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 572 Research Methods and Epidemiology for Health Care Professionals**
This course introduces students to the statistical concepts necessary to understand and apply statistics to decision making and patient care. These concepts include frequency and probability, central tendency, normal population and sampling distributions, hypothesis testing, and an introduction to inferential statistics. Students will also be introduced to the most common methods used to conduct research in pharmacy practice. Topics include research design, data collection, analysis, interpretation, and application of results to the practice of pharmacy.
3 credits
In addition to one’s knowledge of the scientific basis of practice, the ability to communicate and be an effective team member is critical to the pharmacist’s role as an educator, clinician, and member of the health care team. This three course sequence is offered in the PS-I year to provide students with foundational concepts and skills necessary to function as caring and ethical pharmacists upon graduation and in the future. This will be accomplished through discussion of issues shaping the profession, experiential assignments, and case studies.

PPRA 591, 2 credits
PPRA 592, 2 credits, Prerequisite: PPRA 591
PPRA 593, 1 credit, Prerequisite: PPRA 592

PPRA 594 Introductory Pharmacy Practice Experience
This course provides PS-I students the opportunity to observe current pharmacy practice by shadowing pharmacists in a variety of sites. Activities will be assigned to stimulate discussion between the preceptor and student regarding current issues in patient centered care. Students will participate in shadowing experiences at two different sites and participate in on campus discussion of their experiences. Students will be assigned to either the fall or winter quarter. 0.5 credit

PPRA 597 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
Prerequisite: PHID 607 Integrated Sequence VII

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 provides students with an introduction to administrative 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 human resource management.
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, pharmacoconomics, 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 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.
7.5 credits
Prerequisite: see academic polices regarding experiential education

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: see academic polices regarding experiential education

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 toxico logical 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 the supervision of adjunct or full-time faculty, the student will participate in a community pharmacy, health-system pharmacy, ambulatory care, acute care, and two patient care elective experiences. One elective experience may be a non-patient care experience.
7.5 credits each
Prerequisite: see academic polices regarding experiential education

PSCI 541 Pharmaceutics I
Pharmaceutics I is an integration of physical pharmacy, dosage forms, and pharmaceutical compounding presented by dosage form classification in addition to pharmacy calculations. The course presents the principles important for the use, 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 the compounding of pharmaceutical delivery systems. This course is the first of two required courses in pharmaceutics for pharmacy students; specific dosage forms covered during this quarter include powders, capsules, tablets, suppositories, ointments, and transdermal patches. The course also lays a foundation for future courses such as Basic Pharmacokinetics and Biopharmaceutics, Applied Pharmaceutical Care, Disease State Management, Integrated Sequence, and several electives for those students wishing to specialize in pharmaceutical compounding and/or postgraduate training in the pharmaceutical sciences.
4 credits

PSCI 542 Pharmaceutics II
Pharmaceutics II is an integration of physical pharmacy, dosage forms, and pharmaceutical compounding presented by dosage form classification in addition to pharmacy calculations. The course presents the principles important for the use, 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 the compounding of pharmaceutical delivery systems. This course is the second of two required courses in pharmaceutics for pharmacy students. Specific dosage forms covered during this quarter include solutions, suspensions, emulsions, aerosols, ophthalmics, and parenterals. The course also lays a foundation for future courses such as Basic Pharmacokinetics and Biopharmaceutics, Applied Pharmaceutical Care, Disease State Management, Integrated Sequence, and several electives for those students wishing to specialize in pharmaceutical compounding and/or postgraduate training in the pharmaceutical sciences.
4 credits
Prerequisite: PSCI 541 Pharmaceutics I
PSCI 551 Biochemistry I
This course combines lectures and small group discussions called workshops. Lectures address structure/function relationships in major biomolecules, enzymes in biochemistry, human energy metabolism, and major pathways for human protein, carbohydrate, and lipid metabolism. Workshops feature clinical cases and/or problem sets to illustrate the principles of clinical biochemistry as they relate to pH and buffers, enzyme function, and homeostasis. 3.5 credits

PSCI 552 Biochemistry II
This course combines lectures, small group discussions, and group presentations. Lectures address the regulation of metabolism, chemical signaling, cell cycle regulation, principles of gene expression, and basic genetics. Workshops feature clinical case studies that illustrate the biochemistry of Type I and Type II diabetes mellitus and hyperlipidemia. Group presentations are a culmination of both biochemistry courses in that they give the students an opportunity to research, understand, and present to the class the genetics and biochemistry of an inherited human disorder. 3.5 credits
Prerequisite: PSCI 551 Biochemistry

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
Prerequisite: PHID 605 Integrated Sequence V

PSCI 564 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. 3 credits

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
Prerequisite: PHID 605 Integrated Sequence V

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
Prerequisite: PHID 608 Integrated Sequence VIII

PPRA 616 Issues in Infectious Diseases
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, cSSTI, 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
Prerequisite: PHID 608 Integrated Sequence VIII
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 Applications of Handheld PCs 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 644 Entrepreneurism in Pharmacy Practice
This course covers many of the aspects necessary to successfully start and manage an independent pharmacy. Topics include determining an equitable selling/purchase price for an existing pharmacy, assessing profitability, securing financing, human resource management, developing and marketing specialized services and the development of a comprehensive business plan.
3 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
Prerequisite: PHID 503 Integrated Sequence III

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 included but not limited to are: 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
Prerequisite: PHID 607 Integrated Sequence VII
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
Prerequisite: PPRA 676 Evidence-Based Medicine

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
Prerequisite: PHID 607 Integrated Sequence VII

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 621 Contemporary Compounding
This course expands expertise in the field of extemporaneous compounding. Students learn the practical aspects of compatibility and stability of compounded prescriptions and parenteral products. The course objective is to strengthen a student's proficiency in prescription compounding by utilizing hands-on experience, critical thinking, and problem solving skills.
1.5 credits
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 homoeo = 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
This course is intended to increase students’ understanding of pharmaceutics concepts, particularly drug product formulation and analysis, and is designed for students who plan to focus on a compounding practice or continue their education within a pharmaceutics graduate program. The course will be a supplement to the Pharmaceutics I and II course, whose laboratory portion focused on preparation techniques, calculations, and legal issues regarding documentation and labeling. In this course, students will formulate drug products using different excipients to achieve optimal quality, stability, and performance and use various analytical techniques to evaluate these characteristics. Topics that will be discussed include powder flowability, weight variation, content uniformity, dissolution, solubility, stability, sedimentation volume, factorial design, UV/visible spectroscopy, and high pressure liquid chromatography (HPLC). The course will be taught using a weekly one-hour lecture and open laboratory/workshop times. Grading will be based upon attendance and completion of laboratory activities. Students will work in groups to complete these assignments. 1.5 credits
Prerequisite: PSCI 542 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: PHID 501 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: PSCI 542 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 an 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: PHID 503 Integrated Sequence III

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.

Pfizer U.S. Pharmaceuticals Outstanding Leader Award
A plaque and a monetary award are presented to the graduating student who has demonstrated extraordinary leadership during the course of their academic program.

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 Scholarships
The Albertsons Stores Foundation provides seven scholarships to students with a desire to enter community pharmacy practice.

Bi-Mart Scholarships
The Bi-Mart Corporation provides scholarships to students interested in entering community pharmacy practice, who have demonstrated academic achievement and financial need.

CVS Charitable Trust, Inc. Scholarship
The CVS Charitable Trust, Inc. provide 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.

MRxI Scholarship
One scholarship is presented each year to a student who has an interest in teaching.

The MWU–CPG Heritage of Pharmacy Scholarships
One scholarship is presented each year to a student who has demonstrated academic achievement and professionalism.
Novo Nordisk Scholarship
This award is given to an individual student or team of students who successfully completes a project in management of diabetes as determined by a panel of endocrinologists and MWU-CPG faculty.

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.

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.

Grades
The following includes all grading options and corresponding definitions that may be issued within MWU-CPG.

<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>3.75</td>
</tr>
<tr>
<td>B+</td>
<td>3.25</td>
</tr>
<tr>
<td>B</td>
<td>3.00</td>
</tr>
<tr>
<td>B-</td>
<td>2.75</td>
</tr>
<tr>
<td>C+</td>
<td>2.25</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>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.

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.

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. For other students, the criteria for Dean’s List recognition is a GPA of 3.25 or better for the quarter and applies for full-time didactic coursework only.
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 for Students Admitted Prior to Fall 2003

Students admitted prior to Fall 2003 should request a copy of the academic policies from the MWU-CPG Dean’s Office.

Academic Policies for Students Admitted Beginning Fall 2005

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.

Academic Standards for Experiential Rotations

If 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 retake, 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 retake 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.

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.

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.

Grade Appeal Policy
 mass 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 errors 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
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 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.

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 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 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 coursework, 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.

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.

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 dress is required. Students will be notified if professional dress is required for college functions and/or courses. Course syllabi will state if professional dress 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 of 10-12 students 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 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; and
5. Counseling the student during his/her selection of a career within the pharmacy profession.

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 first professional 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.

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.

Faculty Pharmacy Practice
Marcus Barton, PharmD
Washington State University
Adjunct Assistant Professor

Kim Cauthon, PharmD, CGP
St. Louis College of Pharmacy
Assistant Professor

Michelle A Chui, PharmD, PhD
Purdue University
Assistant Professor

Sofia Coracides, PharmD
Midwestern University College of Pharmacy-Glendale
Adjunct Assistant Professor

Michael A Dietrich, PharmD, BCPS
Xavier University of Louisiana
Associate Professor
Karen Gallus, PharmD
University of Minnesota
Assistant Professor

Mary Gurney, PhD
University of Wisconsin
Assistant Professor

Stacy L Haber, PharmD
Medical University of South Carolina
Assistant Professor

Lindsay M Huxtable, PharmD, BCPS
Midwestern University College of Pharmacy-Glendale
Assistant Professor

Robert C Johnson, RPh, MS
Wayne State University, Detroit, MI
Adjunct Professor & Assistant Dean

Chenery Kinemond, PharmD
Midwestern University College of Pharmacy-Glendale
Adjunct Assistant Professor

John Kohli, PharmD
Ohio Northern University
Assistant Professor

Dawn S Knudsen, PharmD
Drake University
Assistant Professor

Anne Y F Lin, PharmD
St. John’s University
Dean & Professor

Sam Mahrous, PhD
Northeast Louisiana University
Associate Professor

Dennis J McCallian, PharmD
Purdue University
Assistant Dean and Professor

Danny McNatty, PharmD
State University of New York at Buffalo
Assistant Professor

Roger Morris, BS, JD
University of Pittsburgh
Adjunct Assistant Professor

Alexandra Muczka, PharmD
Midwestern University College of Pharmacy-Glendale
Adjunct Assistant Professor

Russ Newman, PharmD
University of Arizona
Adjunct Assistant Professor

Lynn R Patton, BS, MS, BCNSP
St. John’s University
Department Chair and Professor

Erin C Raney, PharmD, BCPS
University of Arizona
Associate Professor

Michael T Rupp, PhD
Ohio State University
Professor

Luz Dalia Sanchez, PhD
University of Minnesota
Assistant Professor

Mohammad J Tafreshi, PharmD, BCPS
University of Southern California School of Pharmacy
Associate Professor

Melinda J Throm, PharmD, BCPS
University of Missouri-Kansas City
Assistant Professor

Stephanie Thune, PharmD
Midwestern University College of Pharmacy-Glendale
Assistant Professor

FACULTY PHARMACEUTICAL SCIENCES

Hugo Arias, PhD
Universidad Nacional del Sur, Argentina
Associate Professor

Bill J Bowman, PhD
University of the Sciences of Philadelphia
Assistant Professor

Mitchell R Emerson, PhD
University of Kansas Medical Center
Assistant Professor

Craig A Johnston, PhD
Michigan State University
Professor & Department Chair

Melanie A Jordan, PhD
Virginia Commonwealth University Medical College of Virginia Campus
Assistant Professor

Joie C Rowles, PhD
University of Texas Southwestern Medical School
Assistant Professor
MISSION
The mission of the College of Health Sciences is to educate and graduate competent health care professionals who will meet the health care and service needs of the public in a wide range of community and institutional practice settings. Students enrolled in the College of Health Sciences will become knowledgeable about and establish linkages with the osteopathic profession during the course of the education provided by the College. The College of Health Sciences shall develop and maintain progressive educational programs that meet or exceed professional accreditation standards, and satisfy the eligibility requirements of graduating students to pursue licensure/certification in the appropriate discipline within the United States. This mission is expressed in the educational, research, and service objectives 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 Monitoring
All students enrolled in the College are expected to:
1. Maintain satisfactory academic progress in their course of study;
2. Meet all academic and professional standards established by the faculty of their program and the College; and
3. Comply with all standards of professional conduct and deportment expected of a student enrolled in a program of study that leads to eventual practice in a regulated health care profession.

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 Faculty Senate upon recommendation of the program director, faculty, and Dean. 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 also decides whether a student is placed on academic warning, academic probation, administrative probation, suspension, or dismissal. 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, four faculty members from the basic science departments (2 representatives from each campus), the Registrar (ex-officio without vote), and the Dean of Students (ex-officio without vote). The CHS Dean is also an ex-officio member without vote. The CHS Dean appoints the co-chairs, one from each campus, of this Committee, consulting with the University Faculty Senate. 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 subcommittee will review student appeals from their respective campus. A subcommittee reviewing a student appeal must have three or more CHS Student 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, this committee reviews the recommendations from the individual Program Student Academic Review Committee and assesses the academic and professional progress and performance of each student. If satisfactory, the Committee recommends promotion of the student. In addition, this Committee meets 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 the Student Handbook. The co-chairpersons of the Committee are responsible for submitting minutes of each meeting to the CHS Dean.

**Student Responsibilities**

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 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.

**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. 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.

**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 suspension, or dismissal, based on the following table.

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., FedEx, 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 decision 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 incongruency.

The Chair of the Program Student Academic Review Committee is responsible for providing notification in writing with a delivery confirmation to the involved student, informing him/her of the decision of the committee, including dismissal for academic reasons. Notice of dismissal must be delivered in writing with a delivery confirmation 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.). With the exception of dismissal, all decisions of the Program Student Academic Review Committee shall be implemented by the Program Director. Academic dismissal shall be implemented by the CHS Dean.
<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 ≥ 2.75 (graduate programs) or ≥ 2.25 (undergrad. programs) or ≥ 2.00 (AZPod only)</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; 2.75 (graduate programs) or &lt; 2.25 (undergrad. programs) or &lt; 2.00 (AZPod only)</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>
<tr>
<td>Satisfactory professional behavior; one course failure**; and/or two quarters of cumulative GPA &lt; 2.75 (graduate programs) or &lt; 2.25 (undergrad. programs) or &lt; 2.00 (AZPod only)</td>
<td>Academic probation for the subsequent quarter and one of the following:</td>
<td>“F” grade is listed on transcript and is counted toward GPA calculation.</td>
</tr>
<tr>
<td></td>
<td>a) Remediation at a later date. Remediation or retake of any course is the prerogative of the course director/department/program;</td>
<td>Following successful remediation or retake of the course, the original “F”</td>
</tr>
<tr>
<td></td>
<td>b) Academic suspension for up to one year until course is remediated or retaken, or any requirements for re-entry established by the program have been met;</td>
<td>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.</td>
</tr>
<tr>
<td></td>
<td>c) Administrative probation;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>d) Extended course of study.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Note: Students already on an extended course of study or when returning from LOA/suspension may be subject to suspension or dismissal after one course failure or failure to maintain the required cumulative GPA.</td>
<td></td>
</tr>
<tr>
<td>Satisfactory professional behavior; two course failures**; and/or three quarters of cumulative GPA &lt; 2.75 (graduate programs) or &lt; 2.25 (undergrad. programs) or &lt; 2.00 (AZPod only)</td>
<td>a) Academic suspension*** and probation, or</td>
<td>Academic suspension, administrative probation, or dismissal are noted on transcript.</td>
</tr>
<tr>
<td></td>
<td>b) Administrative probation and academic probation, or</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c) Extended course of study and academic probation, or</td>
<td></td>
</tr>
<tr>
<td></td>
<td>d) Dismissal.</td>
<td></td>
</tr>
<tr>
<td>Unsatisfactory professional behavior regardless of academic performance</td>
<td>Disciplinary probation, academic dismissal, and/or suspension</td>
<td>Disciplinary probation is not noted on transcript, but is kept in the student’s file in the offices of the CHS Dean and Student Services. Academic dismissal and/or suspension are noted on transcript.</td>
</tr>
</tbody>
</table>

* 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 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 for their program during one quarter. 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 cumulative GPA 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 suspension 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. Academic probation ends when a student achieves the required minimum cumulative GPA for the probationary quarter. When a student is placed on academic probation, it 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 Suspension**

Academic suspension 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. Academic suspension 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. Academic suspension is noted on the student’s transcript.

The student who has been suspended 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.

**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 decision from the Program Student Academic Review Committee, a student may appeal the decision. He/she has three working days to submit a formal written appeal of the decision 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. The student must attend all classes in which they are registered until the appeal process is complete. 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 co-chair of the CHS Student Promotion and Graduation Committee will select a subcommittee that will review student appeals from their respective campus. A subcommittee reviewing a student appeal must have three or more CHS Student 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. The subcommittee will review and assess the student’s appeal. Any student requesting an appeal shall be notified in writing by the Chair of the Appeal 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 Appeal Subcommittee in order to present his/her case. In such instances, the student shall inform the Chair of the Appeal Subcommittee, 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. The subcommittee chair submits their recommendation to the CHS Dean. The Program Student Academic Review Committee may also appeal the recommendation of the Student Promotion and Graduation Committee.
Appeal Subcommittee to the CHS Dean. The CHS Dean makes the final decision and then notifies the student, the Program Student Academic Review Committee, and the CHS Student Promotion and Graduation Appeal Subcommittee.

**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 preceding year (i.e., first, second, or third year) of the professional program curriculum. The Program Student Academic Review Committee, and the CHS Student Promotion and Graduation Appeal Subcommittee.

**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 for the next academic quarter 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 this status as an auditing student, he/she is not eligible to take any exams or in any way participate in formal or informal 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 (see below), 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**
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 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 Midwestern University background check does not meet a facility’s requirement, other procedures must be performed at the student’s expense. Criminal background information will be shared with clinical sites that are affiliated with Midwestern University educational programs.

**Disciplinary Probation**
Disciplinary 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 the transcript but is kept in the student’s disciplinary file. Disciplinary probation information may be shared with clinical sites that are affiliated with Midwestern University educational programs.

**Extended Course of Study**
It is 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. The CHS Dean is responsible for notifying all academic support areas affected by this status change (i.e., Registrar, Office of Student Financial Services, etc.). Any student requesting or placed in an extended program is advised to meet with the Office of Student Financial Services to review the implications, if any, of this action on his/her financial aid status and eligibility. 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:** If a student is experiencing unusual stresses in life and a modified academic load could alleviate added stress, the student may petition the program director for an extended course of study. This petition is not automatically granted and is approved only in exceptional circumstances. Interested students are advised to consult with the program director to ascertain whether an extended course of study is offered by that program. 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 notifying the student that his/her request has been approved.

Academic Reasons: A student may be placed on an extended program for academic reasons at the discretion of the Program Student Academic Review Committee and 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 standing until the extended program is completed. If a student is placed on an extended program, such action does not modify or limit either the Program Student Academic Review Committee or the Student Promotion and Graduation Committee actions for dismissal. Thus, the student may be dismissed for academic reasons while on an extended program. Students on an extended course of study may be subject to suspension 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.

It is the responsibility of the chair of these committees to inform the Dean, Registrar, and the Office of Student Financial Services whenever an extended course of study has been adopted and approved by the committee. Only matriculated students may request placement in an extended course of study. The Program Director is responsible for evaluating the request and determining eligibility for placement in the extended curricular track approved by the Program Student Academic Review Committee of the program. 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 (eg., Registrar, Office of Financial Aid, etc).

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 issues. 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 full amount of interaction.

CHS faculty mentors act as liaisons between the faculty and students. Their responsibilities include:
1. Serving as the student’s academic/professional advisor;
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. Advising the student during his/her selection of a career within the profession.

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 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.

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 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 Program Student Academic Review 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.

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.

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, Bachelor of Biomedical Sciences, Master of Sciences in Biomedical Sciences, Master of Arts in Bioethics, Master of Health Professions Education, Master of Science in 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 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 officially 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 the one quarter immediately following the officially 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 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 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 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 CHS programs on the Glendale campus that officially complete their degree programs in August may participate in the graduation ceremony scheduled for May-June prior to the end of their academic program. The CHS Dean will forward a 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.

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>

Immunization Policy
Full-time students enrolled in a program with a clinical component are required to have all immunizations as outlined in 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 titers. Part-time and at-large students enrolled in a program without a clinical component are not required to have immunizations or titers.

National Boards for Doctor of Podiatric Medicine
Each student in AZPod must pass Part I and take Part II of the examination given by the National Board of Podiatric Medical Examiners (NBPME) as partial fulfillment of the requirements for graduation. Part I includes general anatomy,
lower extremity anatomy, biochemistry, physiology, medical microbiology/immunology, pathology and pharmacology. Part II includes medicine, radiology, orthopedics/biomechanics/sports medicine, community health/jurisprudence, surgery/anesthesia and hospital protocol.

Part I is taken following the completion of the second academic year and Part II is taken during the fourth year.

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>3.750</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 Sciences program.</td>
</tr>
<tr>
<td>F</td>
<td>&lt; 60</td>
<td>0.000</td>
<td>Only for Bachelor of Biomedical Sciences 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 CHS 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>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 during the first three weeks of the quarter. There is no penalty and no credit.</td>
</tr>
<tr>
<td>W/P</td>
<td>—</td>
<td>0.000</td>
<td>Withdrawal/Passing is given between the start of the fourth 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 calculations 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 fourth 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 Sciences 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. Students are not allowed to withdraw from a course after the end of the eighth week of class, unless there are exceptional circumstances.</td>
</tr>
</tbody>
</table>

The specific dates are listed in the academic calendar. To be excused from taking this examination at the prescribed time, the student must have prior approval of the Director of AZPod.

Registration, test center regulations, preparation for the examinations and many more details are available at the following URL: http://www.nbpme.info/Exams.htm
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AU</strong></td>
<td>—</td>
<td>0.000</td>
</tr>
<tr>
<td><strong>AP</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Re-examination**

Re-examination occurs when a student fails a course but qualifies for a re-examination. It is the prerogative of the program/department to offer or not offer a re-examination for course failure and to determine the eligibility criteria for a re-examination. The policy of the department for that course should be stated in the course syllabus.

If the student qualifies for a re-examination, a grade of "I" may be submitted to the Registrar. The re-examination(s) must be complete 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 grade of "C" (or the minimal passing grade for the 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 re-examination offered by the department.
2. Course failure followed by failure of the re-examination.
3. Course failure and failure to meet eligibility criteria for re-examination.

The course may be repeated at MWU or at an outside institution. 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 Program Student Academic Review Committee 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.

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. The new grade will be factored into the overall GPA. A student enrolled in a repeated course will be charged appropriate tuition.

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. A student enrolled in a repeated course will be charged the appropriate tuition.

**Suspension**

Academic suspension 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. Academic suspension 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. Academic suspension is noted on the student’s transcript.

The student who has been suspended 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.

**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; further, 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 director. Following approval by the course director, the withdrawal must be approved by the program director and the CHS Dean. If the approval is granted, the student receives one of the following grades: W (withdrew), W/P (withdrew passing), or W/F (withdrew failing).

Withdrawal (W) can be given only during the first three weeks of the course. There is no penalty and no credit. 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/Passing (W/P) 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 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/Failing (W/F) grade. 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 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 re-enter the program, he/she must reapply for admission and, if accepted, assume the status of a new student.
Students contemplating withdrawal must inform the 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 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.
DEFINITION OF A PHYSICIAN ASSISTANT
(Approved by the American Academy of Physician Assistants’ House of Delegates, 1995).
“Physician Assistants are health professionals licensed to practice medicine with physician supervision. Physician assistants are qualified upon graduation from an accredited physician assistant educational program and/or certification by the National Commission on Certification of Physician Assistants. Within the physician/physician assistant relationship, physician assistants exercise autonomy in medical decision-making and provide a broad range of diagnostic and therapeutic services. The clinical role of physician assistants includes primary and specialty care in medical and surgical practice settings in rural and urban areas. Physician assistant practice is centered on patient care and may include educational, research, and administrative activities.”

MISSION
The Midwestern University Physician Assistant (PA) Program in Glendale is committed to the following mission:
To train and mentor PA’s in an educational environment that cultivates excellence in professionalism, compassion, competence, service, and teamwork in the practice of medicine.

PROGRAM DESCRIPTION
The professional curriculum leading to the master’s degree is a full-time professional program that offers students the opportunity to earn a graduate degree and satisfy the eligibility requirements for the PA national certifying examination. The roles and specific clinical duties and responsibilities that graduates can expect to experience will vary depending on their chosen career path. MWU 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 didactic phase of the curriculum is offered at the Glendale campus.

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.

DEGREE: MASTER OF MEDICAL SCIENCE (M.M.S.) IN PHYSICIAN ASSISTANT STUDIES
The master’s curriculum augments the PA professional education by providing the student with additional academic coursework. Within the M.M.S. track, students may choose from among a Clinical Specialty Emphasis, a Research Emphasis, a Bioethics Emphasis, or a Health Professions Education Emphasis.

MMS 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.

MMS 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 MMS Research Track and require the student to complete an original research project in clinical medicine, health policy, health education, and/or basic science.

MMS 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. The Bioethics Track will also help the student to practice medicine in a more humanistic way. Graduates will receive interdisciplinary training that will expose them to a wide range of issues and perspectives.

MMS 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 to reduce the amount of 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.

**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.

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, 800-621-7440.

**ADMISSIONS**

The MWU PA Program considers applicants who possess the academic and professional promise necessary to become competent, caring members of the health care community. The admissions environment is highly selective; greater than 500 applications are received each year. The application deadline is November 1st; however, applicants are encouraged to apply early.

Completed applications received on or before the application deadline are reviewed to determine the applicant’s eligibility for an interview. Interviews are typically held between September and February. The PA Program conducts rolling admissions and admissions decisions are generally made within two weeks following the interview. Candidates are notified of their status shortly thereafter. Cumulative and science grade point averages, GRE general test scores, letters of recommendation, health care experience, knowledge of the profession, and motivation for wanting to become a PA will all be considered when reviewing an applicant’s file.

**Requirements**

1. Possess a minimum overall grade point average (GPA) of 2.75 on a 4.00 scale.
2. Submit scores from the Graduate Record Examination (GRE) general test to the Office of Admissions by the November 1st deadline. The test must have been taken no earlier than January 1, 2003. The Midwestern University institution code for the GRE is 4160. Applicants are expected to achieve a score at or above the 50th percentile in each section. For additional information about the GRE, call 800/GRE-CALL, or visit <www.gre.org>.
3. Complete 35 semester hours of prerequisite courses as listed below from a regionally accredited college or university. All prerequisite courses must be completed with a grade of a C, C+, or higher (a C- will NOT be accepted for any prerequisite course) before matriculation.
4. All applicants should satisfactorily complete all prerequisite course work by December 31 of the year before they plan to begin class.
5. Possess a bachelor’s degree from an accredited college or university.
6. Reflect proper motivation for and commitment to health care as demonstrated by previous work, volunteer, or other life experiences.
7. Reflect a people/service orientation through community service or extracurricular activities.
8. Possess the oral and written communication skills necessary to interact with patients and colleagues.
10. Abide by the MWU Drug-Free Workplace and Substance Abuse Policy.

**Prerequisite Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>8 Sem/12 Qtr hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology (with lab) Must include at least 4 hours of Anatomy</td>
<td>8 Sem/12 Qtr hours</td>
</tr>
<tr>
<td>General 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>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>Biochemistry (not required, but strongly recommended)</td>
<td>4-8 Sem/9-12 Qtr hours</td>
</tr>
</tbody>
</table>

* All science prerequisites must be courses designed for science majors. No survey courses will count to fulfill science prerequisites.

INTERNATIONAL STUDENTS: Must complete a minimum of 30 semester hours of coursework in the United States. Of the 30 semester hours, 6 hours must be completed in non-remedial English composition.
Application Process

1. CASPA Application
   Applicants are required to submit an application with all required materials to CASPA at www.caspaonline.org by November 1, 2007. 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 the applicant plans to matriculate. Due to the large number of applications and the limited number of seats available, applicants are strongly encouraged to complete their CASPA application 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 from a science professor who has actually taught the student or a pre-health advisory committee. The second letter can be from any one of the following: pre-health advisory committee, pre-health advisor, college professor, or healthcare 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.

3. GRE Scores
   Applicants are required to submit official GRE general test scores to Midwestern University. The MWU institutional code for submitting your scores is 4160. Only test scores earned during the previous five years (no earlier than January 2003) and sent directly from the Educational Testing Service (ETS) will be accepted.

4. Completed Applications
   Upon receipt of your CASPA application with all required materials, the Office of Admissions will send all applicants who meet the minimum overall GPA requirement of 2.75 a letter verifying receipt of the CASPA application. The letter will also include instructions on checking your application status online using your Interact Now account. Please remember that applicants must also submit official GRE general test scores to Midwestern University. It is the applicant’s responsibility to track the receipt of their application materials and 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.

Please Note: Applicants are responsible for notifying the Office of Admissions of any changes in their mailing address or email address. All requests for withdrawing an application must be done in writing via email, fax, or letter. Contact information for the Office of Admissions is listed below.

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

Interview/Selection Process
   After the Office of Admissions receives a CASPA application report, the applicant’s file is reviewed to determine if the applicant merits 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 wanting to become a PA. Eligible candidates are typically invited to interview during the months of September, October, November, December, January, and February. The applicant’s file may also be placed on an interview wait list pending possible openings toward the end of the interview cycle. Evaluation of completed applications will begin in September and continue until all seats in the class are filled. 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. A letter of confirmation will be sent to the applicant that includes 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, a chance to meet with current Midwestern University students, a campus tour, and an opportunity to meet with an admissions counselor and the financial aid office. During each interview session, the prospective student may be asked about his/her academic, personal, and professional aspirations and preparedness for admission to the program. The prospective student will be rated on a standardized evaluation form. These evaluations are then made a part of the applicant’s file and forwarded to the PA Admissions Committee.

The PA Admissions Committee meets approximately one to two weeks after interviews have concluded. The Committee reviews the full application file for each applicant who was interviewed and then formulates and submits its recommendation to the Program Director for action. The CHS Dean—via the Office of Admissions—then notifies each applicant in writing of the admissions action/decision. All applicants will 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 for admission set forth by the PA 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.

II. 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 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.

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.

**Matriculation Process**

The matriculation process begins after an applicant receives notification of his/her acceptance into the PA Program. The student must return both a signed matriculation agreement and an initial deposit to the Office of Admissions. The student must also complete the following:

- Submit deposit monies by the date designated in his/her matriculation agreement—the entire deposit is applied toward the student’s first-quarter tuition.
- Arrange to have all final college transcripts submitted to the Office of Admissions no later than the date designated in the matriculation agreement. CASPA does not forward transcripts to schools, therefore, it is the student’s responsibility to forward official transcripts from all the schools attended directly to Midwestern University, Glendale campus.
- Successfully complete all outstanding prerequisites with the grade of a “C,” “C+,” or higher. A “C-” will NOT be accepted for any prerequisite course.
- Complete a medical file as requested by the Department of Student Services.
- Submit proof of medical and disability insurance coverage. The student may select either a plan offered by an MWU-approved carrier or a comparable plan offered by an outside carrier of the student’s choice.
- PERMANENT RESIDENTS: Submit a copy of permanent resident alien card.
- INTERNATIONAL STUDENTS: Submit proof of completed required immunizations.
- SIGN Credit Policy Statement.
- Complete a physical exam and submit form.
- 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).
- Provide documentation that any additional coursework or service requirements stipulated by the PA Admissions Committee has been completed.
- Submit additional documents as required by the Office of Admissions.
- Complete a physical exam and submit form.
- Sign authorization allowing a criminal background check.
- Sign the MWU Drug-Free Workplace and Substance Abuse Policy.
- Complete a personal file and submit form.
- Provide proof of completed required immunizations.
- Satisfy Technical Standards for the Program.

If the student either fails to satisfy these matriculation requirements or omits/falsifies information required on official admissions documents, the student automatically forfeits his/her seat in the program. Any individual accepted for admission to the PA Program who does not comply with stated timelines for submission of all required materials receives no further notification from the College relative to forfeiture of his/her seat.
Reapplication Process
After receiving either a denial or an end-of-cycle letter, a prospective student 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, the prospective student must complete and submit a new application and proceed through each step of the entire application process.

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:

- Follow an approved course of study leading to the completion of all master’s requirements;
- Satisfactorily complete all professional courses with a minimum cumulative grade point average of 2.75; no course or rotation grade below a C;
- Satisfactorily complete the Senior Summative examinations;
- Satisfactorily complete the required credit hours in the overall course of study;
- 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;
- Be recommended for conferral of the master’s degree 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.

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

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer Quarter</td>
<td>PASS 451 Behavioral Medicine 2.0</td>
</tr>
<tr>
<td></td>
<td>PASS 450 Health Professionalian 1.0</td>
</tr>
<tr>
<td></td>
<td>ANAT 451 Human Anatomy/Embryology 7.0</td>
</tr>
<tr>
<td></td>
<td>BIOC 451 Human Biochemistry 6.0</td>
</tr>
<tr>
<td></td>
<td>PASS 456 Medical Interviewing and Documentation 1.0</td>
</tr>
<tr>
<td></td>
<td>PASS 561 Master’s Skills &amp; Topics 2.0</td>
</tr>
<tr>
<td></td>
<td>Total 19.0</td>
</tr>
</tbody>
</table>

Fall Quarter

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANAT 463 Human Neurosciences</td>
<td>3.0</td>
</tr>
<tr>
<td>CORE 460 Interdisciplinary Health Care</td>
<td>0.5</td>
</tr>
<tr>
<td>MICR 465 Epidemiology &amp; Evidence-Based Medicine</td>
<td>1.0</td>
</tr>
<tr>
<td>PASS 460 Clinical Medicine I</td>
<td>4.0</td>
</tr>
<tr>
<td>PASS 469 Physical Diagnosis</td>
<td>4.0</td>
</tr>
<tr>
<td>PASS 475 Women’s Health</td>
<td>2.0</td>
</tr>
<tr>
<td>PHYS 471 Human Physiology I</td>
<td>4.0</td>
</tr>
<tr>
<td>Required Master’s Course</td>
<td>3.0</td>
</tr>
<tr>
<td>Total</td>
<td>21.5</td>
</tr>
</tbody>
</table>

Winter Quarter

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORE 470 Interdisciplinary Health Care</td>
<td>0.5</td>
</tr>
<tr>
<td>MICR 470 Microbiology</td>
<td>3.0</td>
</tr>
<tr>
<td>PASS 470 Clinical Medicine II</td>
<td>4.0</td>
</tr>
<tr>
<td>PASS 474 Clinical Laboratory Medicine I</td>
<td>2.0</td>
</tr>
<tr>
<td>PASS 473 Electrocardiography</td>
<td>1.5</td>
</tr>
<tr>
<td>PASS 471 Therapeutic and Diagnostic Skills</td>
<td>1.5</td>
</tr>
<tr>
<td>PHYS 482 Human Physiology II</td>
<td>4.0</td>
</tr>
<tr>
<td>PHAR 461 Pharmacology I</td>
<td>3.0</td>
</tr>
<tr>
<td>Required Master’s Course</td>
<td>3.0</td>
</tr>
<tr>
<td>Total</td>
<td>22.5</td>
</tr>
</tbody>
</table>

Spring Quarter

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORE 480 Interdisciplinary Health Care</td>
<td>0.5</td>
</tr>
<tr>
<td>PASS 481 ACLS</td>
<td>1.0</td>
</tr>
<tr>
<td>PASS 480 Clinical Medicine III</td>
<td>4.0</td>
</tr>
<tr>
<td>PASS 485 Clinical Laboratory Medicine II</td>
<td>2.0</td>
</tr>
<tr>
<td>PASS 461 Emergency Medicine &amp; Surgical Principles</td>
<td>3.0</td>
</tr>
<tr>
<td>PASS 486 Pediatrics</td>
<td>2.0</td>
</tr>
<tr>
<td>PASS 483 Psychiatric Principles</td>
<td>1.5</td>
</tr>
<tr>
<td>PHAR 472 Pharmacology II</td>
<td>3.0</td>
</tr>
<tr>
<td>Required Master’s Course</td>
<td>3.0</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
</tr>
</tbody>
</table>

*details of Master’s curricula and tracks may be subject to change

Second Professional Year

Total Quarter Credit Hours Required: 63

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.

**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 Exam: 1.0
- Total: 16.0

**Third Professional Year**
- Total Quarter Credit Hours Required: 12

**Summer Quarter Hrs**
- Required Master’s Coursework*: 6.0
- Total: 12.0
- Total credits for years 1, 2, and 3: 158.5

*depending on track in the 2nd year

**Required Clinical Rotations**
- EMED 491: Emergency Medicine (6 weeks): 6.0
- FMED 492: Family Medicine (6 weeks): 6.0
- SURG 496: General Surgery (6 weeks): 6.0
- IMED 493: Internal Medicine (6 weeks): 6.0
- PSYC 495: Psychiatry (6 weeks): 6.0
- CLRO 498: Selective Rotation (6 weeks): 6.0
- PASS 666: Clinical Practicum (6 weeks)*: 6.0
- PASS 667: Clinical Practicum (6 weeks)*: 6.0
- OBGY 497: Women’s Health (6 weeks): 6.0

*Depending on track. For the Health Professions Education Track, CLRO 498 is composed of PASS 666 and PASS 667, taken consecutively.

The CHS PA Program reserves the right to alter its curriculum however and whenever it deems appropriate.

---

### Master of Medical Science 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><strong>Summer</strong></td>
<td>Master’s Skills and Topics, PASS561</td>
<td>Master’s Skills and Topics, PASS561</td>
<td>Master’s Skills and Topics, PASS561</td>
<td>Master’s Skills and Topics, PASS561</td>
</tr>
<tr>
<td><strong>Fall</strong></td>
<td>Advanced Master’s Skills and Application, PASS562</td>
<td>Advanced Master’s Skills and Application, PASS562</td>
<td>Introduction to Bioethics, GEB501</td>
<td>Teaching and Learning Styles, GEHP501</td>
</tr>
<tr>
<td><strong>Winter</strong></td>
<td>Independent Study I: Literature Review, PASS563</td>
<td>Independent Study I: Literature Review, PASS563</td>
<td>Foundations of Medical Ethics, GEB502</td>
<td>Instructional Design and Methods, GEHP503</td>
</tr>
<tr>
<td><strong>Spring</strong></td>
<td>Independent Study II: Learning Plan, PASS564</td>
<td>Independent Study II: Research Proposal, PASS564</td>
<td>Philosophy of Medicine, GEB503</td>
<td>Curriculum Construction, GEHP504</td>
</tr>
<tr>
<td><strong>Year 2 and Year 3</strong></td>
<td>Non-Practice and Practice Objectives, Master’s Portfolio, PASS665A-D (12 credits total) Clinical Master’s Specialty Rotations, PASS666 and PASS667 (12 credits total)</td>
<td>Master’s Thesis as Original Research Project, PASS665A-D (12 credits total) Research Practicum Rotations, PASS666 and PASS667 (12 credits total)</td>
<td>Bioethics Portfolio, PASS666 and PASS667 (12 credits total) Ethics of Research and Experimentation, GEB505 (3 credits) Required and Elective Courses, Independent Studies (9 credits)</td>
<td>Education Technology, GEHP502 (3 credits) Education Curriculum Plan, PASS665A (1 credit) Required and Elective Courses, Patient Education Projects (8 credits) Education Practicum and Educational Portfolio, PASS666 and PASS667 (12 credits total)</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.

**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.
3 credits
Prerequisite: ANAT 451

*BBSC 409 Drugs of Abuse Electives*
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.
2 credits

*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.
6 credits

*BMED 429*
Clinical epidemiological studies are used to determine disease causation, treatment efficacy, diagnostic and screening test reliability, risk factors for disease and other information fundamental to the practice of health care. The goal of this course is to provide the basic concepts and terminology necessary to be an intelligent consumer of the epidemiological literature.
3 credits

*CORE 460, 470, 480 Interdisciplinary Health Care*
Changes in our healthcare delivery system are creating a growing demand for health professionals with skills in collaboration and teamwork. The Interdisciplinary Healthcare course involves the Colleges of Health Sciences, Osteopathic Medicine, and Pharmacy, in order to teach 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 465 Epidemiology and Evidence-Based Medicine*
This course provides a study of basic principles of epidemiology and descriptive biostatistics. Topics include disease occurrence, recurrence, and patterns and trends in a population. Emphasis is given to understanding how to interpret such concepts as relative risk, risk cofactors, attributable risk, and assessing public health significance in relation to health promotion and disease prevention. The health risks for targeted populations and potential areas for preventive intervention are also discussed.
1 credit

*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
Prerequisite: BIOC 451

*PASS 450 Health Professionalism*
The purpose of this course is to provide the student with a holistic understanding and perspective of the PA profession. We will discuss various topics that illustrate the challenges faced by PAs in clinical practice and the challenges you may encounter as you make the transition from a student to a professional. Various topics in professionalism include communication techniques with patients, confidentiality issues, ethical issues, and cultural sensitivity. The goal of this
The 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. Normal and abnormal patterns are reviewed and techniques for intervention are described. Basic principles of effective communication are discussed. 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, substance-related disorders, chronic illness and aging, and end of life care. Lectures are supplemented by video vignettes and in-class small group interaction.

2 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.

1 credit

**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 problems-based learning sessions. In these sessions, students have the opportunity to develop competence in taking histories, to 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.

3 credits each quarter

**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 medico legal 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: ANAT 451, BIOC 451, PASS 456, PASS 460, PASS 469, PASS 470, PASS 473, PASS 474, & PASS 475.

**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, BIOC 451, PASS 451 & PASS 456

**PASS 471 Therapeutic and Diagnostic Skills**

This course emphasizes skill development in performing routine therapeutic procedures and competence in managing therapeutic intervention. Areas of skill development include (at a minimum) injections, suturing and wound care, casting, splinting, venipuncture, and intravenous therapy.

1.5 credits

Prerequisites: ANAT 451, BIOC 451, PASS 456, PASS 460, PASS 469

**PASS 473 Electrocardiography**

The purpose of the Electrocardiography 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 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 451, BIOC 451, PASS 456, PASS 460, & PASS 469

**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 451, BIOC 451, PASS 456, PASS 460, & PASS 469.

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—concepts which are critical for success in the second year and relevant to a PA in a variety of practice settings, including obstetrics/gynecology, primary care, emergency medicine and surgery. Finally, this course is aligned with the Physician Assistant National Certification Examination (PANCE) content blueprint, to ensure that the first-year PA student is introduced to core content for the national certification examination.

2 credits
Prerequisites: ANAT 451, BIOC 451, PASS 456, PASS 460, PASS 469, PASS 470, PASS 473, PASS 474, & PASS 475

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, BIOC 451, PASS 456, PASS 460, PASS 469, PASS 470, PASS 473, PASS 474, PASS 475, & PASS 485

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 participate in an in-depth review of history taking and physical examination skills while being required to conduct a problem-specific interview and physical examination on a standardized patient. 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 assigned rotations

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, Auth/Kerstein review questions, 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

PASS 561 Master’s Skills & Topics
This required course is the initial preparatory course for Master’s of Medical Science students in the PA Program. Each faculty track coordinator will present a topic(s) relevant to their MMS track and provide activities and assignments to allow the student an in-depth approach to the subject matter. The student will also be exposed to core content appropriate to all master’s students, such as searching the literature, critiquing web sites and professional writing.

2 credits

PASS 562 Advanced Master’s Skills and Application
This course will advance and apply the principles of evidence-based medicine (EBM), advanced concepts in research design and statistics, and the clinical application of these tools for the Clinical or Research Master’s student. The course will emphasize clinical relevance and application of EBM skills, using case studies as examples. Students will apply these skills in weekly assignments and a thorough report in the form of Grand Rounds at the conclusion of the course. These tools will ultimately assist the student in preparation for the clinical year and in the development of the master’s thesis or portfolio.

3 credits

PASS 563 Independent Study I: Literature Review
The purpose of this course is to help students refine a topic of study for their master’s research thesis or clinical master’s portfolio. The master’s student is not required to complete their final master’s project using the field of study selected in this course. The course coordinators will assist students in the selection of a research or clinical topic of study and facilitate an in-depth approach to the topic through the ‘research literature review’ or the ‘clinical review article’. The coordinators also intend to assist students as they refine their writing skills and adapt to form and style requirements outlined by the Midwestern University PA Master’s program.

3 credits

PASS 564 Independent Study II: Learning Plan
This independent study course facilitates the student’s preparation of the research project proposal (research MMS track), or the learning plan (clinical MMS track). The student will develop a practical foundation for the successful implementation of his/her master’s work in the second and third years. Specific guidelines for each track are included in the syllabus. All students are strongly encouraged to meet with the appropriate faculty throughout the quarter to assess progress and address any questions and/or concerns.

3 credits

PASS 665 A-D
The second-year clinical 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 related to a select specialty field.

As discussed in PASS 564, it is recommended that the clinical master’s student select one specialty field of emphasis (i.e. dermatology). However, the student has the option of selecting a maximum of two related specialty fields for the portfolio (i.e. cardiology and cardiothoracic surgery). Correlation between the two fields must be clearly explained in the learning plan and is subject to approval by the PA Program faculty.

3 credits each (12 credits total)

PASS 666-667
Following successful completion and evaluation of non-practice objectives listed in the learning plan, third-year clinical master’s students enter the 12-week master’s practicum. Each student works with their chosen preceptor to develop practicum-specific learning objectives that will serve as the basis for their evaluation.

6 credits per quarter (12 credits total)

PHAR 461, 472 Pharmacology I and II
The overall instructional goal of pharmacology is to provide the student with a firm understanding of the effects of therapeutically important drugs in man, from a molecular to a behavioral level of organization. Why should a person study pharmacology? Why is it important to understand the science behind how drugs work? Why is it important to learn about how drugs were developed and to understand some basic drugs that are not commonly used today? New therapeutic strategies, and new types of drugs, are being developed at an extraordinary pace. How is someone to evaluate the claims regarding hundreds of new drugs and therapeutic approaches that will be developed during the course of their practice? It is our opinion that a sound understanding of the science of pharmacology will allow you to make rational decisions regarding the use of new drugs, and to provide a basis for continuous learning. A health care provider who has an adequate knowledge of the principles of basic and clinical pharmacology should be able to formulate and monitor a
rational course of drug therapy for any disease he or she is required to treat.
3 credits per quarter

PHYS 471, 482 Human Physiology I and II
In this two-quarter series, students are introduced through didactic instruction and clinical case sessions 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. The cases utilize small group clinical case sessions to promote critical thinking, development of problem solving skills, and appropriate clinical application of physiologic concepts and principles. As active participants in these discussion sessions, students identify, present, and discuss deviations from the norm as the patient’s history, symptoms, signs, and relevant laboratory findings are reviewed. Medical literature interpretation and case write-ups are included. This component of the course assists in providing a foundation for clinical decision making and diagnosis.
PHYS 471, 4 credits
PHYS 482, 4 credits, Prerequisite: PHYS 471

FACULTY

Kevin Lohenry, MPAS, PA-C
University of Nebraska
Program Director and Assistant Professor

James Meyer, MD
University of Michigan
Medical Director and Associate Professor

Michel Statler, MLA, PA-C
University of Texas-Southwestern
Associate Program Director and Associate Professor

James Stoehr, PhD
Dartmouth College
Associate Director of Master's Education and Professor

Alison Essary, MHPE, PA-C
Midwestern University-Glendale
Academic Coordinator and Assistant Professor

Jacqueline Spiegel, MS, PA-C
Rosalind Franklin University
Clinical Coordinator and Assistant Professor

Bettie Coplan, MPAS, PA-C
University of Nebraska
Instructor

Lisa Chang, MMSc, PA-C
Emory University
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

PROGRAM 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, 27-month, 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 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. Our 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, our fieldwork program is extensive and rich in the types of experiences offered to our 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 our 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 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;

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.

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).

ADMISSIONS
The College of Health Sciences Occupational Therapy Program considers for admission those applicants who possess the academic and professional promise necessary to become 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 file as early as possible to ensure timely consideration.

Applications received are reviewed by the Director of Admissions in conjunction with the OT Program to determine the applicant’s eligibility for an interview. 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 satisfy the following minimum requirements before the academic year commences for the incoming class:

- Completed a baccalaureate degree from a regionally accredited college or university;

- Achieved a cumulative undergraduate grade point average (GPA) of 2.75 on a 4.00 scale (only grades of C or higher will be considered to fulfill prerequisite requirements);

- Have completed the minimum number of prerequisite courses in the prescribed subject areas at a regionally accredited college or university before the program begins;

- Take and submit the Graduate Record Examination (GRE) general test scores (optional for those with GPAs above 3.0). Scores will be accepted from tests taken no earlier than January 1, 2003. The Midwestern University institutional code for the GRE is 4160. For more information about the GRE, contact Educational Testing Services (ETS) at 1-800-GRE-CALL, or visit www.gre.org.
• Satisfied the standards set forth by the Admissions Committee (including documentation of academic and professional promise in the prospective student);
• Completed the Program’s interview process. On-campus interviews are by invitation only;
• Completed a first aid course within three years prior to enrollment;
• Present evidence of 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. It is the student’s responsibility to maintain CPR certification at this level while enrolled in the program;
• Reflect a people/service orientation through community service or extracurricular activities;
• Reflect proper motivation for and commitment to health care as demonstrated by previous work, volunteer work, or other life experiences;
• Possess the oral and written communication skills necessary to interact with patients and colleagues;
• Abide by the Midwestern University Drug-Free Workplace and Substance Abuse Policy;
• Pass a criminal background check.

INTERNATIONAL STUDENTS: Must complete a minimum of 30 semester hours of coursework in the United States. Of the 30 semester hours, 6 hours must be in nonremedial English composition, and 3 hours in Speech/Communication.

Prerequisite Courses

Students must complete these courses with a grade of C or higher

<table>
<thead>
<tr>
<th>Subject</th>
<th>Required Courses</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.

Additional courses in the sciences and mathematics are also recommended including chemistry, physiology, physics, and additional biology courses.

General education electives are also recommended to demonstrate competency in English composition, oral communication, problem-solving behavior, logic, and ethical theories.

Application Process

To be considered for admission to the Occupational Therapy Program, applicants must submit the following items to the Office of Admissions:

1. A properly completed application. Forms and instructions can be downloaded at www.midwestern.edu; click on the AZ Occupational Therapy program section. You may also obtain an application packet by writing or calling the Office of Admissions at Midwestern University, 19555 N. 59th Avenue, Glendale, AZ, 85308, 623/572-3215 or 888/247-9277; e-mail admisz@midwestern.edu.
2. A nonrefundable, nonwaivable application fee of $50. Make checks payable to Midwestern University: OT.
3. Two properly signed and sealed letters of recommendation from professionals who know the applicant well. The Office of Admissions will accept letters from prehealth advisors or committees, science professors, and health professionals.
4. Official transcripts from every undergraduate, graduate, or professional school attended. Each transcript MUST be signed and sealed by the registrar of each institution.
5. Standardized test scores (GRE general test scores are required of students with a GPA less than 3.0).

Send all application materials to:
Office of Admissions
Midwestern University
19555 N. 59th Ave.
Glendale, AZ 85308

You can track the receipt of your application materials and the status of your file on our University Web site. When we receive your application, the Office of Admissions will send instructions for accessing your account information.

Note: Please notify us of any changes to your mailing address and e-mail address.

All requests for withdrawing an application must be done in writing.

GPA Verification

The Office of Admissions considers grades from all nonremedial, college-level courses completed after high school. All attempts of repeated courses must be used in the calculation of the GPA. No grades of C– or below are accepted for any pre-professional 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 if the applicant can provide verification that the grade earned was equivalent to a C or higher. Such courses are not included in the cumulative GPA calculation.
Interview/Selection Process
Students selected for an interview will be notified by letter or telephone of available interview dates and invited to schedule an on-campus interview. The applicant must contact the Office of Admissions to schedule an interview date.

During each interview session, the interviewer(s) questions the applicant about his/her academic, personal, and professional aspirations and preparedness for admission to the program, rating the prospective student on a standardized evaluation form. These evaluations are then made a part of the applicant’s file, which is then made available 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 file for each applicant who was interviewed and then formulates and submits its recommendation for action. Each applicant will be notified in writing of the admissions action/decision.

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.

Matriculation Process
The matriculation process begins after an applicant receives notification of his/her acceptance into the Occupational Therapy Program. The student must return both a signed matriculation agreement and an initial deposit to the Office of Admissions. The student must also complete the following:

1. Submit deposit monies by the dates designated in his/her matriculation agreement; the entire deposit is applied toward the student’s first quarter tuition.
2. Arrange to have all final college transcript(s) submitted to the Office of Admissions no later than the date designated in the matriculation agreement.
3. Complete a medical file as requested by the Office of Student Services.
4. Submit proof of medical and disability insurance coverage. The student may select either a plan offered by an MWU-approved carrier or a comparable plan offered by an outside carrier of the student’s choice.
5. 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).
6. Provide documentation that any additional coursework or service requirements stipulated by the admissions committee of the program has been completed.
7. Submit additional documents as required by the Office of Admissions.
8. Sign authorization form allowing a criminal background check.
9. Sign the Midwestern University Drug-Free Workplace and Substance Abuse Policy.
10. Complete physical exam and submit form.
12. Satisfy Technical Standards for the program.

If the student either fails to satisfy these matriculation requirements or omits/falsifies information required on official admissions documents, the student automatically
forfeits his/her seat in the Program. Any individual accepted for admission to the Occupational Therapy Program who does not comply with stated timelines for submission of all required materials receives no further notification from CHS relative to forfeiture of his/her seat.

Reapplication Process
After receiving either a denial or end-of-cycle letter, a prospective student 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, the prospective student must complete and submit a new application and proceed through each step of the entire 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 skills 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 AOTA. 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.

Time Limit for Completion of Coursework
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.

Graduation Requirements
To qualify for graduation, students must:
- Satisfactorily complete all courses with a minimum cumulative GPA of 2.75 or higher;
- Satisfactorily complete the required minimum of credit hours in the curriculum;
- 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;
- Receive a favorable recommendation for master’s degree conferral from the University Faculty Senate;
- Settle all financial accounts with the University;
- 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; however, state licenses are usually based on the results of the NBCOT Certification Examination. A prior felony conviction may affect a graduate’s ability to sit for the NBCOT Certification Exam or attain licensure.

Curriculum
The first calendar year of the professional master’s curriculum is composed of three quarters of coursework consisting of 46 required course credits (quarter hours) including 40 clock-hours (one quarter credit hour) of Level I-A Fieldwork. The second calendar year of the curriculum consists of 60.5 required course credits (quarter hours). The first three quarters entail coursework, faculty-guided and supervised learning opportunities in the community related to evaluation and intervention, and 40 clock-hours (one quarter credit hour) of Level I-B Fieldwork. The fourth quarter of this second professional year is comprised of one quarter (12 credits) of Level II-A Fieldwork. Students’ proficiency in evaluation and intervention, independent decision-making and critical thinking are emphasized during the Fieldwork II-
Fieldwork experiences are offered in clinical, community, hospital, school and other facilities located throughout the continental United States that have a legal agreement with the University. Between these two full-time clinical rotations, Summer Quarter of the third year consists of 13 required course credits (quarter hours) which are designed to further refine student preparation for autonomous clinical practice.

### Curriculum Structure, Course Quarter Hour Credits, and Sequencing

#### First Professional Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Quarter Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTHE 510</td>
<td>OT Foundations</td>
<td>2.0</td>
</tr>
<tr>
<td>OTHE 540</td>
<td>OT Analysis I</td>
<td>2.0</td>
</tr>
<tr>
<td>OTHE 583</td>
<td>Neuroscience I</td>
<td>3.0</td>
</tr>
<tr>
<td>OTHE 505</td>
<td>Human Conditions I</td>
<td>3.0</td>
</tr>
<tr>
<td>OTHE 520</td>
<td>Theoretical Constructs I</td>
<td>3.0</td>
</tr>
<tr>
<td>CORE 460</td>
<td>Interdisciplinary Health Care</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>13.5</strong></td>
</tr>
</tbody>
</table>

#### Winter Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Quarter Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTHE 502</td>
<td>Anatomy</td>
<td>4.0</td>
</tr>
<tr>
<td>OTHE 679</td>
<td>Neuroscience II</td>
<td>3.0</td>
</tr>
<tr>
<td>OTHE 541</td>
<td>OT Analysis II</td>
<td>2.0</td>
</tr>
<tr>
<td>OTHE 525</td>
<td>Human Conditions II</td>
<td>3.0</td>
</tr>
<tr>
<td>OTHE 660</td>
<td>Occupational Roles and Participation</td>
<td>2.0</td>
</tr>
<tr>
<td>OTHE 550</td>
<td>Fieldwork Foundations I</td>
<td>1.0</td>
</tr>
<tr>
<td>CORE 470</td>
<td>Interdisciplinary Health Care</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>15.5</strong></td>
</tr>
</tbody>
</table>

#### Spring Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Quarter Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTHE 536</td>
<td>Fieldwork I-A</td>
<td>1.0</td>
</tr>
<tr>
<td>OTHE 585</td>
<td>Evaluation and Treatment I: Foundations</td>
<td>5.0</td>
</tr>
<tr>
<td>OTHE 526</td>
<td>Human Conditions III</td>
<td>3.0</td>
</tr>
<tr>
<td>OTHE 581</td>
<td>Kinesiology</td>
<td>3.0</td>
</tr>
<tr>
<td>OTHE 629</td>
<td>OT Group Process</td>
<td>2.0</td>
</tr>
<tr>
<td>CORE 480</td>
<td>Interdisciplinary Health Care</td>
<td>0.5</td>
</tr>
<tr>
<td>OTHE 551</td>
<td>Fieldwork Foundations II</td>
<td>0.5</td>
</tr>
<tr>
<td>OTHE 628</td>
<td>Research I</td>
<td>2.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>17.0</strong></td>
</tr>
</tbody>
</table>

#### Second Professional Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Quarter Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTHE 587</td>
<td>Evaluation and Treatment II: Children</td>
<td>5.0</td>
</tr>
<tr>
<td>OTHE 640</td>
<td>OT Analysis III</td>
<td>2.0</td>
</tr>
<tr>
<td>OTHE 630</td>
<td>Research II</td>
<td>3.0</td>
</tr>
<tr>
<td>OTHE 626</td>
<td>Human Conditions IV</td>
<td>3.0</td>
</tr>
<tr>
<td>OTHE 641</td>
<td>Orthotics I</td>
<td>2.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>15.0</strong></td>
</tr>
</tbody>
</table>

### Fall Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Quarter Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTHE 685</td>
<td>Evaluation and Treatment III: Adult</td>
<td>5.0</td>
</tr>
<tr>
<td>OTHE 678</td>
<td>Administration and Leadership</td>
<td>3.0</td>
</tr>
<tr>
<td>OTHE 617</td>
<td>Critical Analysis of Pediatric Practice</td>
<td>2.0</td>
</tr>
<tr>
<td>OTHE 642</td>
<td>Orthotics II</td>
<td>2.0</td>
</tr>
<tr>
<td>OTHE 690</td>
<td>Advanced Seminar: Upper Extremity</td>
<td>3.0</td>
</tr>
<tr>
<td>OTHE 635</td>
<td>Fieldwork I-B</td>
<td>1.0</td>
</tr>
<tr>
<td>OTHE 552</td>
<td>Fieldwork Foundations III</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>16.5</strong></td>
</tr>
</tbody>
</table>

### Winter Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Quarter Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTHE 589</td>
<td>Evaluation and Treatment IV: Seniors</td>
<td>5.0</td>
</tr>
<tr>
<td>OTHE 631</td>
<td>Research III</td>
<td>3.0</td>
</tr>
<tr>
<td>OTHE 687</td>
<td>Advanced Seminar: Adults</td>
<td>3.0</td>
</tr>
<tr>
<td>OTHE 632</td>
<td>Critical Analysis: Psychosocial Practice</td>
<td>2.0</td>
</tr>
<tr>
<td>OTHE 634</td>
<td>Physical Agents</td>
<td>4.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>17.0</strong></td>
</tr>
</tbody>
</table>

### Spring Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Quarter Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTHE 795</td>
<td>Fieldwork II-A</td>
<td>12.0</td>
</tr>
</tbody>
</table>

### Third Professional Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Quarter Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTHE 645</td>
<td>Seminar on Clinical Practice</td>
<td>1.0</td>
</tr>
<tr>
<td>OTHE 633</td>
<td>Research IV</td>
<td>3.0</td>
</tr>
<tr>
<td>OTHE 620</td>
<td>Theoretical Constructs II</td>
<td>3.0</td>
</tr>
<tr>
<td>OTHE 694</td>
<td>Program Development</td>
<td>3.0</td>
</tr>
<tr>
<td>OTHE 689</td>
<td>Work Rehabilitation and Health Promotion</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>13.0</strong></td>
</tr>
</tbody>
</table>

### Summer Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Quarter Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTHE 796</td>
<td>Fieldwork II-B</td>
<td>12.0</td>
</tr>
<tr>
<td><strong>Total Quarter Credits for Years 1, 2, and 3</strong></td>
<td></td>
<td><strong>131.5</strong></td>
</tr>
</tbody>
</table>

**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**

Changes in our health care delivery system are creating a growing demand for health professionals with skills in collaboration and teamwork. The Interdisciplinary Health
Care course involves the colleges of Health Sciences, Osteopathic Medicine, and Pharmacy, in order to teach 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 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.
3 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 continue one’s focus on increasing 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 continue one’s focus on increasing 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 it’s 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

OTHE 583 Neuroscience I
This is the first of two courses designed to develop the students’ 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: Evaluation and Treatment I

OTHE 589 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: Evaluation and Treatment I

OTHE 617 Critical Analysis of 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: 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: 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 the beginning of reviewing the literature 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: 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: Research II

**OTHE 632 Critical Analysis: 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.

2 credits

**OTHE 633 Research IV**
This is the final course in the four-part progression that emphasizes the development and refinement of beginning research skills. Students’ research results from the previous coursework are subjected to descriptive or statistical analysis and integrated with the current literature in occupational therapy practice. Students’ projects ultimately relate theory to practice, and demonstrate synthesis of advanced knowledge in a practice area with recommendations for clinical practice and further inquiry. This course’s outcome is the completion of a manuscript appropriate for publication in a peer-reviewed journal.

3 credits
Prerequisite: 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 normal and abnormal response of tissue to the application of physical modalities. The safe and effective application of therapeutic hydrotherapy, thermotherapy, and electrotherapy when used as an adjunct to, or in preparation for, therapeutic occupation is highlighted.

4 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: 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 678 Administration and 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 is the second of two courses designed to develop the students’ knowledge base of neuroscience to a level required for clinical practice. It provides further opportunities to apply neuroscience principles as they relate to occupational therapy evaluation and treatment. It also enables a greater appreciation of the neurological impact on the human condition. Throughout the two 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: Neuroscience I

OTHE 685 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: Evaluation and Treatment I

OTHE 687 Advanced Seminar: Adult
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: Evaluation and Treatment III

OTHE 689 Work Rehabilitation and 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 Advanced Seminar: Upper Extremity
This course will focus 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.
3 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: Administration and 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

Kimberly A Bryze, PhD, OTR/L
University of Illinois at Chicago
Associate Professor and Program Director

Christine Merchant, MA, OTR/L
University of Minnesota
Assistant Professor

Katherine Schofield, OTR/L, CHT
University of Alberta
Adjunct Instructor

Brenda K Taubman, MA, OTR/L
University of Phoenix
Assistant Professor

Mary Ellen Thompson, MA, OTR/L
University of Southern California
Assistant Professor
ADMISSIONS REQUIREMENTS
The Biomedical Sciences Program uses a rolling admission process in which completed applications are reviewed and decisions are made at regular intervals during the admissions cycle. Bachelor-level students may enter the program during any academic quarter. Master-level students may only enter the program in the Fall Quarter (late August). Admission to the Biomedical Sciences 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. The Biomedical Sciences Admissions Committee carefully considers the applicant’s interests, aptitude, record of community service, extracurricular activities, oral and written communication skills, 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 until the class is filled. To maximize their competitiveness within our rolling admission process, candidates are advised to submit a completed application early in the admission cycle.

Students who have completed coursework outside the United States must have completed a minimum of 30 semester hours (45 quarter hours) at a regionally accredited college or university in the United States. Of the 30 semester hours, 6 hours must be in nonremedial English composition and 3 hours must be in speech/communication.

Bachelor of Biomedical Sciences Requirements:
To be considered for admission to the Bachelor of Biomedical Sciences degree program, the applicant must:
1. Meet the prerequisite coursework.
Applicants must have completed 60 semester hours (or 90 quarter hours) of prerequisite coursework at another regionally accredited institution (often a community college). Students must complete the prerequisite courses (other than general education credits) with a grade of "C" or higher. Included in these prerequisite hours must be the following non-remedial courses (100 level or above):

<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>4</td>
<td>6</td>
</tr>
<tr>
<td>General chemistry (with laboratory)</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>Organic chemistry (with laboratory)*</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Physics—algebra-based (mechanics, heat, magnetism, electricity, light, relativity, and quantum theory)</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics**</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>General education (divided among the social and behavioral sciences, humanities, fine arts, foreign language, business, or computer sciences).</td>
<td>31</td>
<td>47</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>60</td>
<td>90</td>
</tr>
</tbody>
</table>

(Speech and economics are recommended for pre-pharmacy candidates.)

* Some professional programs may require 8 semester hours of organic chemistry (with laboratory)
**Pre-pharmacy candidates require a course in calculus

2. Have obtained a minimum cumulative grade point average of 2.50 or higher on a scale of 4.00 in all coursework completed at previous colleges or universities.
3. Submit two letters of recommendation.
4. Submit official transcripts from each college or university attended.
5. Pass a criminal background check.
6. Agree to abide by the Midwestern University Drug Free Workplace and Substance Abuse Policy.

Master of Biomedical Sciences Requirements:
To be considered for admission to the Master of Biomedical Sciences degree program, the applicant must:
1. Hold a bachelor’s level or higher degree from a regionally accredited college or university (preferably in the sciences).
2. Have obtained a minimum cumulative grade point average of 2.75 or higher on a scale of 4.00 in all coursework completed at previous colleges or universities.
3. Submit two letters of recommendation.
4. Submit official transcripts from each college or university attended.

5. Submit scores from one of the following: Graduate Record Examination (GRE) general test, Medical College Admissions Test (MCAT), Dental Admissions Test (DAT), Pharmacy College Admissions Test (PCAT), or other professional program admissions exam. All test scores must be less than five years old.

6. Pass a criminal background check.

7. Agree to abide by the Midwestern University Drug Free Workplace and Substance Abuse Policy.

**APPLICATION PROCESS**

Individuals interested in applying for admission to the Bachelor or Master of Biomedical Sciences programs may download an application from our web site at www.midwestern.edu or obtain an application packet by writing or calling:

The Office of Admissions  
Midwestern University  
19555 North 59th Avenue  
Glendale, AZ 85308  
623/572-3215  
888/247-9277

To be considered for admission, the applicant must submit an application packet that includes the following:

1. A properly completed Biomedical Sciences Program Application for Admission
2. A nonrefundable, nonwaiveable application fee ($25 for the Bachelor’s degree program and $50 for the Master’s degree program)

The letters of recommendation must be properly signed and sealed from professionals who know the applicant well. The Office of Admissions will accept letters from pre-health advisors/committees, science professors, and health professionals.

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. If the applicant has completed coursework at an institution in a foreign country, he/she must also submit an official, detailed course-by-course evaluation of this coursework. The applicant must obtain this evaluation from one of the following services:

- Education Credential Evaluators (ECE): 414/289-3400
- World Education Service (WES): 212/966-6311

After receiving the completed application packet, an admission staff member verifies the information provided to determine whether all prerequisite coursework has been completed satisfactorily or will be completed prior to potential matriculation and to verify the applicant’s cumulative grade point average (GPA) for all completed courses. The applicant must complete a Biomedical Sciences Program interview (invitation only). A phone interview is possible for those applicants who are unable to be interviewed in person. Applications meeting all established standards for admission are forwarded to the Biomedical Sciences Program Admissions Committee. Each applicant will be notified in writing of the admissions action/decision.

**Please Note:** An applicant can track the receipt of their application materials and the status of their file on our University Web site. When we receive your application, the Office of Admissions will send instructions for accessing your account information. Please notify us of any changes to your mailing address and e-mail address.

All requests for withdrawing an application must be done in writing.

**Technical Standards for Admission to the Bachelor or Master of Biomedical Sciences Program**

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.

MATRICULATION PROCESS
The matriculation process begins after an applicant receives notification of his/her acceptance into the Biomedical Sciences Program. The student must return both a signed matriculation agreement and an initial deposit to the Office of Admissions. The student must:
1. Submit deposit monies by the date designated in his/her matriculation agreement. The entire deposit is applied toward the student’s first quarter tuition.
2. Arrange to have final college transcripts submitted to the Office of Admissions no later than the date designated in the matriculation agreement.
3. Submit proof of immunization against measles, mumps, rubella, oral polio (opv), and diphtheria.
4. Submit proof of medical and disability insurance coverage. The student may select either a plan offered by an MWU-approved carrier or a comparable plan offered by an outside carrier of the student’s choice.
5. Satisfy the Technical Standards for the Program.
6. 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 the College of Health Science.
7. Provide documentation that any additional coursework or service requirements stipulated by the Biomedical Sciences Program Admissions Committee of the program has been completed.
8. Submit additional documents as required by the Office of Admissions.
9. Sign authorization form allowing criminal background check.
10. Sign the Midwestern University Drug Free Workplace and Substance Abuse Policy.
11. Complete physical exam and submit form.

If the student either fails to satisfy these matriculation requirements or omits/falsifies information required on official admissions documents, the student automatically forfeits his/her seat in the program.

GRADUATION REQUIREMENTS
Graduation Requirements
University graduation and degree conferral ceremonies are held once a year. Currently, these ceremonies are held in June for all colleges and educational programs of the University.
To qualify for graduation, students must:
1. Follow an approved course of study acceptable to the Biomedical Sciences Program Student Academic Review Committee;
2. Satisfactorily complete all courses with a minimum cumulative grade point average of 2.25 for the Bachelor of Biomedical Sciences degree, and 2.75 for the Master of Biomedical Sciences degree;
3. Satisfactorily complete the required minimum number of quarter hour credits in their respective programs (90 credits for the Bachelor of Biomedical Sciences, and 72 credits for the Master of Biomedical Sciences degree program. A limited number of transfer credits from other institutions are allowed.)
4. Receive a favorable recommendation for bachelor’s or master’s degree conferral from the program faculty to the College’s Student Promotion and Graduation Committee;
5. Receive a favorable recommendation for bachelor’s or 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.

BACHELOR OF BIOMEDICAL SCIENCES DEGREE PROGRAM
Mission
The mission of the Bachelor of Biomedical Sciences 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.

Program 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 Sciences (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.

### Curriculum

**Sample Curriculum, Course Credits, and Sequencing**

#### Fall Quarter, First Year (12 credits)

<table>
<thead>
<tr>
<th>Core Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMED 306 Health Career Planning</td>
<td>2</td>
</tr>
<tr>
<td>BMED 312 Histology</td>
<td>2</td>
</tr>
<tr>
<td>BMED 320 General Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>BMED 360 Biophysics</td>
<td>4</td>
</tr>
</tbody>
</table>

**Electives**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMED 301 Current Topics</td>
<td>1</td>
</tr>
<tr>
<td>BMED 307 Medical Terminology</td>
<td>2</td>
</tr>
<tr>
<td>BMED 308 Introduction to Hospice Care</td>
<td>1</td>
</tr>
<tr>
<td>BMED 321 Emerging Diseases</td>
<td>1</td>
</tr>
<tr>
<td>BMED 360L Biophysics Lab</td>
<td>2</td>
</tr>
</tbody>
</table>

#### Winter Quarter, First Year (12 credits)

<table>
<thead>
<tr>
<th>Core Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMED 316 Human Anatomy w/ Lab</td>
<td>4</td>
</tr>
<tr>
<td>BMED 323 Medical Virology</td>
<td>4</td>
</tr>
<tr>
<td>BMED 350 Biochemistry</td>
<td>4</td>
</tr>
</tbody>
</table>

**Electives**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMED 322 Issues in Bioterrorism</td>
<td>1</td>
</tr>
<tr>
<td>BMED 375 Pharmacognosy</td>
<td>2</td>
</tr>
<tr>
<td>PSCI 619 Medical Spanish</td>
<td>1.5</td>
</tr>
</tbody>
</table>

#### Spring Quarter, First Year (12 credits)

<table>
<thead>
<tr>
<th>Core Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMED 324 Parasitology</td>
<td>4</td>
</tr>
<tr>
<td>BMED 351 Molecular Cell Biology</td>
<td>4</td>
</tr>
</tbody>
</table>

**Electives**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMED 300 Special Topics</td>
<td>1-3</td>
</tr>
<tr>
<td>BMED 302 Current Topics</td>
<td>1</td>
</tr>
<tr>
<td>BMED 303 Understanding Cancer</td>
<td>1</td>
</tr>
<tr>
<td>BMED 419 Neuroanatomy</td>
<td>2</td>
</tr>
<tr>
<td>BMED 428 Public Health</td>
<td>3</td>
</tr>
<tr>
<td>BMED 511 Research Design and Statistics</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Summer Quarter, First Year

**Electives**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMED 520 Good Laboratory Practice</td>
<td>3</td>
</tr>
<tr>
<td>BMED 514 Advanced Research Design and Statistics</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Fall Quarter, Second Year (12 credits)

<table>
<thead>
<tr>
<th>Core Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 501 Physiology I</td>
<td>4</td>
</tr>
</tbody>
</table>

**Electives**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMED 404 Pre-Professional Exam Prep I</td>
<td>2</td>
</tr>
<tr>
<td>BMED 409 Drugs of Addiction</td>
<td>2</td>
</tr>
<tr>
<td>BMED 421 Prion Diseases</td>
<td>1</td>
</tr>
<tr>
<td>BMED 429 Epidemiology</td>
<td>1</td>
</tr>
<tr>
<td>BMED 440 Oncology</td>
<td>3</td>
</tr>
<tr>
<td>CVSP 551 Applied CV Anatomy &amp; Embryology</td>
<td>2</td>
</tr>
<tr>
<td>BMED 425 Immunology</td>
<td>2</td>
</tr>
<tr>
<td>PSCI 551 Biochemistry I</td>
<td>3.5</td>
</tr>
</tbody>
</table>

#### Winter Quarter, Second Year (12 credits)

<table>
<thead>
<tr>
<th>Core Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMED 341 Human Genetics</td>
<td>3</td>
</tr>
<tr>
<td>BMED 474 Pharmacology I</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 502 Physiology II</td>
<td>4</td>
</tr>
</tbody>
</table>

**Electives**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMED 400 Special Topics</td>
<td>1-3</td>
</tr>
<tr>
<td>BMED 401 Biology of Human Aging</td>
<td>1</td>
</tr>
<tr>
<td>BMED 402 Medical Spanish</td>
<td>1.5</td>
</tr>
<tr>
<td>BMED 404 Pre-professional Exam Preparation</td>
<td>2</td>
</tr>
<tr>
<td>BMED 414 Embryology</td>
<td>2</td>
</tr>
<tr>
<td>BMED 422 Current Topics in Infectious Disease</td>
<td>1</td>
</tr>
<tr>
<td>BMED 450 Nutritional Biochemistry and lab</td>
<td>4</td>
</tr>
<tr>
<td>BMED 455 Biotechnology</td>
<td>3</td>
</tr>
<tr>
<td>BMED 553 Research Seminar</td>
<td>1</td>
</tr>
<tr>
<td>CVSP 552 Cardiovascular Pathology</td>
<td>3</td>
</tr>
<tr>
<td>BMED 512 Information Systems for Education &amp; Research</td>
<td>2</td>
</tr>
<tr>
<td>MICR 470 Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>PSCI 552 Biochemistry II</td>
<td>3.5</td>
</tr>
</tbody>
</table>

#### Spring Quarter, Second Year (12 credits)

<table>
<thead>
<tr>
<th>Core Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMED 435 Pathophysiology</td>
<td>4</td>
</tr>
<tr>
<td>BMED 442 Genetics with lab</td>
<td>3.5</td>
</tr>
</tbody>
</table>

**Electives**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMED 406 Laboratory Management</td>
<td>2</td>
</tr>
<tr>
<td>BMED 419 Neuroanatomy</td>
<td>2</td>
</tr>
<tr>
<td>BMED 424 Applied Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>BMED 445 Genomics &amp; Proteomics</td>
<td>4</td>
</tr>
<tr>
<td>BMED 450 Nutritional Biochemistry with lab</td>
<td>4</td>
</tr>
<tr>
<td>BMED 475 Pharmacology II</td>
<td>3</td>
</tr>
<tr>
<td>BMED 477 Dangerous Plants &amp; Animals</td>
<td>2</td>
</tr>
<tr>
<td>BMED 511 Research Design &amp; Statistics</td>
<td>3</td>
</tr>
<tr>
<td>PASS 473 Basic Electrocardiography</td>
<td>1</td>
</tr>
</tbody>
</table>

112
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 Sciences 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. Asterisks (*) indicate required courses.

**BMED 300 Special Topics**
These courses focus on topics of interest in the current scientific literature and student oral presentations of those topics.
1 to 3 credits

**BMED 301/BMED 302 Current Topics**
This is a seminar course in which students and faculty meet weekly to analyze current topics in Biomedical Sciences research. The course consists of individual presentations by faculty members and active researchers. All students are welcome to enroll. Attendance at each seminar is required.
1 credit each

**BMED 303 Understanding Cancer**
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 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 professional programs.
2 credits

**BMED 307 Medical Terminology**
This aim of this course is to introduce the student to the lexicon of the medical sciences. The bulk of the course will be self-study with periodic meetings to test student progress. Students are expected to be able to describe and apply the basic principles of root words, suffixes, and prefixes of medical terms. All the major organ systems of the body will be covered.
2 credits

**BMED 308 Introduction to Hospice**
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 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 w/Lab** *
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

**BMED 320 General Microbiology** *
This is a survey lecture and laboratory course designed to acquaint the student with a general overview of the microbial world. Students will have the opportunity to study a series of basic concepts within the field of microbiology. This course is designed to be highly interactive.
4 credits

**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**
This course is an overview of the biological aspects of bioterrorism and biological weapons of mass destruction based on reviews of scientific literature and current events. This is an invaluable resource for Biomedical Sciences students, health professionals, and graduate students in biology and medicine. We will proceed at a pace that is most appropriate to the interests of the class as a whole. This will allow opportunity for in-depth discussion of the biological agents considered most likely to be used in a bioterrorist attack including anthrax, smallpox, plague, botulism, tularemia, and ebola. Some assignments will be made which require students to use programs on computers available at MWU outside of class time.
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 Human Genetics *
This course is an introduction to human genetics and the fundamental principles of inheritance.
3 credits

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 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 400 Special Topics
These courses focus on topics of interest in the current scientific literature and on student oral presentations of those advanced topics.
1 to 3 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 will provide the student with the communication skills necessary to provide care to the Spanish-speaking patient. At the end of this course, students will have 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, taking SOAP notes, selected disease conditions, etc.). Group interaction and role-playing will be utilized in this course. This course is directed at 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 stimulate an actual MCAT exam as closely as possible.
2 credits per quarter

BMED 406 Laboratory Management
This course provides practical laboratory management experience in how to prepare culture media, conduct analyses with common laboratory instruments, maintenance of stock cultures, ordering, and routine laboratory safety.
2 credits
**BMED 409 Drugs of Addiction**

This course is designed to provide the student with a detailed 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 in each lecture will 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

---

**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 sciences (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 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, immunoprrophylaxis, and therapy.

2 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. 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 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 442 Genetics and Lab**

This course introduces the foundations of the normal transmission of dominant and recessive genetic traits, risk factors, and genetic mapping.

3.5 credits
BMED 445 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 474 Pharmacology I *
This course introduces students to the general principles of pharmacology including pharmacodynamics, pharmacokinetics, pharmaceutics, and toxicology. Students will also 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. In addition, in-depth discussions on the chemotherapy of microbial and parasitic organisms, the chemotherapy of neoplastic disease, drugs 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 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; assistance with development of future elective courses; or other activities agreed upon between the student and the mentor. Maximum of 6 credits can be applied toward degree
1-3 credits

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 each

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

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

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 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

BMED 520 Good Laboratory Practice
This course reviews the Good Laboratory Practice (GLP) requirements and regulations of the Food and Drug Administration and Environmental Protection Agency. Additionally, the regulations of the International Organization for Economic Cooperation and Development will be discussed. Compliance issues and inspection procedures and implications will be 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. Hands-on laboratory experiences will enhance the student’s understanding of GLP.
3 credits

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

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

MICR 470 Microbiology
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 laboratory sessions that provide hands-on experience 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 also introduced to a number of diagnostic tests currently available for rapid diagnosis of infectious disease.
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

PHYS 501, 502 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

PSCI 551, 552 Biochemistry I, II
This course combines lectures, small group discussions (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. Group presentations are a culmination of both biochemistry courses in that they give the student an opportunity to research, understand, and present to the class the genetics and biochemistry of an inherited disorder.
3.5 credits each

PSCI 619 Medical Spanish
This course will provide the student with the communication skills necessary to provide care to the Spanish-speaking patient. At the end of this course, 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 will be utilized in this course. This course is directed at students not fluent in Spanish, but with prior Spanish language education.

1.5 credit

**MASTER OF BIOMEDICAL SCIENCES DEGREE PROGRAM**

**Mission**
The mission of the Master of Biomedical Sciences 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. and academic medical programs 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.

**Program Description**
The Master of Biomedical Sciences (MBS)/Postbaccalaureate 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 in areas such as technicians and supervisors in the biotechnology, biosafety, and pharmaceutical industry; research personnel in biomedical sciences laboratories; employees in governmental and regulatory agencies; and 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 eleven basic science courses in anatomy, biochemistry, histology, immunology, microbiology, pharmacology, physiology, and neuroanatomy. In addition to the basic science courses, the student must take a series of research courses that prepare the student 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, Good Laboratory Practice, Ethics of Research and Experimentation, Research Literature Review, Research Protocol, Research Seminar, Laboratory Research, and Research Thesis. Finally, a series of electives and independent studies 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.

The Postbaccalaureate Option includes the first year of the M.B.S. curriculum and helps to prepare students for medical, dental, pharmacy or other professional school programs. Students have the opportunity to improve their GPA, fill in “gaps” in their undergraduate transcripts, and demonstrate their proficiency at taking graduate-level courses.

**Curriculum**

**Sample Curriculum, Course Credits, and Sequencing**

**Fall Quarter, First Year (15.5-17.5 credits)**

<table>
<thead>
<tr>
<th>Core Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMED 510 Research Topics and Methods</td>
<td>3</td>
</tr>
<tr>
<td>BMED 471 Human Physiology I</td>
<td>4</td>
</tr>
<tr>
<td>PSCI 551 Biochemistry I</td>
<td>3.5</td>
</tr>
<tr>
<td>Electives</td>
<td>1-7</td>
</tr>
</tbody>
</table>

**Winter Quarter, First Year (14-18 credits)**

<table>
<thead>
<tr>
<th>Core Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMED 316 Human Anatomy w/Lab</td>
<td>4</td>
</tr>
<tr>
<td>BMED 474 Pharmacology I</td>
<td>3</td>
</tr>
<tr>
<td>BMED 551 Research Literature Review</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 482 Human Physiology II</td>
<td>4</td>
</tr>
<tr>
<td>Electives</td>
<td>1-5</td>
</tr>
</tbody>
</table>

**Spring Quarter, First Year (18-23 credits)**

<table>
<thead>
<tr>
<th>Core Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMED 419 Neuroanatomy</td>
<td>2</td>
</tr>
<tr>
<td>BMED 475 Pharmacology II</td>
<td>3</td>
</tr>
<tr>
<td>BMED 511 Research Design and Statistics</td>
<td>3</td>
</tr>
<tr>
<td>BMED 552 Research Protocol</td>
<td>2</td>
</tr>
<tr>
<td>ETHC 505 Ethics of Research and Experimentation</td>
<td>3</td>
</tr>
<tr>
<td>MICR 513 Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>2-7</td>
</tr>
</tbody>
</table>

**Summer Quarter, Second Year (7-17 credits)**

<table>
<thead>
<tr>
<th>Core Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMED 520 Good Laboratory Practice</td>
<td>3</td>
</tr>
<tr>
<td>BMED 580 Laboratory Research</td>
<td>1-4</td>
</tr>
<tr>
<td>Electives</td>
<td>1-5</td>
</tr>
</tbody>
</table>

**Fall Quarter, Second Year (9-17 credits)**

<table>
<thead>
<tr>
<th>Core Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMED 581 Laboratory Research</td>
<td>6-10</td>
</tr>
<tr>
<td>BMED 595 Research Thesis</td>
<td>1-2</td>
</tr>
<tr>
<td>Electives</td>
<td>2-5</td>
</tr>
</tbody>
</table>

**Winter Quarter, Second Year (10-18 credits)**

<table>
<thead>
<tr>
<th>Core Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMED 553 Research Seminar</td>
<td>1</td>
</tr>
<tr>
<td>BMED 582 Laboratory Research</td>
<td>6-10</td>
</tr>
<tr>
<td>BMED 596 Research Thesis</td>
<td>1-2</td>
</tr>
<tr>
<td>Electives</td>
<td>2-5</td>
</tr>
</tbody>
</table>
Spring Quarter, Second Year (8-16 credits)
Core Requirements
BMED 583 Laboratory Research 4-8 credits
BMED 597 Research Thesis 2-3 credits
Electives 2-5 credits

Elective Courses
BMED 307 Medical Terminology 1 credit
BMED 323 Medical Virology 4 credits
BMED 324 Parasitology 4 credits
BMED 341 Biology of Human Genetics 3 credits
BMED 360 Biophysics 4 credits
BMED 360L Biophysics Lab 2 credits
BMED 375 Pharmacognosy 2 credits
BMED 401 Human Aging 1 credit
BMED 404 Pre-professional Exam Preparation (MCAT Review) I 2 credits
BMED 405 Pre-professional Exam Preparation (MCAT Review) II 2 credits
BMED 409 Drugs of Addiction 2 credits
BMED 414 Embryology 2 credits
BMED 421 Prion Diseases 1 credit
BMED 424 Applied Microbiology 3 credits
BMED 429 Epidermiology 2 credits
BMED 435 Pathophysiology 4 credits
BMED 440 Oncology 3 credits
BMED 442 Genetics with lab 2 credits
BMED 445 Genomics and Proteomics 4 credits
BMED 455 Biotechnology 3 credits
BMED 477 Dangerous Plants and Animals 2 credits
BMED 512 Information Systems for Education and Research 2 credits
BMED 513 Writing for Publication 3 credits
BMED 514 Advanced Research Design and Statistics 3 credits
BMED 518 Grant Writing in the Health Sciences 3 credits
BMED 535, 536 Advanced Topics I, II 3 credits each
BMED 540 Special Topics (independent study) 1–3 credits
CVSP 551 Applied Cardiovascular Anatomy & Embryology 2 credits
CVSP 552 Cardiovascular Pathology 3 credits

A limited number of electives may also be taken from the Bioethics and Health Professions Education curriculum.

MWU/CHS Biomedical Sciences 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. Asterisks (*) indicate required courses.

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.

1 credit

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 Lab*
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 312 Histology

BMED 323 Medical Virology
This course examines the unique aspects of key virus groups and their structural, biochemical, and biophysical properties. The discussion also includes those viral agents of medical and economic importance.

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 Human Genetics
An introduction to human genetics and the fundamental principles of inheritance.

3 credits

BMED 350 Molecular Cell Biology
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 and Biochemistry II**
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 360L Biophysics Laboratory**
Laboratory associated with BMED 360
2 credits

**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. 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 is designed to provide the student with a detailed 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 in each lecture 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.
1 credit

**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

**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 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
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 context 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 442 Genetics w/Lab
This didactic/laboratory course introduces the foundations of the normal transmission of dominant and recessive genetic traits, risk factors, and genetic mapping.
3.5 credits

BMED 445 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 446 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 474 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, and gastrointestinal and genitourinary systems. In addition, in-depth discussions on chemotherapy of microbial and parasitic organisms, chemotherapy of neoplastic diseases, drugs acting on the blood-forming organs, and 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
Prerequisite: BMED 474 Pharmacology I

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 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.
3 credits

BMED 511 Research Design and Statistics*
This course is a basic introduction to research design and statistics covering basic science, applied, and descriptive research. The course presents basic research skills used in all laboratories and disciplines of the health professions, and lays the groundwork for the master's project.
3 credits
Prerequisite: BMED 510 Research Topics and Methods
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 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 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 520 Good Laboratory Practice*
This course reviews the Good Laboratory Practice (GLP) requirements and regulations of the Food and Drug Administration and Environmental Protection Agency. Additionally, the regulations of the International Organization for Economic Cooperation and Development will be discussed. Compliance issues and inspection procedures and implications will be covered for organizations involved in product safety testing in animals and the environment. A historical perspective will be presented as to the development of regulations and non-traditional safety testing. Development of quality assurance programs and management’s responsibility will be discussed. Hands-on laboratory experiences will enhance the student’s understanding of GLP.
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, formulate a plan of study, and determine the number of credits that will be received for the independent study (1-3). 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. The mentoring faculty individualizes evaluation of the student.
1-3 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 Sciences 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 Sciences 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 580-588 Laboratory Research*
The Master of Biomedical Sciences degree 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 Biomedical Sciences Program will endeavor to expose the student to a wide variety of research mentors conducting research on the Glendale campus of Midwestern University as well as throughout the local research community. This will be accomplished through short presentations of on-going research during the Research Topics and Methods class and the Intercollegiate Research Seminar Series offered at Midwestern University during the winter and spring quarters. Laboratory Research, 10 credit minimum
1-10 credits per quarter

BMED 595-601 Research Thesis*
This required independent laboratory research project is the culmination of the Master of Biomedical Sciences degree program. The project entails original research or current basic science question. The objective of the project is to develop an appropriate research question, design the proper laboratory methodology to answer the question, collect and analyze experimental data, develop appropriate conclusions based on the information gathered, and write the research finding in publication format. The Research Committee will approve the proposal, oversee the Research Project, and approve the final Research Thesis. Research Thesis, 4 credit minimum
1-4 credits per course
Prerequisites: BMED 510, BMED 511, MHPE 533, BMED 552, and BMED 553

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, 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

MICR 513 Microbiology*
This didactic course covers basic clinical microbiology, pathogenic mechanisms, and antimicrobial agents relating to the understanding, rational management, and control of infectious agents. Each course includes laboratory sessions that provide hands-on experience 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 also introduced to a number of diagnostic tests currently available for rapid diagnosis of infectious disease.
3 credits

PHYS 471, 482 Human Physiology I, II*
In this two-quarter series, students are introduced through didactic instruction to the basic physiological principles that underlie the normal function of the various organs and organ systems. These core principles provide the foundation through which students develop an understanding of the physiological adaptations and transitions that occur in commonly occurring disease states. 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

PSCI 551, 552 Human Biochemistry I*, II*
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 homeostasis. Group presentations are a culmination of both biochemistry courses in that they give the student an opportunity to research, understand, and present to the class the genetics and biochemistry of an inherited disorder.
3.5 credits per quarter
MAJOR OF ARTS IN BIOETHICS, CERTIFICATE IN BIOETHICS, AND MASTER OF HEALTH PROFESSIONS EDUCATION

Admission Requirements
The Biomedical Sciences Program uses a rolling admissions process for the Master of Health Professions Education (HPE) and Master of Arts (and Certificate) in Bioethics (BE) degree programs. Completed applications are reviewed and decisions are made at regular intervals during the admissions cycle. Health Professions Education and Bioethics students may enter their programs during any academic quarter. Admission to the HPE and BE programs 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 applicant’s not holding a bachelor’s degree). Multiple criteria are used to select the most qualified candidates. In addition, the Biomedical Sciences Program Admissions Committee carefully considers the applicant’s 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 for each program is reached.

Individuals may take one or more classes in the Health Professions Education or Bioethics programs without applying for admission by registering as “non-degree seeking” students. Tuition is per credit and financial aid is not available for such students.

To be considered for admission to the Master of Health Professions Education or Bioethics degree programs, the applicant must:

1. Hold 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 (not required for the Certificate in Bioethics). Exceptions to this requirement may be made by the Biomedical Sciences Program Admissions Committee for an applicant who:
   a. Has successfully completed an accredited professional program such as physician assistant, nursing, dental hygienist, etc.;
   b. Has 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. Has five or more years of experience in a health care-related profession;
   d. Has a record of continuous professional development, and
   e. Submits one additional letter of reference (i.e., three total) attesting to their ability to perform at a graduate level.
2. Achieved a minimum cumulative grade point average of 2.75 on a scale of 4.00 for their bachelor’s or higher degree program;
3. Submit official transcripts verifying completion of a bachelor’s degree or higher level degree program from a regionally accredited college or university;
4. Submit two letters of recommendation;
5. Pass a criminal background check;
6. Agree to abide by the Midwestern University Drug Free Workplace and Substance Abuse Policy.

Application Process
Individuals interested in applying for admissions to the Master of Health Professions Education or Master of Arts (or Certificate) in Bioethics degree programs may download an application from our web site at www.midwestern.edu or obtain an application packet by writing or calling:

The Office of Admissions
Midwestern University
19555 N. 59th Avenue
Glendale, AZ 85308
623/572-3215
888/247-9277

To be considered for admission, the applicant must submit an application packet that includes the following:
1. A properly completed Biomedical Sciences Program Application for Admission form specific for the degree program of interest;
2. A nonrefundable, non-waivable application fee of $50 (the application fee is waived for dual-degree students);
3. Complete the Biomedical Sciences Program’s interview process (invitation only)

The letters of recommendation from professionals who know the applicant well must be properly signed and sealed. Official transcripts must be sealed and signed by the registrar at each institution. If the applicant has completed coursework at an institution in a foreign country, he/she must also submit an official, detailed course-by-course evaluation of this coursework. The applicant must obtain this evaluation from one of the following services:

Education Credential Evaluators (ECE): 414/289-3400
World Education Service (WES): 212/966-6311

After receiving the completed application packet, an admission staff member verifies the information provided 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 Biomedical Sciences Program Admissions Committee. Each applicant will be notified in writing of the admissions committee’s action/decision.

Please Note: You can track the receipt of your application materials and the status of your file on our University Web site. When we receive your application the Office of Admissions will send instructions for accessing your account information. Please notify us of any changes to your mailing address and e-mail address.

All requests for withdrawing an application must be done in writing.

Technical Standards for Admission to the Master of Health Professions Education or Master of Arts in Bioethics Programs
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.

Matriculation Process
The matriculation process begins after an applicant receives notification of his/her acceptance into the Biomedical Sciences Program. The student must return both a signed matriculation agreement and an initial deposit to the Office of Admissions. The student must also complete the following:

1. Submit deposit monies by the date designated in his/her matriculation agreement. The entire deposit is applied toward the student’s first quarter tuition.

2. Arrange to have final college transcripts submitted to the Office of Admissions no later than the date designated in the matriculation agreement.

3. Submit proof of immunization against measles, mumps, rubella, oral polio (opv), and diphtheria.

4. Submit proof of medical and disability insurance coverage. The student may select either a plan offered by an MWU-approved carrier or a comparable plan offered by an outside carrier of the student’s choice.

5. Satisfy Technical Standards for the Program.

6. 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 the College of Health Sciences.

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

8. Sign authorization form allowing a criminal background check

9. Sign the Midwestern University Drug Free Workplace and Substance Abuse Policy.

If the student either fails to satisfy these matriculation requirements or omits/falsifies information required on official admissions documents, the student automatically forfeits his/her seat in the program.

Graduation Requirements
University graduation and degree conferral ceremonies are held once a year. Currently, these ceremonies are held in June for all colleges and educational programs of the University. To qualify for graduation, students must:
1. Follow an approved course of study acceptable to the Biomedical Sciences 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.

**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 career opportunities and advancement within their current career.

**Program 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.

**Curriculum**

**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**
- BMED 510 Research Topics and Methods 3 credits
- BMED 511 Research Design and Statistics 3 credits
- BMED 512 Information Systems for Education 2 credits
- BMED 513 Writing for Publications 3 credits
- BMED 518 Grant Writing in the Health Sciences 3 credits
- ETHC 517 Foundations of Managed Care Systems 3 credits
- MHPE 515 Leadership and Management 3 credits
- MHPE 520 Reading and Writing Across the Curriculum 2 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 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

126
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. Asterisks (*) indicate required courses.

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.
3 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 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

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 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

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 integrated curricula for their field of expertise.
MHPE 515 Leadership and Management
This elective course explores the various methods of leadership and management as well as their impact on productivity and employee satisfaction. Critical analysis of the different types of management systems is given and the need for developing a leadership plan is explored. Each student is expected to gain knowledge of the various types of leaders and systems, and is required to research and present a current leadership topic.
3 credits

MHPE 520 Reading and Writing Across the Curriculum
This course introduces students to current theory and research related to reading and writing across the curriculum, so that they may integrate relevant and appropriate techniques in their own repertoire of educative skills. After the theoretical basis for writing to learn has been established, the course focuses on practical and useful writing-to-learn and reading-to-learn techniques.
2 credits

MHPE 521 Instructional Supervision
This course is designed to introduce the student to the philosophy of performance-based developmental evaluation. The course focuses on the role of supervision in the improvement of instruction including the role of a teacher in providing good leadership, sharing in the educational environment, supervising, and evaluating.
2 credits

MHPE 522 Advanced Topics in Physical Therapy 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 Education
The course explores issues relevant to occupational therapy education and some of the challenges facing clinicians who transition to educators. The format includes both lecture and small group discussion. 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 Education
The course explores issues relevant to physician assistant education as well as some of the challenges facing clinicians who transition to educators. The format includes both lecture and small group discussion. The course is intended to provide students with a broad understanding of educational and curricular topics and issues.
3 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 format includes both lecture and small group discussion. 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 format includes both lecture and small group discussion. 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. The format includes lecture sessions, small group work, and student presentations.
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

MPHE 534 Patient Education: Improving Health Outcomes
This course explores the correlation between educating the patient regarding their health and/or disease state and the long term health of the patient. The course is clinically oriented and outlines the methods of educating patients and the role of evidence based medicine in education. Topics include: disease prevention and treatment, treatment compliance, quality of life issues and protection of health information.
3 credits

MHPE 540 Special Topics
Additional courses are offered at the discretion of the Biomedical Sciences Program faculty.
1 to 3 credits

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 highly structured opportunities to put theory into practice by working on a teaching project within the health professions, under the supervision of a practicing educator. The practicum project typically includes the development, implementation and evaluation of an instructional design plan on approved topics. After a student develops the practicum proposal outline in MHPE 551, he or she will focus on implementing the approved goals and objectives within the plan. The final product will include goals obtained during the practicum, methods by which the student accomplished these goals, and submission of any materials developed to implement the goals, for example; training videos, handouts, course syllabi, assessment tools, etc. The Practicum Committee oversees the entire process, provides input, and approves the final product.
11 credits
Prerequisites: MHPE 501 Teaching and Learning Styles, MHPE 502 Educational Technology, MHPE 503 Instructional Design and Methods, MHPE 504 Curricular Construction, and MHPE 551 Practicum Project Proposal

MHPE 595-599 Research Thesis
The independent 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. Each student develops a proposal for a Research Thesis (in MHPE 552) and selects faculty for a Research Committee. 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
Prerequisites: MHPE 501 Teaching and Learning Styles, MHPE 502 Educational Technology, MHPE 503 Instructional Design and Methods, MHPE 504 Curricular Construction, and MHPE 552 Research Project Proposal
MASTER OF ARTS IN BIOETHICS
DEGREE PROGRAM AND CERTIFICATE IN BIOETHICS PROGRAM

Mission
The mission of the M.A. 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 M.A. 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 on-going career and/or practice of those already involved in providing therapeutic, legal, and spiritual care to patients.

Program Description
The curriculum leading to the M.A. 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 opt for 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. M.A. in Bioethics students interested in acquiring additional educational skills may take certain 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 M.A. in Bioethics program. Successful completion of the Certificate in Bioethics curriculum does not automatically qualify the student for admission into the M.A. in Bioethics program.

Curriculum

Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHC 501</td>
<td>Introduction to Medical Ethics</td>
<td>3</td>
</tr>
<tr>
<td>ETHC 502</td>
<td>Foundations of Medical Ethics</td>
<td>3</td>
</tr>
<tr>
<td>ETHC 503</td>
<td>Philosophy of Medicine</td>
<td>3</td>
</tr>
<tr>
<td>ETHC 505</td>
<td>Ethics of Research and Experimentation</td>
<td>3</td>
</tr>
</tbody>
</table>

Elective Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMED 510</td>
<td>Research Topics and Methods</td>
<td>3</td>
</tr>
<tr>
<td>BMED 511</td>
<td>Research Design and Statistics</td>
<td>3</td>
</tr>
<tr>
<td>BMED 513</td>
<td>Writing for Publication</td>
<td>3</td>
</tr>
<tr>
<td>ETHC 504</td>
<td>Medical Ethics and the Law</td>
<td>3</td>
</tr>
<tr>
<td>ETHC 516</td>
<td>Communication Skills for Health Care Professionals</td>
<td>3</td>
</tr>
<tr>
<td>ETHC 517</td>
<td>Foundations of Managed Care Systems</td>
<td>3</td>
</tr>
<tr>
<td>ETHC 520</td>
<td>Ethics of Death and Dying</td>
<td>3</td>
</tr>
<tr>
<td>ETHC 521</td>
<td>Health Care Allocation and Justice</td>
<td>3</td>
</tr>
<tr>
<td>ETHC 522</td>
<td>Ethical Issues of Human Reproduction</td>
<td>3</td>
</tr>
<tr>
<td>ETHC 523</td>
<td>Bioethics, Culture and Identity</td>
<td>3</td>
</tr>
<tr>
<td>ETHC 524</td>
<td>Religion and Bioethics</td>
<td>3</td>
</tr>
<tr>
<td>ETHC 525</td>
<td>Ethical Relationships and the Health Care Team</td>
<td>3</td>
</tr>
<tr>
<td>ETHC 526</td>
<td>Bioethics Committees and Consulting</td>
<td>3</td>
</tr>
<tr>
<td>ETHC 527</td>
<td>Ethical Issues in Genetics</td>
<td>3</td>
</tr>
<tr>
<td>ETHC 528</td>
<td>Sexuality and Health Care</td>
<td>3</td>
</tr>
<tr>
<td>ETHC 529</td>
<td>Ethics and Pediatric Medicine</td>
<td>3</td>
</tr>
<tr>
<td>ETHC 530</td>
<td>Teaching Medical Ethics</td>
<td>2</td>
</tr>
<tr>
<td>ETHC 531</td>
<td>Clinical Ethics Rotations</td>
<td>3</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>ETHC 533</td>
<td>Christianity and Bioethics</td>
<td>3 credits</td>
</tr>
<tr>
<td>ETHC 534</td>
<td>Judaism and Bioethics</td>
<td>3 credits</td>
</tr>
<tr>
<td>ETHC 535</td>
<td>Eastern Religions and Bioethics</td>
<td>3 credits</td>
</tr>
<tr>
<td>ETHC 536</td>
<td>Literature and Medicine</td>
<td>3 credits</td>
</tr>
<tr>
<td>ETHC 537</td>
<td>Ethical Challenges in Medicine: A Case Study Approach</td>
<td>3 credits</td>
</tr>
<tr>
<td>ETHC 540</td>
<td>Special Topics</td>
<td>1–3 credits</td>
</tr>
<tr>
<td>ETHC 542</td>
<td>Contemporary Readings in Bioethics</td>
<td>3 credits</td>
</tr>
<tr>
<td>ETHC 550</td>
<td>Independent Study</td>
<td>1–3 credits</td>
</tr>
<tr>
<td>ETHC 551</td>
<td>Research Literature Review</td>
<td>1 credit</td>
</tr>
<tr>
<td>ETHC 552</td>
<td>Research Project Proposal</td>
<td>1 credit</td>
</tr>
<tr>
<td>ETHC 595-599</td>
<td>Research Thesis</td>
<td>12 credits</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. Asterisks (*) indicate required courses.

**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.
3 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 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 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

**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 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 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

**ETHC 506 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 507 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 508 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 533 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 534 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 535 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 536 Literature and Medicine**
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 537 Ethical Challenges of 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 540 Special Topics**
These additional courses are taught at the discretion of the Bioethics Program faculty.
1-3 credits

**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: MHPE 551 Research Literature Review

ETHC 595-599 Research Thesis
This independent research project 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 research proposal (developed in MHPE 552) includes the specific objectives obtained by the research project and the methods by which the student investigates the specific objectives. The student’s Research Committee approves the proposal, oversees the research project, and approves the final research thesis.
12 credits
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

DUAL DEGREE OPTIONS
for Physician Assistant, Occupational Therapy, Cardiovascular Sciences, Podiatric Medicine, Osteopathic Medicine, Biomedical Sciences, and Nurse Anesthetist Students
The Biomedical Sciences Program offers an educational opportunity to current and incoming occupational therapy (OT), cardiovascular science (M.C.S.), nurse anesthetist (CRNA), podiatric medicine (D.P.M.) and osteopathic medical (D.O.) students. Students accepted into these programs may apply to the Biomedical Sciences Program as dual-degree candidates in either bioethics or health professions education. The following policies apply:
1. The applicant must apply and be accepted into the clinical program and Biomedical Sciences Program separately. Only applicants meeting minimum entrance requirements for both degree programs will be given an option for the dual-degree program.
2. The clinical degree program will be considered the primary degree program and the Biomedical Sciences 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 Biomedical Sciences Program (i.e., research, practicum or didactic tract, if applicable), and student preferences. The Biomedical Sciences Program degree must be completed within a total of 60 months from initial matriculation.
4. The student must maintain the minimum cumulative GPA requirements of each program. Failure to maintain the minimum cumulative GPA in either program will result in the student being given an academic warning or placed 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 Biomedical Sciences Program is degree-specific (see degree descriptions). Some courses from the student’s clinical degree program may be deemed suitable for credit in the Biomedical Sciences Program degree program. If approved, these courses may be substituted for elective credit in the Biomedical Sciences Program up to a maximum of six (6) credits. No Biomedical Sciences 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 Biomedical Sciences Program on a per credit basis. Dual-degree students accepted into the Biomedical Sciences Program at any time before graduation shall receive a 30% discount on the normal Biomedical Sciences 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 Biomedical Sciences Program tuition is determined by the number of credits for which the student is registered.

FACULTY
William P. Baker, Ph.D.
Arizona State University
Professor and Coordinator

Leonard B. Bell, Ph.D.
Medical College of Wisconsin
Professor and Director

Pedro I. Chavez, Ph.D.
University of Texas
Professor

Kimbal E. Cooper, Ph.D.
University of Illinois
Professor

Margaret Hall, Ph.D.
Stony Brook University
Assistant Professor
Elizabeth E. Hull, Ph.D.
Rockefeller University
Associate Professor

Carleton B. Jones, Ph.D
Washington State University
Associate Professor

Gregory S. Loeben, Ph.D.
University of Arizona
Associate Professor

Christine M. Morgan, Ed.D.
Nova Southeastern University
Associate Professor
COLLEGE OF HEALTH SCIENCES

CARDIOVASCULAR SCIENCE PROGRAM

DEFINITION OF A PERFUSIONIST
A perfusionist is a skilled person, qualified by academic and clinical education, who operates extracorporeal circulation equipment during any medical situation where it is necessary to support or temporarily replace the patient’s circulatory or respiratory function. The perfusionist is knowledgeable concerning the variety of equipment available to perform extracorporeal circulation functions, and is responsible in consultation with the physician for selecting the appropriate equipment and techniques to be used.

MISSION
The Cardiovascular Science Program at Midwestern University (MWU) will provide academic and clinical excellence in educating cardiovascular perfusionists for their professional careers.

PROGRAM 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 curriculum leading to a Master of Science in Cardiovascular Science degree is a full-time professional program of seven continuous quarters. 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.

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
35 East Wacker Drive, Suite 1970
Chicago, IL  60601-2208
312/553-9355

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 a regionally accredited professional program. Applications received are reviewed by the Office of Admissions for completeness and referred to the Director of Cardiovascular Science and/or the Director of Admissions to determine eligibility for an interview. 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.

Requirements
To be considered for admission to the Cardiovascular Science Program an applicant must:
1. Hold a bachelor’s level or higher degree from a regionally accredited college or university;
2. Achieve a minimum cumulative grade point average of 2.75 on a scale of 4.00;
3. Complete an application for admission and meet the technical standards; and
4. Complete the Program’s interview process (by invitation only).
5. Pass a criminal background check.
6. Abide by the Midwestern University Drug-Free Workplace and Substance Abuse Policy.

**NOTE:** If the student completed coursework at or graduated from a foreign college or university, he/she must submit acceptable evidence of U.S. degree/course equivalency. The student must also complete at least 30 semester hours of coursework at a U.S. college or university prior to matriculation. This coursework must include six semester hours of nonremedial coursework in English.

### Prerequisite Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Sem. Hr.</th>
<th>Qtr. Hrs.</th>
</tr>
</thead>
<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>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, and economics; cultural anthropology is highly recommended.)</td>
<td>25</td>
<td>38</td>
</tr>
<tr>
<td>Courses in medical terminology and organic chemistry are recommended for all students.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total Credit Hours:** 52 78

### Application Instructions

To be considered for admission into the Cardiovascular Science Program, the applicant must submit to the Office of Admissions an application packet including the following:

1. A properly completed Application for Admission form specific for the degree program of interest;
2. A nonrefundable, nonwaivable application fee of $50;
3. Two completed letters of recommendation; and
4. Official transcripts from each college or university attended.

Mail the completed application packet to:
Office of Admissions
Midwestern University
19555 North 59th Avenue
Glendale, AZ 85308

To obtain an application packet or for further information, call the Office of Admissions at 623/572-3215 or 888/247-9277. You may also download an application from the Web site at <www.midwestern.edu>.

**Please Note:** Now you can track the receipt of your application materials and the status of your file on our University web site. When we receive your application the Office of Admissions will send instructions for accessing your account information. Please notify us of any changes to your mailing address and e-mail address.

All requests for withdrawing an application must be done in writing.

### Technical Standards for Admission

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 certain of these areas, but a candidate should be able to perform in a reasonably independent manner.

1. **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.
2. **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.
3. **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.
4. **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.
5. **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.

Matriculation Process
The matriculation process begins after an applicant receives notification of his/her acceptance into the Cardiovascular Science Program of the College of Health Sciences. The student must return both a signed matriculation agreement and an initial deposit to the Office of Admissions. The student must also complete the following:

1. Submit deposit monies by the dates designated in his/her matriculation agreement; the entire deposit is applied toward the student’s first quarter tuition.
2. Arrange to have all final college transcript(s) submitted to the Office of Admissions no later than the date designated in the matriculation agreement.
3. Complete a medical file as requested by the Office of Student Services.
4. Submit proof of medical and disability insurance coverage. The student may select either a plan offered by an MWU-approved carrier or a comparable plan offered by an outside carrier of the student’s choice.
5. 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).
6. Provide documentation that any additional coursework or service requirements stipulated by the Admissions Committee has been completed.
7. Submit additional documents as required by the Office of Admissions.
8. Sign authorization form allowing a criminal background check.
9. Sign Midwestern University Drug-Free Workplace and Substance Abuse Policy.
10. Complete physical exam and submit form.
12. Satisfy the Technical Standards for the Program.

If the student either fails to satisfy these matriculation requirements or omits/falsifies information required on official admissions documents, the student automatically forfeits his/her seat in the Program. Any individual accepted for admission to the Cardiovascular Science Program of the College of Health Sciences who does not comply with stated timelines for submission of all required materials receives no further notification from CHS relative to forfeiture of his/her seat.

GRADUATION REQUIREMENTS
Students usually complete the Master of Science in Cardiovascular Science degree in seven consecutive quarters. To qualify for graduation with the master’s degree, students must:

- Follow an approved course of study leading to the completion of a master’s project acceptable to the Program Student Academic Review Committee;
- Satisfactorily complete all professional courses with a minimum cumulative grade point average of 2.750, 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;
- Satisfactorily complete the required 105.5 quarter-credit hours in the overall course of study during which time a grade of F has not been issued;
- 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;
- Be recommended for conferral of the master’s degree 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
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

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMED 360</td>
<td>Biophysics</td>
</tr>
<tr>
<td>CORE 460</td>
<td>Interdisciplinary Health Care</td>
</tr>
<tr>
<td>CVSP 531</td>
<td>CV Sciences Journal Review I</td>
</tr>
<tr>
<td>CVSP 532</td>
<td>Research Methodology for CV Sciences</td>
</tr>
<tr>
<td>CVSP 541</td>
<td>Introduction to the Perfusion Environment</td>
</tr>
<tr>
<td>CVSP 551</td>
<td>Applied CV Anatomy &amp; Embryology</td>
</tr>
<tr>
<td>CVSP 561</td>
<td>CV Perfusion Technology &amp; Lab I</td>
</tr>
<tr>
<td>PHYS 471</td>
<td>Human Physiology I</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>18.5</strong></td>
</tr>
</tbody>
</table>
First Year, Winter Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMED 474 Pharmacology I</td>
<td>3.0</td>
</tr>
<tr>
<td>CORE 470 Interdisciplinary Health Care</td>
<td>0.5</td>
</tr>
<tr>
<td>CVSP 533 CV Sciences Journal Review II</td>
<td>1.0</td>
</tr>
<tr>
<td>CVSP 542 Quality Management for CV Sciences</td>
<td>1.5</td>
</tr>
<tr>
<td>CVSP 552 Cardiovascular Pathology</td>
<td>3.0</td>
</tr>
<tr>
<td>CVSP 562 CV Perfusion Technology &amp; Lab II</td>
<td>5.0</td>
</tr>
<tr>
<td>CVSP 571 CV Observations I</td>
<td>1.0</td>
</tr>
<tr>
<td>PHYS 482 Human Physiology II</td>
<td>4.0</td>
</tr>
</tbody>
</table>

Total Credit Hours: 19.0

First Year, Spring Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMED 475 Pharmacology II</td>
<td>3.0</td>
</tr>
<tr>
<td>CORE 480 Interdisciplinary Health Care</td>
<td>0.5</td>
</tr>
<tr>
<td>CVSP 534 Research Laboratory for CV Sciences</td>
<td>2.0</td>
</tr>
<tr>
<td>CVSP 535 Independent Study</td>
<td>1.0</td>
</tr>
<tr>
<td>CVSP 543 Risk Management for CV Sciences</td>
<td>1.5</td>
</tr>
<tr>
<td>CVSP 553 Monitoring of the CV Patient</td>
<td>2.0</td>
</tr>
<tr>
<td>CVSP 563 CV Perfusion Technology &amp; Lab III</td>
<td>5.0</td>
</tr>
<tr>
<td>CVSP 564 CV Devices Laboratory</td>
<td>1.0</td>
</tr>
<tr>
<td>CVSP 565 CV Sciences High Fidelity Simulation</td>
<td>1.0</td>
</tr>
<tr>
<td>CVSP 572 CV Observations II</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Total Credit Hours: 18.0

Second Year, Summer Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CVSP 581 Clinical Practicum I (6 weeks)</td>
<td>6.0</td>
</tr>
<tr>
<td>CVSP 582 Clinical Practicum II (6 weeks)</td>
<td>6.0</td>
</tr>
</tbody>
</table>

Total Credit Hours: 12.0

Note: Text reading assignments, journal review, and other online activities are required for each clinical rotation.

Second Year, Fall Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CVSP 566 Special Techniques in Cardiopulmonary Bypass (online course)</td>
<td>1.0</td>
</tr>
<tr>
<td>CVSP 583 Clinical Practicum III (6 weeks)</td>
<td>6.0</td>
</tr>
<tr>
<td>CVSP 584 Clinical Practicum IV (6 weeks)</td>
<td>6.0</td>
</tr>
</tbody>
</table>

Total Credit Hours: 13.0

Note: Text reading assignments, journal review, and other online activities are required for each clinical rotation.

Second Year, Winter Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CVSP 585 Clinical Practicum V (6 weeks)</td>
<td>6.0</td>
</tr>
<tr>
<td>CVSP 586 Clinical Practicum VI (6 weeks)</td>
<td>6.0</td>
</tr>
</tbody>
</table>

Total Credit Hours: 12.0

Note: Text reading assignments, journal review, and other online activities are required for each clinical rotation.

Second Year, Spring Quarter

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CVSP 567 Current Trends in Perfusion (online course)</td>
<td>1.0</td>
</tr>
<tr>
<td>CVSP 587 Clinical Practicum VII (6 weeks)</td>
<td>6.0</td>
</tr>
</tbody>
</table>

Total Credit Hours: 13.0

Note: Text reading assignments, journal review, and other online activities are required for each clinical rotation.

Program Completion: 105.5

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 I: Required Preclinical Courses

**BMED 360 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. In addition to physics and chemistry, the theory of control systems has important applications to human function. Control theory is used throughout the course to help quantify the mechanisms of homeostasis.

4 credits

**BMED 474 Pharmacology I**

This course introduces students to the general principles of pharmacology including pharmacodynamics, pharmacokinetics, pharmaceutics, and toxicology. Students will learn about common drug classes affecting major organ systems of the body, namely the autonomic nervous system, central nervous system, cardiovascular and renal systems, and the gastrointestinal and genitourinary systems. In addition, in-depth discussions on chemotherapy of microbial and parasitic organisms, chemotherapy of neoplastic disease, drugs acting on blood-forming organs, and hormones and vitamins will be presented.

3 credits

**BMED 475 Pharmacology II**

In this course the student will learn the pharmacology of drugs affecting the human cardiovascular and renal systems. The first section of the course will cover the autonomic nervous system and the drugs used to modulate cholinergic and adrenergic responses. In the second section, we will study anti-anginal drugs, lipid lowering drugs, and drugs affecting coagulation. In the third section, we will discuss the treatment of hypertension and the drugs affecting the heart and kidneys. Lastly, we will study the autacoids, inflammation, and asthma. This course is the second of a two-part pharmacology course beginning with BMED 474 Pharmacology I.

3 credits

Prerequisite: BMED 474 Pharmacology I
CORE 460, 470, 480 Interdisciplinary Health Care
Changes in our health care system are creating a growing demand for health professionals with skills of collaboration and teamwork. The Interdisciplinary Health Care course involves the colleges of health sciences, osteopathic medicine, and pharmacy in order to teach biomedical, occupational therapy, osteopathic medicine, pharmacy, physician assistant, and nurse anesthetist students together about the importance of an interdisciplinary approach to patient care. Topics pertinent to all providers such as cultural and ethical issues and the roles of the profession are presented.
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, present, and moderate discussions 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 apply 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 Independent Study
A requirement of the Cardiovascular Science Program is that the Master’s Degree 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. This independent study course is designed for the student to select a topic, find major references, produce a text outline, and write an abstract for their manuscript. It is anticipated that they may present their research information during a regional or national perfusion meeting. “Instructions for Authors,” as adopted by The Journal of the American Society of Extra-Corporeal Technology, will serve as a guideline for the student.
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. Students will research the current manufacturers of perfusion hardware and software and present their findings to the class. 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 542 Quality Management for Cardiovascular Sciences
This course covers topics related to quality management in cardiovascular perfusion. The 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. Additionally, there will be a segment on the concept and function of teams and team dynamics relating to the cardiac surgery suite.
1.5 credits

CVSP 543 Risk Management for Cardiovascular Sciences
This course covers topics related to risk management in cardiovascular perfusion. The course will instruct the student in aspects of risk management for perfusion technology. The student will have the opportunity to research, present, lead discussions, and write papers relating to the nature, prevalence, and ability to minimize the occurrence of safety issues associated with cardiopulmonary bypass and the cardiac surgery suite.
1.5 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 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, increasing situation awareness, and preparing the student for practice within the team environment of an operating room. The training scenarios are based on a building block approach in which students first practice particular skills in isolation and later in context with other skills. 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 and CVSP 562 Cardiovascular Perfusion Technology & Lab II

CVSP 571, 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
PHYS 471, 482 Human Physiology I, II
In this two-quarter series, students are introduced through didactic instruction and clinical case scenarios 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 commonly occur in disease states. Emphasis is given to developing an understanding of health in physiologic terms and an 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

Year 2: Clinical Rotations

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, On-line instruction

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, On-line instruction

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 to the Clinical Rotations before the start of rotations and a one-week Summative Evaluation at the end of the rotations. During these rotations, students are expected to achieve specific competencies in cardiovascular perfusion and related technologies of open-heart surgery. Students are also expected to develop proficiency in a number of areas such as managing patient problems, handling issues of quality assurance, utilization review, continuity of care, and making appropriate treatment plans during each rotation. At least one of the clinical rotations will be pediatrics.
6 credits each
Prerequisite: Completion of all first year courses and successful completion of the Orientation to the Clinical Rotations program.

FACULTY
Jon W Austin, MA Ed, CP
Ottawa University
Assistant Professor

Edward L Evans, BBA, MA, CP
University of Phoenix
Assistant Professor

Harry R Hoerr, Jr., MS, CCT
National University
Associate Professor
MISSION
As a leader in podiatric medical education, our mission is to ensure excellence in an environment that nurtures diversity, professionalism, dedication and creativity.

VISION
Our vision 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
The Arizona Podiatric Medicine Program has been granted Candidate Status 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.

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; 800-621-7440.

ADMISSIONS
The Arizona Podiatric Medicine (AZPod) Program considers for admission those students who possess the academic, professional, and personal qualities necessary to become 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, MCAT scores, personal experiences and character, ability to communicate, familiarity with the profession, volunteer/community involvement, research experience, and other considerations. MCAT scores are preferred, but in selected cases other suitable comparative test scores such as the DAT or the GRE may be accepted.

Requirements
To be considered for admission to AZPod, the successful candidate must possess:
1. A minimum cumulative GPA and science GPA of 2.75 on a 4.00 scale.
2. The ability to successfully complete a rigorous curriculum which requires one to think critically, speak and write effectively, read voluminously, and be responsibly self-directed in the learning process.
3. Competitive scores on comparative academic tests.
4. The necessary course prerequisites. The candidate must complete a minimum of 90 semester hours at a regionally accredited college or university. A bachelor’s degree is preferred. Most students admitted to colleges of podiatric medicine possess a bachelor’s degree; many also possess an advanced degree.
5. Two letters of recommendation. One letter must be from a medical practitioner (letters from podiatric physicians are strongly encouraged) and the other letter must be from a pre-health professions advisor or a science professor. Additional letters from individuals who can attest to your character are welcome.
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. Extracurricular and/or community activities that indicate a well-rounded background and demonstrate a service orientation.
8. Medically-related experiences that indicate a sufficient exposure to allow an informed decision about a medical career.
9. Personal integrity and sound moral character.
10. The interpersonal and communication skills necessary to relate effectively with others.
11. Pass a criminal background check.
12. Abide by the MWU Drug-Free Workplace and Substance Abuse Policy.

**Course prerequisites include:**

<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>

No grade less than a C will be accepted for any prerequisite course.

**Application Process**

Individuals interested in applying for admission to AZPOD may download an application at the American Association of Colleges of Podiatric Medicine (AACPM) Web site, <www.aacpm.org> or obtain an application packet by writing or calling:

The American Association of Colleges of Podiatric Medicine (AACPM)
15850 Crabbs Branchway
Suite 320
Rockville, MD 20855-2622
1-800-922-9266

To initiate the competitive selection process, applicants must complete an application packet. This packet must include the following:

- A properly completed application (a non-refundable application fee will be due to the AACPM Application Service [AACPMAS])
- Two letters of recommendation
- Official transcripts from each college or university attended
- Official MCAT or other comparative test scores

Applicants must submit two properly signed and sealed letters of recommendation from professionals who know the applicant well. One letter must be from a medical practitioner. (Letters from podiatric physicians are strongly encouraged) and the other letter must be from a pre-health professions advisor or a science professor. Additional letters from individuals who can attest to your character are welcome.

Applicants must submit 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. If the applicant has completed coursework at an institution in a foreign country, he/she must also submit an official, detailed course-by-course evaluation of this coursework. The applicant must obtain this evaluation from one of the following services:

- Education Credential Evaluators (ECE): 414/289-3400
- World Education Service (WES): 212/966-6311

**Application Deadline**

The application deadline for admission to AZPOD is June 30 of the year of matriculation.

**Interview/Selection Process**

To be considered for an interview, applicants must meet the admissions requirements listed previously. They must also submit all of the materials necessary to complete their file, e.g., an application, transcripts, and two letters of recommendation.

After the Office of Admissions receives these materials, the applicant’s file is reviewed to determine if the applicant merits an interview, 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.

If an applicant accepts an interview, he/she joins several other interviewees in a meeting with members of a three-person interview panel—a panel selected from a volunteer group of basic scientists, administrators, and clinicians. Team members question each student about his/her academic, personal, and health care preparedness for podiatric medical school, rating the students on a standardized evaluation form relative to each of these variables. At the conclusion of the interviews, the team members forward their evaluation for each student to the Admissions Committee. The committee may recommend to accept, to deny, or to place the student on either the hold or alternate list. This recommendation is then forwarded to the Dean of the College of Health Sciences for final approval. The Dean, via the Office of Admissions, notifies the student of his/her status within three or four weeks of the interview.

**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. It is expected that students are willing to participate in this learning process by an openness to direct physical contact with fellow students, live models and cadaver material, and to reciprocally allow appropriate examination of themselves.

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 do the following:

1. Submit deposit monies by the dates designated in his/her matriculation agreement. The entire deposit is applied toward the student’s first quarter tuition.
2. Submit official transcript(s) from all colleges attended post-high school by the date designated in his/her matriculation agreement, if not previously submitted.
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. The student may select either a plan offered by Midwestern University or a comparable plan offered by an outside carrier approved by the University.
5. Provide documentation verifying that sufficient funds have been deposited in a U.S. bank to cover all expenses while attending Midwestern University (for non-U.S. citizens/nonpermanent residents only).
6. Submit additional documents as required by the Office of Admissions.
7. Sign the authorization form allowing a criminal background check.
8. Sign the MWU Drug-Free Workplace and Substance Abuse Policy.
9. Complete the physical exam and submit the form.
10. Sign the Credit Policy Statement.
11. Satisfy the Technical Standards for the Program.

If a student fails to satisfy these matriculation requirements and/or omits or falsifies information required on official admissions documents, the student automatically forfeits his/her seat at the College. The student receives no further notification relative to this forfeiture.

REAPPLICATION PROCESS
After receiving either a denial or end-of-cycle letter, a prospective student may reapply for the next enrollment cycle. Before reapplying, however, the student should seek the advice of an admissions counselor.

TRANSFER ADMISSION POLICY
AZPod may elect to accept transfer students from other U.S. podiatric medical schools as long as these students are in “good academic standing” and have an acceptable reason(s) for seeking a transfer. Typically, transfers are only granted to students desiring to transfer in as a third- or fourth-year student; however, transfers to the second year may be granted.

To be considered for transfer, a student must meet the Program’s general requirements for admission. He/she must also submit the following:

1. A letter to the Director of Admissions indicating why he/she wishes to transfer and explaining any difficulties encountered at his/her previous institution(s);
2. The AZPod Transfer Application (available through the Office of Admissions);
3. Scores from the Medical College Admissions Test (MCAT) or other appropriate testing agencies;
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. The letter(s) must indicate the student’s current academic status and/or terms of withdrawal/dismissal; and
6. Additional documents or letters of evaluation as determined necessary by the Director of Admissions.

Following receipt of these materials, a decision by the Program Director 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 of the College of Health Sciences 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.

**INSTRUCTIONAL PROGRAM**
Podiatric medicine is an independent health profession; podiatrists are licensed to provide the complete scope of care for disorders of the foot, ankle, and leg. Podiatrists use all diagnostic and therapeutic alternatives including the performance of surgery, the prescription of drugs, the provision of physical therapy, and the use of many advanced technologies. Podiatric physicians are specialists that manage both acute and chronic lower extremity complaints as well as the lower extremity manifestations of systemic disease. Though specialists, podiatrists enjoy some of the practice characteristics of primary care providers such as longitudinal relationships with patients while caring for their chronic problems. They treat patients of all ages in all health care settings. The instructional program, therefore, is designed to prepare the podiatric graduate with a thorough general medical education along with additional focused education and training in podiatric biomechanics, podiatric medicine, and podiatric surgery.

**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:
- Satisfactorily complete all academic requirements with a cumulative GPA of at least 2.00;
- Repeat and pass any course for which an F grade has been issued;
- Passed Part I of the National Boards and take Part II of the National Boards administered by the National Board of Podiatric Medical Examiners;
- Be of good moral character;
- Receive a favorable recommendation from the Program, Student Academic Review Committee, and the College of Health Sciences Student Promotion and Graduation Committee;
- Be recommended for conferral of the Doctor of Podiatric Medicine degree 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**
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 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).

|APMA| 9312 Old Georgetown Road  
Bethesda, Maryland  
800/275-2762 |
|FPMB| PO Box 880187  
Boca Raton, FL 33488-0187  
561/477-3060|

**CURRICULUM**
Learning experiences highlighted represent clinical exposure.

**First Year**

<table>
<thead>
<tr>
<th>Fall Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORE 1460 Interdisciplinary Health Care</td>
<td>0.5</td>
</tr>
<tr>
<td>ANAT 1511 Gross Anatomy I</td>
<td>5.0</td>
</tr>
<tr>
<td>BIOC 1511 Biochemistry I</td>
<td>7.0</td>
</tr>
<tr>
<td>HIST 1511 Histology/Embryology I</td>
<td>4.4</td>
</tr>
<tr>
<td>PMED 1510 Introduction to Research</td>
<td>2.0</td>
</tr>
<tr>
<td>PMED 1512 Podiatric Medicine I</td>
<td>1.5</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>20.4</strong></td>
</tr>
<tr>
<td>Winter Quarter</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>CORE 1470 Interdisciplinary Health Care</td>
<td>0.5</td>
</tr>
<tr>
<td>PHYS 1521 Physiology I</td>
<td>5.5</td>
</tr>
<tr>
<td>ANAT 1522 Gross Anatomy II</td>
<td>5.0</td>
</tr>
<tr>
<td>BIOC 1522 Biochemistry II</td>
<td>4.0</td>
</tr>
<tr>
<td>HIST 1522 Histology/Embryology II</td>
<td>1.5</td>
</tr>
<tr>
<td>PMED 1521 Podiatric Biomechanics I</td>
<td>3.0</td>
</tr>
<tr>
<td>PMED 1522 Community Podiatric Medicine I</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>20.0</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Spring Quarter</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CORE 1480 Interdisciplinary Health Care</td>
<td>0.5</td>
</tr>
<tr>
<td>MICR 1531 Immunology</td>
<td>3.0</td>
</tr>
<tr>
<td>NEUR 1531 Neuroscience</td>
<td>6.5</td>
</tr>
<tr>
<td>PHYS 1532 Physiology II</td>
<td>5.5</td>
</tr>
<tr>
<td>PMED 1531 Podiatric Surgery &amp; Anesthesia</td>
<td>3.5</td>
</tr>
<tr>
<td>PMED 1532 Community Podiatric Medicine II</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>19.5</strong></td>
</tr>
</tbody>
</table>

| Total First Year: 59.9 |

<table>
<thead>
<tr>
<th>Second Year</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Summer Quarter</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PASS 451 Behavioral Medicine</td>
<td>2.0</td>
</tr>
<tr>
<td>PMED 1641 Podiatric Medicine II</td>
<td>3.5</td>
</tr>
<tr>
<td>PMED 1643 Lower Extremity Anatomy I</td>
<td>6.5</td>
</tr>
<tr>
<td>PMED 1644 Medical Imaging</td>
<td>2.0</td>
</tr>
<tr>
<td>PMED 1651 Podiatric Biomechanics II</td>
<td>3.5</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>17.5</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fall Quarter</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MICR 1611 Microbiology I</td>
<td>5.0</td>
</tr>
<tr>
<td>PHAR 1621 Pharmacology I</td>
<td>4.0</td>
</tr>
<tr>
<td>PATH 1611 Pathology I</td>
<td>6.0</td>
</tr>
<tr>
<td>PASS 469 Physical Diagnosis</td>
<td>4.0</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>19.0</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Winter Quarter</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MICR 1622 Microbiology II</td>
<td>5.0</td>
</tr>
<tr>
<td>PHAR 1622 Pharmacology II</td>
<td>4.0</td>
</tr>
<tr>
<td>PATH 1622 Pathology II</td>
<td>6.0</td>
</tr>
<tr>
<td>PMED 1660 Community Podiatric Medicine II</td>
<td>0.5</td>
</tr>
<tr>
<td>PMED 1662 General Medicine I</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>18.5</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Spring Quarter</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PHAR 1633 Pharmacology III</td>
<td>3.0</td>
</tr>
<tr>
<td>PATH 1633 Pathology III</td>
<td>5.0</td>
</tr>
<tr>
<td>PMED 1677 Community Podiatric Medicine IV</td>
<td>0.5</td>
</tr>
<tr>
<td>PMED 1672 General Medicine II</td>
<td>3.0</td>
</tr>
<tr>
<td>PMED 1675 Pediatric Orthopedics</td>
<td>3.0</td>
</tr>
<tr>
<td>PMED 1678 Psychiatric Principles</td>
<td>1.0</td>
</tr>
<tr>
<td>PMED 1663 Podiatric Pathomechanics</td>
<td>3.5</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>32.0</strong></td>
</tr>
</tbody>
</table>

| Total Third Year: 58.0 |

<table>
<thead>
<tr>
<th>Third Year Didactic Instruction</th>
</tr>
</thead>
</table>

Summer quarter courses are scheduled lighter during the early part of the quarter to allow students time to study for the National Boards. The courses taught during the remaining quarters are taught one or two afternoons of the week. Practice management presentations are given in the evenings. Basic Life Support (BLS) is a mandatory, non-credit, half-day session taught during the summer. ACLS is a mandatory, non-credit, 2-day session taught during the summer. Students receive a holiday break.

<table>
<thead>
<tr>
<th>Summer Quarter</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PMED 1753 Jurisprudence</td>
<td>1.5</td>
</tr>
<tr>
<td>PMED 1722 Advanced Podiatric Surgery and Trauma</td>
<td>4.0</td>
</tr>
<tr>
<td>PMED 1724 Orientation/Operating Room</td>
<td>0.5</td>
</tr>
<tr>
<td>PMED 1731 Community Health/Ethics</td>
<td>2.0</td>
</tr>
<tr>
<td>PMED 1732 General Medicine III</td>
<td>3.0</td>
</tr>
<tr>
<td>PMED 1774 General Orthopedics/Disorders of Bone</td>
<td>2.5</td>
</tr>
<tr>
<td>PMED 1773 Sports Medicine and Rehabilitation</td>
<td>2.5</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>16.0</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fall Quarter</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PMED 1723 Emergency Medicine</td>
<td>1.0</td>
</tr>
<tr>
<td>PMED 1741 Podiatric Dermatology and Infectious Diseases</td>
<td>3.0</td>
</tr>
<tr>
<td>PMED 1742 Evidence Based Medicine</td>
<td>1.0</td>
</tr>
<tr>
<td>PMED 1734 Practice Management</td>
<td>2.0</td>
</tr>
<tr>
<td>PMED 1751 Advanced Biomechanics</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>10.0</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rotations</th>
<th>(Integrated October through May)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PMED 1701 Core Podiatric Medicine (3 rotations, 4 weeks each)</td>
<td></td>
</tr>
<tr>
<td>PMED 1701A Core Rotation</td>
<td>4.0</td>
</tr>
<tr>
<td>PMED 1701B Core Rotation</td>
<td>4.0</td>
</tr>
<tr>
<td>PMED 1701C Core Rotation</td>
<td>4.0</td>
</tr>
<tr>
<td>PMED 1702 Radiology (2 weeks)</td>
<td>2.0</td>
</tr>
<tr>
<td>PMED 1711 Rheumatology (2 weeks)</td>
<td>2.0</td>
</tr>
<tr>
<td>PMED 1710 Dermatology (2 weeks)</td>
<td>2.0</td>
</tr>
<tr>
<td>PMED 1705 Podiatry Office (4 weeks)</td>
<td>4.0</td>
</tr>
<tr>
<td>PMED 1706 Ambulatory Medicine (4 weeks)</td>
<td>4.0</td>
</tr>
<tr>
<td>PMED 1707 Vascular Medicine (2 weeks)</td>
<td>2.0</td>
</tr>
<tr>
<td>PMED 1712 Physical Medicine/Rehabilitation (2 weeks)</td>
<td>2.0</td>
</tr>
<tr>
<td>PMED 1708 Orthotics/Prosthetics (2 weeks)</td>
<td>2.0</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>32.0</strong></td>
</tr>
</tbody>
</table>
Fourth Year Didactic Instruction
The Clinical Correlates courses are all taught online. 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)
P TED 1801 Core Podiatric Medicine (3 rotations, 4 weeks each)
   PMED 1801A Core Rotation 4.0
   PMED 1801B Core Rotation 4.0
   PMED 1801C Core Rotation 4.0
PMED 1802 Emergency Medicine (4 weeks) 4.0
PMED 1803 Surgery (4 weeks) 4.0
PMED 1804 Inpatient Medicine (4 weeks) 4.0
PMED 1805 Podiatry Office (4 weeks) 4.0
PMED 1806 Clinical Clerkship (3 rotations, 4 weeks each)
   PMED 1805A Clinical Clerkship 4.0
   PMED 1805B Clinical Clerkship 4.0
PMED 1807 Elective Medicine or Surgery (non-podiatric) (4 weeks)
   PMED 1805C Clinical Clerkship 4.0
   PMED 1808 Optional Rotation/Potential Remediation (4 weeks) (4.0)
Total: 44.0

Total Fourth Year: 47.0 (51.0)

Elective Medicine or Surgery Non-Podiatric Rotations
Research, Dermatology, Rheumatology, Physical Medicine and Rehabilitation

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 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, the 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.
5 credits

BIOC 1511 Biochemistry I
This course features modules on 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 the storage and expression of genetic information; and intermediary metabolism emphasizing the degradation and synthesis of carbohydrates, lipids, and amino acids. Clinical aspects as well as the regulation and coordination of biologic processes during the fed and fasted states are emphasized. The workshops introduce the biochemical basis of common clinical laboratory tests and/or they illustrate clinical applications of biochemical concepts.
7 credits

BIOC 1522 Biochemistry II
Course modules on human nutrition emphasize the importance of nutrition in health and preventive medicine; modules on human genetics emphasize the inheritance of selected genetic disorders; and modules on tissues and organs emphasize the customization and adaptation of biochemical pathways in specialized cells. Workshops feature a modified problem-based learning environment. Working in teams, students research various aspects of a case and orally present their findings to their small group.
4 credits

CORE 1460, 1470, 1480 Interdisciplinary Health Care
Changes in our health care delivery system are creating a growing demand for health professionals with skills in collaboration and teamwork. The Interdisciplinary Health Care course involves the colleges of health sciences, osteopathic medicine, and pharmacy in order to teach biomedical, occupational therapy, osteopathic medicine, pharmacy, physician assistant, and podiatric medicine students together about the importance of an interdisciplinary approach to patient care. Issues of broad importance to all health care disciplines such as HIPAA (patient confidentiality) regulations are also discussed. The
course meets for one hour, every other odd week of each quarter. Attendance is mandatory. 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, muscular tissue, and nervous tissue. After acquiring this basic knowledge, students learn how these four basic tissues are combined to form organs. This portion of the course focuses on the normal microscopic features of the lymphatic, circulatory, respiratory, and gastrointestinal systems, providing a framework for understanding the pathologic changes in diseases of these systems. In the Embryology component of this course, students learn the general pattern and principles of normal development and the basic aspects of development of the musculoskeletal, circulatory, and gastrointestinal systems. Coordination of this course with the concurrent Gross Anatomy course provides students with a comprehensive anatomic view of each region studied. This course uses a lecture and laboratory format. 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 ear. The development of the urogenital system, 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. 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 the fundamental principles of immunology—the cells and cell products involved in host defense mechanisms, their origin, function, roles in health and in infectious processes, and in immunologic disorders and deficiencies. 3 credits
Prerequisites: Biochemistry I & II

**MICR 1611 Microbiology I**
The didactic component of the 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; and the methods of laboratory diagnosis, treatment, and control for each infectious agent. Laboratory exercises and demonstrations help students develop the microbiologic skills applicable for clinical practice, acquaint students with available diagnostic laboratory tests and their interpretation, and augment selected lecture presentations. 5 credits
Prerequisite: Immunology

**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
Prerequisites: Immunology & Microbiology I

**NEUR 1531 Neuroscience**
This course uses a multidisciplinary approach to provide insight into the fundamental concepts of anatomy and physiology as they relate to the nervous system. The course is divided into three components. In the first unit, a regional approach is used to study the surface landmarks, internal anatomy, and blood supply of the spinal cord, brainstem, and forebrain. This provides the framework and terminology to be used in the second and third units of the course, which adopt a systems approach to the study of the central nervous system. The second unit focuses on the sensory systems, whereas the third unit concentrates on the motor system, limbic system, and higher cortical function. Throughout the second and third units, basic anatomy and physiology are consistently presented in the context of neurologic disorders that involve the particular system being studied. Case studies and lectures by clinicians are used to emphasize the correlation of basic and clinical material. 6.5 credits
Prerequisites: Gross Anatomy I & II

**PASS 451 Behavioral Medicine**
Counseling and psychosocial issues are presented in this required course. The skills, knowledge, and sensitivity needed to communicate and intervene effectively in a variety of psychosocial situations are presented. Issues of patient communication and education, cultural and social awareness and sensitivity, health maintenance, health promotion/disease prevention, treatment and management of patients with HIV/AIDS, and geriatric medicine are discussed. 2 credits

**PASS 469 Physical Diagnosis**
This course presents the basic skills and techniques for taking a complete patient history and performing a systematic physical examination. This course also emphasizes the importance of appropriate patient communication to
diagnose common pathologies, confirm diagnoses, and screen for the presence of diseases in their preclinical stages.
4 credits
Prerequisites: Gross Anatomy I & II and Pathology I & II

PATH 1611 Pathology I
Designed to introduce students to the basic concepts of pathology, this course stresses altered cellular, genetic, and molecular mechanisms, and attempts to convey the dynamic nature of the processes involved.
6 credits

PATH 1622, 1633 Pathology II, III
A continuation of basic pathology, this course identifies the causes and mechanisms of disease as related to specific organ systems. The need for students to understand the pathophysiology of disease and its implications to both the patient and the physician is also stressed. Emphasis is placed on the dynamic process of the pathologic progression of changes, adaptive responses, and therapeutic modifications, and discovering how these changes produce the ultimate clinical manifestations of disease processes.
PATH 1622 Pathology II, 6 credits, Prerequisite: Pathology I
PATH 1633 Pathology III, 5 credits, Prerequisite: Pathology I & 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, cardiovascular, and central nervous system drugs.
4 credits

PHAR 1622, 1633 Pharmacology II, III
These courses are a continuation of PHAR 1611. Topics covered include: 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, and antihistamines; and drugs causing birth defects. 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.
PHAR 1622 Pharmacology II, 4 credits, Prerequisite: Pharmacology I
PHAR 1633 Pharmacology III, 3 credits, Prerequisite: Pharmacology I & II

PHYS 1521 Physiology I
This course presents the biophysics, functional properties, and regulation of membrane transport; excitable cells; skeletal muscle; and the cardiovascular system. 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. The course concludes with an examination of the integrated functions of the circulatory system. Small group case discussions and workshops facilitate the development of critical thinking and problem solving skills as the 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 the physiologic foundations developed during the preceding semester. The initial section of the course presents the function, mechanism of action, regulation, and integration of the renal, respiratory, and gastrointestinal organ systems that maintain body homeostasis through fluid, electrolyte, gas, and nutritional balance. The endocrine section of the course presents the function, mechanism of action, and regulation of specific hormones. Small group discussions continue to refine critical thinking and problem solving skills as students identify the physiologic and pathophysiologic mechanisms underlying the signs and symptoms described in pertinent clinical case studies.
5.5 credits
Prerequisite: Physiology I

PMED 1510 Introduction to Research
This course is designed to introduce the student to the basic principles of research and the review and critical analysis of scientific literature. The student will become familiar with types of research, research design, the meaning of common statistical methods, and the ethical and legal considerations in research.
2 credits

PMED 1512 Podiatric Medicine I
This course introduces students to the scope of podiatric practice, podiatric terminology and instrumentation, and the conservative management techniques for common foot disorders including ingrown nails, warts, dystrophic nails, calluses, and corns. It includes a discussion of alternative practice patterns, the results of recent surveys of the profession, and future projections. Students learn the basic lower extremity examination of vasculature, neurologic function, musculoskeletal findings and the skin. The course includes practical lab sessions for learning fundamental skills such as the safe handling and sterilization of instruments, trimming lesions and nails, padding, and strapping. Students will examine the basic principles of charting.
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.
3.0 credits

PMED 1522, 1532, 1660, 1677 Community Podiatric Medicine I-IV
This course is designed to foster professionalism in the podiatric student. Throughout the first and second years, podiatric students will spend a total of 30 hours per year within a community setting. The student will observe how the podiatrist interacts with patients, as well as learn as much as possible about how the business of the office is managed. The importance of patient-centered care and patient rights will be stressed, as well as practice management, and the role of the doctor as a professional member of the community.
0.5 credit each quarter

PMED 1531 Podiatric Surgery & Anesthesia
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).
3.5 credits

PMED 1541 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: Podiatric Medicine I, Gross Anatomy I & II, Biochemistry I & II, Physiology I & II

PMED 1544 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.
2.0 credits
Prerequisites: Gross Anatomy I & II

PMED 1614 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: 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.
3.0 credits
Prerequisites: Physiology I & II and Physical Diagnosis

PMED 1663 Podiatric Pathomechanics
Pathomechanics is designed to inform the students of the common deformities that occur in the foot that have
underlying biomechanical etiologies. The student’s knowledge of biomechanics will be utilized to correlate the abnormal mechanics of the foot with selection of and techniques utilized for surgical correction. The clinical skills component is designed to demonstrate to the student, in a “hands on” format, a) the components and techniques used in basic internal fixation of osteotomies and b), the skills and techniques used in the radiographic assessment of a Hallux Abducto Valgus deformity so as to better determine the most appropriate procedure(s) indicated.

3.5 credits
Prerequisites: Advanced Lower Extremity Anatomy, Podiatric Surgery and Anesthesia, Biomechanics I & II, Podiatric Medicine I & II, and 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.

3.0 credits
Prerequisites: Physiology I & II, Physical Diagnosis, and General Medicine I

PMED 1773 Sports Medicine and Rehabilitation
This course is designed to introduce the student to the evaluation, diagnosis and management of athletic associated injuries. Special emphasis will be placed upon the different approach used in treating athletes as compared to the general population while also incorporating a look at sports nutrition, footwear and training methodology. This course will also present various physical therapy evaluative techniques and modalities used in the rehabilitation of athletic injuries. The clinical skills component is designed to demonstrate to the student, in a hands-on format, 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: Advanced Lower Extremity Anatomy, Biomechanics I & II, Podiatric Medicine I & II, and 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. Emphasis will be placed on the soft tissue tumors, osseous tumors and metabolic bone disease of the lower extremity. Additionally, an introduction to 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. Additionally, “hands-on” labs will familiarize the student with the anatomy and functional evaluation of a number of orthopedic conditions. Problem Based Learning/Evidence Based Medicine case studies are incorporated to better illustrate common conditions.

2.5 credits
Prerequisites: Advanced Lower Extremity Anatomy, Podiatric Medicine I & II, Podiatric Surgery and Anesthesia, and Medical Imaging

PMED 1675 Pediatric Orthopedics
This course teaches students the complete physical examination and the detailed lower extremity examination of infants and children from the hips to the toes, developmental markers and changes in both orientation and range of motion; radiographic hallmarks in the growing child, changes in growth plates, and ossification centers are discussed. The diagnosis and treatment of pediatric lower extremity trauma is also included. Bracing and shoeing for pediatric foot and leg deformities is taught. The clinical and radiographic manifestations of the avascular necroses, commonly seen in childhood as Sever’s disease and Kohler’s disease, will be described. The course also covers the diagnosis and treatment of common pediatric foot and ankle deformities including clubfoot, metatarsus adductus, hypermobile flatfoot, polydactyly, brachydactyly, toe walking, and in-toeing, as well as common skin and nail problems seen in infants, children, and adolescents.

3.0 credits
Prerequisites: Gross Anatomy I & II, Advanced Lower Extremity Anatomy, and Biomechanics I & II

PMED 1678 Psychiatric Principles
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.

1.0 credit

PMED 1701 Podiatric CORE Rotation
The CORE podiatric rotation consists of a one month training experience at each of three different locations (ABC) 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 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 1706 Ambulatory Medicine
The Ambulatory 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. The experience is organized to enhance the student’s ability to thoroughly assess a primary care patient through appropriate 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 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 Orthotics & Prosthetics
The Orthotics 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 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 1712 Physical Medicine and Rehabilitation
The Physical Medicine and Rehabilitation rotation is a two week training experience in an outpatient PM & R clinic. The overall goal of the experience is to familiarize students with the philosophy, modalities, and the techniques employed by therapists in the treatment of patients with past injuries, surgeries, and neurological disorders.
2 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.
4.0 credits
Prerequisites: Advanced Lower Extremity Anatomy, Podiatric Surgery and Anesthesia, Podiatric Medicine I & II, Biomechanics I & II, Medical Imaging, and 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.
1.0 credit
Prerequisites: General Medicine I, II, and III, Podiatric Medicine I, Podiatric Surgery and Anesthesia, and Advanced Podiatric Surgery and Trauma

PMED 1724 Orientation to the Operating Room
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, and the maintenance of a sterile field.
0.5 credit
Prerequisites: Podiatric Medicine I and Podiatric Surgery and Anesthesia

PMED 1731 Community Health and 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. In addition, students are provided a view of epidemiological methods and the evolution of public health measures. The cause, spread and control of communicable disease is placed in context as students study preventive medicine. Students are also exposed to epidemiological statistics and their meaning.
2.0 credits
Prerequisite: Introduction to Research

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.
3.0 credits
Prerequisites: Physiology I & II, Physical Diagnosis, and General Medicine I & II

PMED 1734 Practice Management
During the first and second years in Community Podiatric Medicine I-IV, students have had exposure through observation of the practice of podiatric medicine in various settings within the community. The students will now have the opportunity to build upon their experiences 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.
2.0 credits
Prerequisites: Community Podiatric Medicine I-IV

PMED 1741 Pediatric 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.
3.0 credits
Prerequisites: Podiatric Medicine I & II, and 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.
1.0 credit
Prerequisites: Introduction to Research and Community Health and 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.
3.0 credits
Prerequisites: Biomechanics I & II, Advanced Lower Extremity Anatomy, and 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 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 three 4-week training experiences at established podiatric medical student training programs involving both an ambulatory and a hospital based component (A, B, C). Students apply for the privilege of training at these hospitals located across the United States. 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 (12 credits total)

PMED 1806 Podiatric Office
The Podiatric Office rotation is a four week training experience at the office of an affiliated preceptor during the fourth 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. However, the emphasis in this fourth year experience is on the diagnosis and management of the podiatric patient. In addition, students will develop an enhanced understanding of practice management and professionalism through observation in a private practice setting.
4 credits

PMED 1807 Elective Medicine/Surgery (non-podiatric)
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

PMED 1808 Vacation/Optional Rotation/Potential Remediation
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
**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. These courses will cover current topics and concepts in these fields. Clinical Correlates uses a case presentation approach, 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.

1.0 credit each course

**Elective Courses**

**BBSC 305 Medical Terminology**

This elective 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. Students are expected to be able to describe and apply the basic principles of root words, suffixes, and prefixes of medical terms upon completion of the course.

2 credits

**ELEC 1604 Medical Spanish**

This course will provide the student with the communication skills necessary to provide care to the Spanish-speaking patient. At the end of this course, students will have an expanded general Spanish vocabulary (selected nouns, verbs, adjectives, phrase, etc.). Group interaction and role-playing will be used in this course. This course is directed at students not fluent in Spanish.

**PMED 1910 Research Elective**

The Research Elective provides an opportunity for experiential learning through active involvement in research. In collaboration with, and under the supervision of, a faculty member, the student will be actively engaged in clinical or basic research. The student must submit a proposal describing the nature of his/her involvement signed by the proposed supervising researcher and must receive prior approval from the Program Director. At the conclusion of the course, the student will submit a summary of and a reflection on the experience.

1-3 credits

Prerequisite: Introduction to Research

**FACULTY**

Stephen L Barrett, DPM  
William M. Scholl College of Podiatric Medicine  
Associate Professor

Denise B Freeman, DPM, MSE  
Pennsylvania College of Podiatric Medicine  
Professor and Associate Program Director

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, MD  
University of Utah  
Associate Professor

Jeffrey C Page, DPM  
California College of Podiatric Medicine  
Professor and Program Director

John Tassone, Jr., DPM  
Ohio College of Podiatric Medicine  
Assistant Professor

Tanya L Thoms, DPM  
California College of Podiatric Medicine  
Assistant Professor

Bruce Werber, DPM  
California College of Podiatric Medicine  
Associate Professor
MISSION
To create an educational environment that cultivates excellence in professionalism, compassion, competence, and teamwork in the practice of anesthesia

PROGRAM DESCRIPTION
The Nurse Anesthesia Program is a two-phase program. The first phase is the didactic component, which takes four quarters to complete. All coursework in the first phase of the program must be completed prior to starting the second phase of the program. The second phase encompasses the clinical practicum and a research-based project related to anesthesia. This phase requires five quarters to complete. The length of the program is 27 months. Upon program completion, a Master of Science degree with a concentration in nurse anesthesia is earned.

ACCREDITATION
Since 1993 Midwestern University has been continuously accredited by The Higher Learning Commission, a Commission of the North Central Association of Colleges and Schools (30 North LaSalle St., Suite 2400, Chicago, IL 60602; 800/621-7440; <www.ncacihe.org>). The most recent action resulted in a 10-year accreditation renewal. The State of Arizona Board of Private Postsecondary Education has approved all current degree programs at the Glendale Campus of Midwestern University. 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 on May 25, 2005 and expires on October 31, 2007. The Program is currently in the process of reaccreditation with the COA.

ADMISSIONS
The Nurse Anesthesia Program uses a standard admissions process. Admission to the Nurse Anesthesia Program is considered on a competitive basis for prospective students who are registered nurses and hold a baccalaureate degree or its equivalent in nursing or a related field (e.g., physiology, chemistry, anatomy) or higher degree from a regionally accredited professional program. Applications received are reviewed by the Office of Admissions for completeness and referred to the Director of the Nurse Anesthesia Program and/or the Director of Admissions to determine eligibility for an interview. 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.

For the class that will matriculate in June, applications will be due on November 1. The Admissions Committee reviews all applications prior to the end of the calendar year. Applicants will be interviewed in January and February of the matriculation year; acceptance letters are mailed out at the end of February.

Requirements
To be considered for admission to the Nurse Anesthesia Program at Midwestern University, a student must:
1. Possess a minimum cumulative grade point average (GPA) of 2.75 on a 4.00 scale. To be competitive, a cumulative GPA of 3.00 on a 4.00 scale is recommended. The cumulative GPA is calculated from the applicant’s last 150 credits completed;
2. Possess a minimum science GPA of 2.75 on a 4.00 scale. To be competitive, a science GPA of 3.00 on a 4.00 scale is recommended. The courses included in the calculation of the science GPA include anatomy, physiology, pathophysiology, pharmacology, chemistry, and physics;
3. Graduate Record Examination (GRE) general test scores must be submitted. Scores will be accepted from tests taken within the past five years. The Midwestern University institutional code for the GRE is 4160. For more information about the GRE, contact Educational Testing Services (ETS) at 800/GRE-CALL, or visit http://www.gre.org/.
4. Satisfactorily complete three credit hours of statistics with a grade of B or better;
5. Possess a baccalaureate degree in nursing, or other appropriate degree, granted by a regionally accredited U.S. college or university prior to November 1st.
Undergraduate study must include 3 credit hours of pharmacology, 8 credit hours of anatomy and physiology, 6 credit hours of chemistry (may include general chemistry, organic chemistry, or biochemistry), and 3 credit hours of basic research; other courses may be substituted on an individual basis;

6. Be licensed to practice as a registered nurse in at least one legal jurisdiction in the United States or its territories. You must have an Arizona or Compact State RN license to complete your clinical coursework

7. Possess a minimum of two years of registered nursing experience in an intensive care unit (ICU). This includes, but is not limited to: Surgical ICU, Medical ICU, Neuro ICU, Cardiovascular ICU, Trauma ICU, Burn ICU, and Pediatric ICU. Critical care areas that do not fulfill this admission requirement include, but are not limited to: Neonatal ICU, Emergency Room, Transport Nursing, Postanesthesia Care Unit, Operating Room, Coronary Care Unit, Step-Down Unit, and Telemetry Unit;

8. Demonstrate a sincere understanding of and interest in nurse anesthesia;

9. Possess the oral and written communication skills necessary to interact with faculty, patients, and colleagues;

10. Pass a criminal background check;

11. Abide by Midwestern University’s Drug-Free Workplace and Substance Abuse Policy.

Foreign Coursework: If the student has completed coursework at or has graduated from a foreign college or university, he or she must submit acceptable evidence of U.S. degree/course equivalency. The student must also complete at least 30 semester hours of coursework at a U.S. college or university prior to matriculation. This coursework must include six semester hours of nonremedial coursework in English.

Application Deadline
The deadline for application into the program is November 1st of the preceding year. The planned date for enrollment is the beginning of the summer quarter (June).

Prerequisite Deadline
An applicant must satisfactorily complete all prerequisite coursework and clinical practice requirements prior to the application deadline.

Application Instructions
To be considered for admission into the Nurse Anesthesia Program, the applicant must submit to the Office of Admissions an application packet including the following:

1. A properly completed Application for Admission form specific for the degree program of interest;
2. A nonrefundable, non-waivable application fee of $50;
3. Official transcripts verifying completion of a baccalaureate degree or higher level degree program.

4. Please submit transcripts of all post-high school education.

4. Three completed letters of recommendation
   • One letter from the applicant’s current nursing supervisor
   • Two letters from peers, academic instructors, or a physician

Mail completed application packet to:
Office of Admissions
Midwestern University
19555 North 59th Avenue
Glendale, AZ 85308

Please Note: You can track the receipt of your application materials and the status of your file on our University website. When we receive your application the Office of Admissions will send instructions for accessing your account information. Please notify us of any changes to your mailing address and e-mail address.

All requests for withdrawing an application must be done in writing.

For further information, call the Office of Admissions at: 623/572-3215 or 888/247-9277.

Technical Standards for Admission
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.

MATRICULATION PROCESS

The matriculation process begins after an applicant receives notification of his/her acceptance into the Nurse Anesthesia Program of the College of Health Sciences. The student must return both a signed matriculation agreement and an initial deposit to the Office of Admissions. The student must also complete the following:

1. Submit deposit monies by the dates designated in his/her matriculation agreement; the entire deposit is applied toward the student’s first quarter tuition.
2. Complete a medical file as requested by the Office of Student Services.
3. Submit proof of medical and disability insurance coverage. The student may select either a plan offered by an MWU-approved carrier or a comparable plan offered by an outside carrier of the student’s 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. Sign authorization form allowing a criminal background check.
7. Sign Midwestern University’s Drug-Free Workplace and Substance Abuse Policy.
8. Complete physical exam and submit form.
10. Provide proof of completed required immunizations.

If the student either fails to satisfy these matriculation requirements or omits/falsifies information required on official admissions documents, the student automatically forfeits his/her seat in the 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 and complete a research-based master’s project acceptable to the Program Student Academic Review Committee;
2. Satisfactorily complete the required number of credit hours with a 2.75 or higher cumulative GPA, with no course or rotation grade below a C;
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 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 and a Colorado nursing license as well. Please note: The Colorado State Board of Nursing is currently in the process of joining the nursing compact. Please contact the Nurse Anesthesia Program at (623) 572-3760 for updated information.

INSTRUCTIONAL PROGRAM

The Nurse Anesthesia Program curriculum is divided into two phases: didactic (4 quarters) and clinical (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. 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 complete 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. Travel and lodging arrangements are the sole responsibility of the student. 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. This phase of the program also requires that students develop a research-based project relevant to nurse anesthesia.

CURRICULUM

First Year

Summer Quarter 15.0 quarter credits
ANAT 451 Human Anatomy and Embryology 7.0
NAAP 411 Biophysics 4.0
NAAP 450 Biochemistry for Nurse Anesthetists 4.0

Fall Quarter 15.5 quarter credits
CORE 460 Interdisciplinary Health Care 0.5
NAAP 432 Principles of Anesthesia I 6.0
NAAP 434 Anesthesia Pharmacology 5.0
PHYS 471 Human Physiology I 4.0

Winter Quarter 16.5 quarter credits
CORE 470 Interdisciplinary Health Care 0.5
NAAP 433 Principles of Anesthesia II 6.0
NAAP 443 Research Methods 3.0
PHAR 461 Pharmacology I 3.0
PHYS 482 Human Physiology II 4.0

Spring Quarter 14.0 quarter credits
CORE 480 Interdisciplinary Health Care 0.5
NAAP 422 Professional Aspects of Nurse Anesthesia 4.5
NAAP 444 Principles of Anesthesia III 6.0
PHAR 472 Pharmacology II 3.0

Second Year

Summer Quarter 17.0 quarter credits
NAAP 515 Clinical Rotation I 9.0
NAAP 520 Clinical Rotation I Didactic Component 3.0
NAAP 525 Required Master’s Coursework I 5.0

Fall Quarter 17.0 quarter credits
NAAP 516 Clinical Rotation II 9.0
NAAP 521 Clinical Rotation II Didactic Component 3.0
NAAP 526 Required Master’s Coursework II 5.0

Winter Quarter 17.0 quarter credits
NAAP 517 Clinical Rotation III 9.0
NAAP 522 Clinical Rotation III Didactic Component 3.0
NAAP 527 Required Master’s Coursework III 5.0

Spring Quarter 17.0 quarter credits
NAAP 518 Clinical Rotation IV 9.0
NAAP 523 Clinical Rotation IV Didactic Component 3.0
NAAP 528 Required Master’s Coursework IV 5.0

Third Year

Summer Quarter 17.0 quarter credits
NAAP 519 Clinical Rotation V 9.0
NAAP 524 Clinical Rotation V Didactic Component 3.0
NAAP 529 Required Master’s Coursework V 5.0

TOTAL FOR PROGRAM COMPLETION: 146.0

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
Changes in our health care system are creating a growing demand for health professionals with skills of collaboration and teamwork. The Interdisciplinary Health Care course involves the Colleges of Health Science, osteopathic medicine, and pharmacy in order to teach biomedical, occupational therapy, osteopathic medicine, pharmacy, physician assistant, and nurse anesthetist students together about the importance of an interdisciplinary approach to patient care. Topics pertinent to all providers such as cultural and ethical issues and the roles of the profession are presented. 0.5 credits per quarter

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 422 Professional Aspects of Nurse Anesthesia
This course presents material concerning issues surrounding the discipline of nurse anesthesia as a profession. Topics include the qualifications and capabilities of the nurse anesthetist, professional roles and responsibilities, commitment to professional involvement, the American
Association of Nurse Anesthetists as a professional organization, the governmental and non-governmental regulation of nurse anesthesia practice, Standards of Care, professional reimbursement, health care marketplace trends, influencing health care policy, assessing and selecting CRNA practice settings, the American legal system and its impact on CRNA practice, the anatomy of malpractice litigation, clinical competency, continuous quality improvement, cultural competency, and ethical issues and decision making.

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 basic anesthesia equipment, monitoring, perioperative patient assessment, basic anesthesia care, documentation of care, principles of infection control and safety, the anesthetic management of specific types of procedures and patients, and methods for pain control. The second course introduces airway management and more complex anesthesia management scenarios. The final course in this series introduces the student to the complexity and function of the anesthesia machine. This course also focuses on specialty practice including cardiac, neurologic, thoracic, vascular, renal, hepatic and endocrine procedures, as well as the care of the obstetric, pediatric, and trauma patients. The management of patients with coexisting disease that complicates anesthesia management is also discussed.

NAAP 432, 6 credits
NAAP 433, 6 credits, Prerequisite: NAAP 432
NAAP 444, 6 credits, Prerequisite: NAAP 433

**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. In order for anesthetists to truly understand the pharmacokinetics and pharmacodynamics of medicines, it is essential that they grasp the chemical and physical essence of those substances and compounds that perform the actions of alleviating pain and inducing anesthesia. Therefore, medicinal organic chemistry will also be covered in this course.

5 credits
Prerequisite: PHAR 461

**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, hemostasis tests and nutrition.

4 credits

**NAAP 515, 516, 517, 518, 519 Clinical Rotation I, II, III, IV, V**

Students begin the first clinical rotation in the summer of their second year in the program and then rotate to a variety of hospitals in Arizona, California, Colorado, New Mexico, and Utah. These rotations include specialty rotations in cardiac surgery, neurosurgery, pediatrics, obstetrics, as well as general surgery. At the end of each quarter, students meet with program faculty for clinical conference presentations and summative quarterly evaluations.

9 credits each quarter (45 credits total)
Prerequisite: Completion of all didactic course work

Current Clinical Sites Include:

1. American Fork Hospital, American Fork, UT
   Distance from campus: 10 hours
2. Arizona Heart Hospital, 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. Del E Webb Memorial Hospital, Sun City West, AZ
   Distance from campus: local
6. Fort Defiance Indian Medical Center, Fort Defiance, AZ
   Distance from campus: 6 hours
7. La Paz Regional Hospital, Parker, AZ
   Distance from campus: 3 hours
8. Northern Navajo Medical Center, Shiprock, NM
   Distance from campus: 8 hours
9. Orem Community Hospital, Orem, UT
   Distance from campus: 10 hours
10. Rehoboth McKinley Christian Health Services, Gallup, NM
    Distance from campus: 8 hours
11. San Juan Regional Medical Center, Farmington, NM
    Distance from campus: 8 hours
12. Southern Arizona Veterans Affairs Healthcare, Tucson, AZ
    Distance from campus: 2 hours
13. Saint Mary Corwin Medical Center, Pueblo, CO
   Distance from campus: 10 hours
14. Tuba City Indian Medical Center, Tuba City, AZ
   Distance from campus: 6 hours
15. University Medical Center, Fresno, CA
   Distance from campus: 9 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 Clinical Rotation I through Clinical Rotation V. The student’s retention of didactic information for the first year of the program will be evaluated. In addition, a professional case report will be presented by the student to their peers and the faculty.

3 credits per Quarter
Prerequisite: Completion of all didactic course work

**NAAP 525 Required Masters Coursework I**

This course comprises the development of a conceptual framework and literature review leading to the development of the student’s master’s project.

5 credits
Prerequisite: Completion of all didactic coursework

**NAAP 526 Required Masters Coursework II**

This course comprises the development of the proposal for the student’s master’s project. The proposal is presented to the student’s committee for approval. The committee and the student will establish the criteria the project must meet for successful completion of the project.

5 credits
Prerequisite: NAAP 525

**NAAP 527, 528 Required Masters Coursework III & IV**

Students have two quarters to work on their approved projects. They are expected to consult with their committees as necessary. Committee members are responsible for reading and commenting on at least one draft of the report of the student’s project.

NAAP 527, 5 credits, Prerequisite: NAAP 526
NAAP 528, 5 credits, Prerequisite: NAAP 527

**NAAP 529 Required Masters Coursework V**

Students present the results of their studies at a final conference that is open to the community of interest. The student’s committee determines whether the project meets the criteria for successful completion of the project.

5 credits
Prerequisite: NAAP 528

**PHAR 461, 472 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 are exposed to common drugs affecting major organ systems of the body, namely, the autonomic nervous system, central nervous system, cardiovascular and renal systems, and gastrointestinal and genitourinary systems. In addition, in-depth discussions on chemotherapy of microbial and parasitic organisms, chemotherapy of neoplastic diseases, drugs acting on blood-forming organs, and hormones and vitamins are presented.

PHAR 461, 3 credits, Prerequisite: ANAT 451 and PHYS 471
PHAR 472, 3 credits

**PHYS 471, 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 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. The cases utilize small group clinical case sessions to promote critical thinking, development of problem solving skills, and appropriate clinical application of physiologic concepts and principles. As active participants in these discussion sessions, students identify, present, and discuss deviations from the norm as the patient’s history, symptoms, signs, and relevant laboratory findings are reviewed. Medical literature interpretation and case write-ups are included. This component of the course assists in providing a foundation for clinical decision making and diagnosis.

PHYS 471, 4 credits
PHYS 482, 4 credits, Prerequisite: PHYS 471
**FACULTY**

**Mary M Wojnakowski, CRNA, PhD**  
University of Pittsburgh  
Program Director and Assistant Professor

**Shari M Burns, CRNA, MSN**  
US Air Force Nurse Anesthetist Program  
Program Associate Director and Assistant Professor

**Guy Caraffa, CRNA, BSN**  
Central Connecticut State University  
Eastern Maine Medical Center School of Nurse Anesthesia  
Program Clinical Coordinator and Instructor
MISSION
The Midwestern University Doctor of Psychology (Psy.D.)/Master of Arts (M.A.) 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.

PROGRAM PHILOSOPHY
The Doctor of Psychology/Master of Arts 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 OBJECTIVES
The Doctor of Psychology/Master of Arts in Clinical 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 program of study follows the objectives of the training models endorsed by the American Psychological Association and the National Council of Schools and Programs of Professional Psychology. Students are educated and trained in the core competency areas related to the current body of knowledge on the biological aspects of behavior, cognitive and affective aspects of behavior, social aspects of behavior, history and systems of psychology, psychological measurement, research methodology, techniques of data analysis, individuals’ differences, human development, dysfunctional behavior and psychopathology, professional standards and ethics, theories and methods of assessment and diagnosis, effective interventions, consultation, supervision, efficacy of interventions, and issues of cultural and individual diversity. The curriculum also has an emphasis on provision of psychological services in primary health care.

Practicum training is completed at numerous hospitals, agencies, and organizations throughout the Phoenix metropolitan area. Midwestern University has an extensive network of training sites established for a variety of health care professions including medicine, physician assistant studies, occupational therapy, cardiovascular science, podiatry, nurse anesthesia and pharmacy. Alumni of Midwestern University are practicing as clinicians, educators, supervisors, and administrators at many facilities throughout the State of Arizona.

Although the Doctor of Psychology in Clinical Psychology Program will seek the 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.

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
ADMISSIONS
The Clinical Psychology Program considers applicants who possess the academic and professional promise necessary to become competent, caring members of the health care community. The program requires an interview with the applicant before a decision is made concerning admission into the program.

Requirements
To be considered for admission within our competitive selection process one must:
1. Possess a bachelor’s degree from a regionally accredited college or university.
2. Possess a minimum cumulative GPA of 2.75 on a 4.0 scale.
3. Complete 18 semester hours in psychology, including:
   • Introductory/General Psychology
   • Human Growth & Development or Personality Theory
   • Abnormal Psychology
   • Statistics or Tests and Measurements
4. Submit Graduate Records Examination (GRE) general test scores; the test must have been taken no earlier than January 1, 2003. The Midwestern University school code for the GRE is 4160, and the department code is 0699. For more information about the GRE, contact Educational Testing Services (ETS) at 800/GRE-CALL or visit www.gre.org. Alternatively, you may substitute MCAT, PCAT, GMAT, LSAT, or Miller’s Analogies Test.
5. Reflect a people/service orientation through community service or extracurricular activities.
6. Reflect proper motivation for and commitment to health care as demonstrated by previous work, volunteer, or other life experiences.
7. Possess the oral and written communication skills necessary to interact with patients and colleagues.
8. Abide by Midwestern University’s Drug-Free Workplace and Substance Abuse Policy.

INTERNATIONAL STUDENTS: Must complete a minimum of 30 semester hours of coursework in the United States. Of the 30 semester hours, 6 hours must be in non-remedial English composition and 3 hours in speech/communication.

Application Process
To be considered for admission to the Clinical Psychology Program, students must submit the following items to the Office of Admissions:

1. A properly completed application. Forms and instructions can be downloaded at www.midwestern.edu; click on the AZ Clinical Psychology Program section. You may also obtain an application packet by writing or calling the Office of Admissions at Midwestern University; 19555 N. 59th Avenue, Glendale, AZ 85308; 623/572-3215 or 888/247-9277; e-mail: admissaz@midwestern.edu;
2. A nonrefundable, nonwaivable application fee of $50;
3. Three properly signed and sealed letters of recommendation from professionals who know you well (teachers, advisors, professional colleagues or supervisors);
4. Personal statement reflecting your educational and career goals and a self-appraisal of qualifications for the program and profession;
5. Current resume;
6. Official transcripts from all postsecondary schools attended; and
7. Standardized test scores (GRE or substitute)

Send all application materials to:
Office of Admissions
Midwestern University
19555 N. 59th Avenue
Glendale, AZ 85308

Please Note: You can track the receipt of your application materials and the status of your file on our University Web site. When we receive your application the Office of Admissions will send instructions for accessing your account information.

Please notify us of any changes to your mailing address and e-mail address.

Completed applications are reviewed to determine the applicant’s eligibility for an interview, 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 interviews, admissions decisions are made and the Dean—via the Office of Admissions—notifies each applicant of the admissions decision.

For those admitted to the Doctor of Psychology/Master of Arts Program, a nonrefundable tuition deposit to reserve a seat in the entering class will be required by a date stipulated in the acceptance letter. The tuition deposit is applied toward the tuition due for the first quarter of study as a matriculated student.

Application Deadlines
Admissions decisions will be made on a rolling basis. You are advised to complete your application file 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.

Matriculation Process
The matriculation process begins after an applicant receives notification of his/her acceptance into the Doctor of Psychology/Master of Arts Program of the College. The student must return both a signed matriculation agreement and an initial deposit to the Office of Admissions. The student must also complete the following:

1. Submit deposit monies by the dates designated in his/her matriculation agreement. The entire deposit is applied toward the student’s first-quarter tuition.
2. Arrange to have all final college transcript(s) submitted to the Office of Admissions no later than the date designated in the matriculation agreement.
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. The student may select either a plan offered by an MWU-approved carrier or a comparable plan offered by an outside carrier of the student’s choice.
6. Submit proof of Arizona residency (this applies only to those students claiming Arizona residency).
7. 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).
8. Provide documentation that any additional coursework or service requirements stipulated by the admissions committee of the program has been completed.
9. Satisfy the Technical Standards for the Program.
10. Submit additional documents as required by the Office of Admissions.
11. Sign authorization form allowing a criminal background check
12. Sign Midwestern University’s Drug-Free Workplace and Substance Abuse Policy.
13. Complete physical exam and submit form.

If the student either fails to satisfy the above matriculation requirements or omits/falsifies information required on official admissions documents, the student automatically forfeits his/her seat in the program. Any individual accepted for admission to the Clinical Psychology Program of the College of Health Sciences, who does not comply with stated timelines for submission of all required materials, receives no further notification from CHS relative to forfeiture of his/her seat.

Reapplication Process
After receiving either a denial or end-of-cycle letter, a prospective student 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, the prospective student must complete and submit a new application and proceed through each step of the entire application process.

**PROGRAM REQUIREMENTS**

The Psy.D. Program is designed to be completed in four to five years. 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 clinical dissertation. Some evening courses may be scheduled.

**MASTER OF ARTS IN CLINICAL PSYCHOLOGY DEGREE**

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 credit hours. In addition, these students must complete and successfully defend a clinical master’s thesis. Students must also register for PSYC 681 Master’s Thesis (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. This additional credential may enhance the value of the students to many employers and assist in the competitive process of securing an internship. The M.A. in Clinical Psychology is awarded if the following are fulfilled:

- Petition to the program for the awarding of the M.A. degree;
- Satisfactory completion of 116 credit hours including all required 500 and 600 level courses (92.5 credits), Interdisciplinary Healthcare courses (1.5 credits), clerkships (3 credits), practicum and practicum seminar (16 credits) and clinical master’s thesis (3 credits);
- Attainment of a cumulative grade point average of 2.75 or higher;
- Successful completion and defense of clinical master’s thesis;
- Full payment of all outstanding tuition and fees; and
- Faculty and committee approval for awarding of the degree.

**REQUIREMENT FOR FULL TIME STUDY IN RESIDENCE**

Typically, students will spend three years in full time study on campus (in residence). All courses except practicum placements are held on campus. In all circumstances, at least one full year of full time study on campus must be satisfied as a condition of graduation. The requirement can be satisfied in either of the following ways:

- The successful completion with a minimum of twelve quarter hours of credit per term for three consecutive quarters, or
- The successful completion of 40 quarter hours within one twelve-month period including the summer quarter.

**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. Students are provided feedback about their progress.

**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:

- A maximum of 40 quarter hours of credit for coursework completed prior to matriculation may be considered;
- Transferred course credit is limited to graduate level courses from recognized, regionally accredited degree granting institutions;
- Credit is not transferred for clinical practicum or internship;
- Credit may be awarded for required courses from other doctoral programs;
- Credit may only be awarded for courses in which a grade of B or higher was attained;
- The program may require a competency examination to determine satisfactory performance before awarding credit for a course; and
- Credit can only be awarded for courses completed within a seven-year period before matriculation.

**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 Director of Training, clerkship supervisor, Program Director, and Program Student Academic Review Committee.
**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 Director of Training. Practicum is a field experience that spans the academic or calendar year. 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 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 core clinical and non-clinical course material from the first two years of study into comprehensive responses 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 after 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.

**Clinical Dissertation**

A clinical dissertation 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 clinical dissertation typically is completed within nine to 12 months. Students are required to develop a proposal for their project that must be approved by the Clinical Dissertation 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 clinical dissertation that are suitable for binding. With the Program Director’s approval, students needing additional time to complete the clinical dissertation must register for dissertation continuation, a zero credit course.

**Electives**

The Psy.D. Program has a very intensive schedule of classes that limits the hours available for electives. But for students who wish to enhance their course of study in clinical psychology, the Psy.D. Program permits selection of elective courses in areas related to Psychology. Elective options are offered through the program and in other university departments. Course availability varies from year to year, and could include courses in services for special populations or advanced interventions, e.g., topics of drug abuse, mental health issues related to aging/geropsychology, sexual assault and domestic violence issues, and rehabilitation. Some courses may be available in an independent study format.

**Graduation Requirements**

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:

- Students must show satisfactory completion of 220 quarter credit hours, including the required courses and seminars (124.5 credits), Interdisciplinary Healthcare Core Courses (1.5 credits); clerkships (3 credits), practica and practicum seminars (32 credits), internship (50 credits), and dissertation (9 credits);
- Attainment of a cumulative grade point average of 2.75 or higher;
- Satisfactory completion of the practicum experiences;
- Satisfactory completion of the written Qualifying Examination;
- Satisfactory completion of an approved one-year internship;
- Satisfactory completion of a clinical dissertation including a successful oral defense and the submission of a copy for binding;
- Full payment of all outstanding tuition and fees; and
- Complete all graduation clearance requirements as instructed by the Office of the Registrar.

**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

#### Typical Schedule

**YEAR 1**

| Fall Quarter | 
| --- | --- |
| PSYC 501 | Professional Issues and Ethics 3 |
| PSYC 502 | Life Span Development I 3 |
| PSYC 515 | Tests and Measurements I 3 |
| PSYC 572 | Psychopathology: Anxiety and Personality Disorders 3 |
| PSYC 560 | Cognitive-Affective Bases of Behavior 3 |
| CORE 460 | Interdisciplinary Health Care 0.5 |

15.5 credits

| Winter Quarter | 
| --- | --- |
| 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 |
| CORE 470 | Interdisciplinary Health Care 0.5 |

15.5 credits

| Spring Quarter | 
| --- | --- |
| 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 665 | Professional Writing 1 |
| PSYC 583 | Clerkship II 1 |
| CORE 480 | Interdisciplinary Health Care 0.5 |

14.5 credits

| Summer Quarter | 
| --- | --- |
| PSYC 530 | Introduction to Psychotherapy 3 |
| PSYC 510 | Statistics 3 |
| PSYC 527 | Personality Assessment II: Projective Techniques 3 |
| PSYC 520 | Clinical Appraisal and Interviewing 3 |
| PSYC 584 | Clerkship III 1 |

13 credits

**YEAR 2**

| Fall Quarter | 
| --- | --- |
| PSYC 631 | Cognitive Approaches to Psychotherapy 3 |
| PSYC 639 | Integrated Behavioral Health Care 3 |
| PSYC 620 | Advanced Assessment 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 1.5 |
| 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 |

14.5 credits

| Spring Quarter | 
| --- | --- |
| PSYC 610 | Diversity in Clinical Psychology 3 |
| PSYC 650 | Psychopharmacology 3 |
| PSYC 636 | Behavioral Therapy 3 |
| PSYC 680 | Research Seminar 2 |
| PSYC 686 | Practicum III 3 |
| PSYC 687 | Practicum Seminar III 1 |

15 credits

| Summer Quarter | 
| --- | --- |
| PSYC 640 | Introduction to Neuropsychology 3 |
| PSYC 540 | History and Systems 3 |
| PSYC 649 | Group Therapy 3 |
| PSYC 688 | Practicum IV 3 |
| PSYC 689 | Practicum Seminar IV 1 |
| PSYC 681 | Master Thesis 3 |

Total credits Year 1 + Year 2 113

(Awarding of Master of Arts Degree)

**YEAR 3**

| Fall Quarter | 
| --- | --- |
| PSYC 730 | Advanced Psychotherapy Practice 2 |
| PSYC 711 | Advanced Statistics 3 |
| 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 | Clinical Dissertation Development 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 | Clinical Dissertation Seminar 1 |
| PSYC 786 | Advanced Practicum III 3 |

172
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 Clinical Dissertation 8
12 credits

YEAR 4
Fall Quarter
PSYC 800 Internship 12.5
12.5 credits

Winter Quarter
PSYC 800 Internship 12.5
12.5 credits

Spring Quarter
PSYC 800 Internship 12.5
12.5 credits

Summer Quarter
PSYC 800 Internship 12.5
PSYC 810 Clinical Dissertation 1
13.5 credits
Total credits 220
(With M.A. degree 223)

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
Changes in our health care system are creating a growing demand for health professionals with skills of collaboration and teamwork. The Interdisciplinary Health Care course involves the colleges of health sciences, osteopathic medicine, and pharmacy in order to teach biomedical, occupational therapy, osteopathic medicine, pharmacy, physician assistant, and nurse anesthetist students together about the importance of an interdisciplinary approach to patient care. Topics pertinent to all providers such as cultural and ethical issues and the roles of the profession are presented.
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-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. The practical decision making process for clinicians will be emphasized in the context of existing research findings to highlight measurements in various domains for individual change, adaptive testing, test bias, and understanding of cultural influences on test construction, outcome, and recommendations. 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. Must be taken concurrently with PSYC 524 Intelligence Testing I. 2 credits
Prerequisite: PSYC 515: Tests and Measurements 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
Prerequisite: PSYC 515: Tests and Measurements I

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.
Prerequisite: PSYC 502 Lifespan Development I
3 credits

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 and advanced students in the clinical psychology program.
1 credit
Prerequisite: Consent 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 601 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.
1.5 credits
Prerequisite: PSYC 501 Professional Issues and Ethics.

PSYC 610 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 620 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

**PSY 631 Cognitive 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 665 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 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 680 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 Thesis
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 DSM 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 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

**PSYC 780 Clinical Dissertation Development**
This course focuses on the development of a research project. It will assist the student with exploring an area of interest and developing that idea into formalized dissertation 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 Clinical Dissertation Seminar**
This seminar-based course focuses on the implementation of the dissertation proposal. Other aspects of the dissertation (Review of the Literature, etc.) are reviewed. Practical considerations, such as a timeline for completion of the dissertation are developed.
1 credit
Prerequisite: PSYC 780 Clinical Dissertation 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 Seminar 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 Internship
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 (repeatable)
Prerequisite: Approval of Program Director

PSYC 810 Clinical Dissertation
Completion of the Clinical Dissertation 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 Clinical Dissertation Seminar and Approval of Program Director

PSYC 820 Clinical Dissertation Continuation
This course is reserved for students needing additional quarters beyond the fourth year in the program for completion of the required clinical dissertation. A fee is assessed with enrollment in this course. The university fee increases in the third quarter and beyond for enrollment in the course.
Prerequisites: PSYC 800 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.
Prerequisites: PSYC 800 and Approval of Course Director

Faculty List for Clinical Psychology

Ruchi Bhargava, Ph.D.
Gallaudet University
Assistant Professor

Philinda Smith Hutchings, Ph.D., ABPP
University of Kansas
Professor and Program Director

Mahsaw "Elicia" Nademin, Ph.D.
Catholic University of America
Assistant Professor

Deborah J. Lewis, Ph.D.
California School of Professional Psychology
Professor

Frederick S. Wechsler, Ph.D., Psy.D., ABPP
University of Georgia
Wright State University
Professor and Director of Clinical Training
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.

ACCREDITATION
The Midwestern University College of Dental Medicine is applying for accreditation by the Commission on Dental Accreditation (CODA). 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.

ADMISSIONS
The Midwestern University College of Dental Medicine considers for admission those students who possess the academic, professional, and personal qualities necessary to become 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) essay, 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 US and Canadian dental schools have agreed to offer class places.

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 a total GPA over 2.50 (although 3.20 will be generally competitively necessary) on a 4.00 scale. A minimum science and overall GPA of 2.50 on a 4.00 scale is required to receive a supplemental application.

<table>
<thead>
<tr>
<th>Prerequisite courses:</th>
<th>8 Semester/12 quarter hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology with lab</td>
<td></td>
</tr>
<tr>
<td>General Chemistry with lab</td>
<td></td>
</tr>
<tr>
<td>Organic Chemistry with lab</td>
<td></td>
</tr>
<tr>
<td>Anatomy with lab</td>
<td></td>
</tr>
<tr>
<td>Microbiology with lab</td>
<td></td>
</tr>
<tr>
<td>Other Courses</td>
<td></td>
</tr>
<tr>
<td>Physics</td>
<td></td>
</tr>
<tr>
<td>Physiology</td>
<td></td>
</tr>
<tr>
<td>Biochemistry</td>
<td></td>
</tr>
<tr>
<td>English Composition/Technical Writing</td>
<td></td>
</tr>
</tbody>
</table>

No grade lower than C will be accepted for any prerequisite course. (A grade of C- will not be accepted.)

1. Complete above prerequisite courses.
2. Submit competitive scores on the Dental Aptitude Test (DAT). Scores in the area of 18 or higher will be expected for the Academic Average, Reading Comprehension and Perceptual Ability sections. The DAT test must have been taken no more than 3 years prior to application;
3. Submit three letters of recommendation. One must be from either a predental advisory committee or a science professor; the others preferentially should be from either someone with a DO/MD, DDS/DMD degree and/or someone who can testify to the integrity and ethical standards of the applicant. Letters written by immediate
family members will not be accepted. All letters of evaluation must be submitted directly from the evaluators. The Office of Admissions will not accept letters submitted by students.

4. Demonstrate a sincere understanding of, and interest in, the humanitarian ethos of healthcare and particularly dental medicine;

5. Reflect a people/service orientation through community service or extracurricular activities;

6. Reflect proper motivation for, and commitment to, health care as demonstrated by previous salaried work, volunteer work, or other life experience;

7. Possess the oral and written communication skills necessary to interact with patients and colleagues;

8. Agree to abide by Midwestern University Drug-Free Workplace and Substance Abuse Policy.

9. 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.

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: 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.

Candidiates for admission who are invited for an on-campus interview are required to acknowledge that they understand the technical standards. Candidates must certify that they meet the technical standards upon their acceptance. Candidates who may not meet the technical standards are encouraged to contact the Director of Admissions to discuss and identify what accommodations, if any, the College would need to make in order that the candidate might be able to meet the standards.

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 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.

Application Process
To initiate the application process, prospective students must apply directly to the American Association of Colleges of Dental Medicine Application Service (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: http://aadsas.adea.org/aadsas2006/application.html. Students who have taken coursework and/or earned a degree from a foreign institution must also submit to AADSAS an evaluation of their transcripts from an approved service. 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’s file. Concurrently, the office sends a supplemental application to applicants meeting the minimum science and total GPA requirement of 2.50 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 website. Instructions for accessing accounts are available from the Office of Admissions. Please send notification of any changes to the mailing address and e-mail address. All requests for withdrawing an application must be done in writing; contact the Office of Admissions via e-mail at admissaz@midwestern.edu.

**Interview/Selection Process**

To be considered for an interview, applicants must meet the admissions requirements listed previously. They must also submit all of the materials necessary to complete their file, e.g., an AADSAS application, a supplemental MWU application, DAT scores, and three letters of evaluation from a premedical advisory committee or a faculty member and a dentist/physician and someone who knows the applicant very well.

After the Office of Admissions receives these materials, the applicant’s file is reviewed to determine if the applicant merits an interview, based on established criteria of the admissions committee. The Chairman 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.

If an applicant accepts an interview, he/she joins several other interviewees in meeting with members of a two or three-person interview panel—a panel selected from a volunteer group of basic scientists, administrators, and dental clinicians.

Team members question each applicant about his/her academic, personal, and health care preparedness for dental school, rating the applicants on a standardized evaluation form relative to each of these variables. At the conclusion of the interviews, the team members forward their evaluation for each applicant 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 the student of his/her status as soon as possible after the interview, but not before December 1 of the year preceding matriculation, which is the date that all dental schools hold to as the first notification date.

The interview process typically begins in the summer prior to matriculation and ends in April/May of the matriculation year.

**Reapplication Process**

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

To initiate the reapplication process, the applicant must submit an application to AADSAS. The application is then processed in the same manner as any other.

**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 do the following:

1. Submit deposit monies and administrative fees by the dates designated in his/her matriculation agreement—the entire amount is applied toward the student’s first quarter tuition;
2. Submit official transcript(s) from all colleges attended post high school by the date designated in the matriculation agreement. (Note: The information provided on the student’s AADSAS application is verified against the information provided on the student’s transcript(s). If the course and degree information on the application cannot be verified, the student’s offer 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 insurance coverage; the student may select either a plan offered by Midwestern University College of Dental Medicine or an approved outside carrier;
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. Sign an authorization form allowing for criminal background check;
8. Sign the Drug-Free Workplace policy;
9. Complete a physical exam and submit form; and,
10. Sign the Credit Policy Statement.

If a student either fails to satisfy these matriculation requirements and/or omits/falsifies information required on
official admissions documents, the student automatically forfeits his/her seat at the College. The student receives no further notification relative to this forfeiture.

Deferred Admission
Deferments are only considered under extreme circumstances, generally only where a student is physically unable to begin classes. If granted, a student may defer their admission for one year only.

To initiate the deferred admission process, a student must make his/her request in writing to the Director of Admissions by the date designated in his/her matriculation agreement. If deferment is appropriate and if the result of a physical condition, the request should be accompanied by a letter from the student’s physician documenting the conditions that prevent the student from beginning his/her dental education. After consultation with the Dean, the Director of Admissions then responds to the request with a letter detailing the specific conditions associated with deferral. Typically, the conditions include the following:
1. The student must submit his/her remaining deposit monies by the times specified during the year of his/her matriculation at the time of request of deferral.
2. Before matriculation, the student must provide a letter from a physician stating that the student can begin his/her dental education.

The student is not required to interview again or submit another supplemental application or letters of evaluation.

Transfer Admission
Midwestern University College of Dental Medicine may elect to accept transfer students from other dental schools as long as these students are in “good academic standing” and have an acceptable reason(s) for seeking a 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, a student must meet the College’s general requirements for admission. He/she must also observe the following procedure:
1. All inquiries for transfer to Midwestern University College of Dental Medicine must be submitted to the Admissions Office;
2. The completed application is returned to the Admissions Office and must also include; transcripts from previous dental school, class rank (must be in top 50%), statement of reason for transfer, Dean’s letter of “Good Academic Standing,” and a letter of reference from the Dean of Student Affairs;
3. The completed application is forwarded to the Dean;
4. Application is reviewed by the Dean who conducts an interview with the applicant;
5. Applicant is notified by the Dean of the final decision;

6. Students wishing to transfer cannot have been previously rejected for application to MWU CDM through the normal admissions process.

INSTRUCTIONAL PROGRAM
The College of Dental Medicine’s goals are:
• to contribute to the overall growth and academic excellence of Midwestern University by supporting the mission and goals of the University
• to foster a humanistic and character-developing environment for students
• to foster a holistic (emphasizing the importance of the whole and the interdependence of its parts) and compassionate approach to patient care
• 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
• to graduate competent dentists who possess the levels of clinical judgment, understanding, empathy, technical skills, and independence to begin professional practice
• to instill a sense of community in graduating dentists
• to instill a life-long learning philosophy of dental education in oral health care among students
• 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
• to be a leader in development and application of new technologies for education, research, and oral health care
• 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

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core 1460</td>
<td>Interdisciplinary Health Care I</td>
</tr>
<tr>
<td>ANAT 1513</td>
<td>Anat./Histl/Embryo/Histo/Embryo</td>
</tr>
<tr>
<td>BIOCHEM 1517</td>
<td>Biochemistry</td>
</tr>
<tr>
<td>DENT 1510</td>
<td>Dent. Health Promotion/Disease Prevention I</td>
</tr>
<tr>
<td>PSYC 1511</td>
<td>Intro. to Human Behavior I</td>
</tr>
<tr>
<td>DENT 1512</td>
<td>Restorative Dentistry I</td>
</tr>
<tr>
<td>DENT 1515</td>
<td>Cariology</td>
</tr>
<tr>
<td>PHYS 1516</td>
<td>Physiology I</td>
</tr>
<tr>
<td>DENT 1514</td>
<td>Ethics &amp; Character Dev. I</td>
</tr>
<tr>
<td>Total</td>
<td></td>
</tr>
</tbody>
</table>

Winter Quarter

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core 1470</td>
<td>Interdisciplinary Health Care II</td>
</tr>
<tr>
<td>PHYS 1526</td>
<td>Physiology II</td>
</tr>
<tr>
<td>ANAT 1523</td>
<td>Anat./Histl/Embryo/Histo/Embryo</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Name</td>
</tr>
<tr>
<td>------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>MICRO 1525</td>
<td>Microbiology/Micro</td>
</tr>
<tr>
<td>IMMUNO 1528</td>
<td>Immunology/Immuno</td>
</tr>
<tr>
<td>DENT 1529</td>
<td>Restorative Dentistry II</td>
</tr>
<tr>
<td>DENT 1520</td>
<td>Dental Health Promotion/Disease</td>
</tr>
<tr>
<td>DENT 1523</td>
<td>Ethics &amp; Character Dev. II</td>
</tr>
<tr>
<td>PSYC 1522</td>
<td>Intro. to Human Behavior II</td>
</tr>
<tr>
<td></td>
<td>Total</td>
</tr>
</tbody>
</table>

### Spring Quarter

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORE 1480</td>
<td>Interdisciplinary Health Care III</td>
<td>0.5</td>
</tr>
<tr>
<td>PSYC 1536</td>
<td>Intro. to Human Behavior III</td>
<td>3.0</td>
</tr>
<tr>
<td>ANAT 1533</td>
<td>Head &amp; Neck Anatomy/Neuro</td>
<td>6.0</td>
</tr>
<tr>
<td>DENT 1532</td>
<td>Pathology/Oral Pathology/Oral</td>
<td>10.5</td>
</tr>
<tr>
<td>DENT 1534</td>
<td>Dent. Health Promotion/Disease</td>
<td>1.5</td>
</tr>
<tr>
<td>DENT 1535</td>
<td>Ethics &amp; Character Dev. III</td>
<td>1.0</td>
</tr>
<tr>
<td>DENT 1531</td>
<td>Restorative Dentistry III</td>
<td>6.0</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>28.5</td>
</tr>
</tbody>
</table>

### Second Year/09-10

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHAR 1611</td>
<td>Pharmacology I</td>
<td>4.0</td>
</tr>
<tr>
<td>DENT 1614</td>
<td>Restorative Dentistry IV</td>
<td>9.5</td>
</tr>
<tr>
<td>DENT 1613</td>
<td>Oral Health Sciences I</td>
<td>5.0</td>
</tr>
<tr>
<td>DENT 1612</td>
<td>Dental Community Services I</td>
<td>0.5</td>
</tr>
<tr>
<td>DENT 1615</td>
<td>Ethics &amp; Character Dev IV</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>19.5</td>
</tr>
</tbody>
</table>

### Winter Quarter

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHAR 1622</td>
<td>Pharmacology II</td>
<td>4.0</td>
</tr>
<tr>
<td>DENT 1625</td>
<td>Restorative Dentistry V</td>
<td>8.5</td>
</tr>
<tr>
<td>DENT 1624</td>
<td>Oral Health Sciences II</td>
<td>5.0</td>
</tr>
<tr>
<td>DENT 1623</td>
<td>Dental Community Services II</td>
<td>0.5</td>
</tr>
<tr>
<td>BIOCHEM 1624</td>
<td>Genetics &amp; Nutrition</td>
<td>3.0</td>
</tr>
<tr>
<td>DENT 1621</td>
<td>Ethics &amp; Character Dev V</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>21.5</td>
</tr>
</tbody>
</table>

### Spring Quarter

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DENT 1637</td>
<td>Anesthesia I</td>
<td>2.0</td>
</tr>
<tr>
<td>PSYC 1634</td>
<td>Psychopathology</td>
<td>1.0</td>
</tr>
<tr>
<td>DENT 1636</td>
<td>Restorative Dentistry VI</td>
<td>11.0</td>
</tr>
<tr>
<td>DENT 1635</td>
<td>Oral Health Sciences III</td>
<td>5.0</td>
</tr>
<tr>
<td>DENT 1639</td>
<td>Dental Community Services III</td>
<td>0.5</td>
</tr>
<tr>
<td>DENT 1633</td>
<td>Ethics &amp; Character Dev VI</td>
<td>0.5</td>
</tr>
<tr>
<td>DENT 1638</td>
<td>Medical Emergencies</td>
<td>2.0</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>22.0</td>
</tr>
</tbody>
</table>

### Third Year/10-11

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DENT 1710</td>
<td>Dental/Medical Rounds I</td>
<td>5.0</td>
</tr>
<tr>
<td>DENT 1711</td>
<td>Perio I</td>
<td>3.5</td>
</tr>
<tr>
<td>DENT 1713</td>
<td>Pediatric Dentistry</td>
<td>4.5</td>
</tr>
<tr>
<td>DENT 1714</td>
<td>OMS</td>
<td>4.5</td>
</tr>
<tr>
<td>DENT 1715</td>
<td>Ortho</td>
<td>6.0</td>
</tr>
<tr>
<td>DENT 1716</td>
<td>Practice Management I</td>
<td>2.0</td>
</tr>
<tr>
<td>DENT 1717</td>
<td>Endo I</td>
<td>2.5</td>
</tr>
<tr>
<td>DENT 2000</td>
<td>Intro to Dental Clinics</td>
<td>2.0</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>30.0</td>
</tr>
</tbody>
</table>

### Fall Quarter

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DENT 1720</td>
<td>Dental/Medical Rounds II</td>
<td>4.0</td>
</tr>
<tr>
<td>DENT 1722</td>
<td>Restorative Dentistry VII</td>
<td>1.5</td>
</tr>
<tr>
<td>DENT 1721</td>
<td>Anesthesia II</td>
<td>2.0</td>
</tr>
<tr>
<td>DENT 1724</td>
<td>Ethics &amp; Character Dev VII</td>
<td>0.5</td>
</tr>
<tr>
<td>DENT 1728</td>
<td>Perio II</td>
<td>1.5</td>
</tr>
<tr>
<td>DENT 1725</td>
<td>Dental Community Services IV</td>
<td>0.5</td>
</tr>
<tr>
<td>DENT 2001</td>
<td>Dental Clinic I</td>
<td>12.0</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>22.0</td>
</tr>
</tbody>
</table>

### Winter Quarter

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DENT 1730</td>
<td>Dental/Medical Rounds III</td>
<td>5.0</td>
</tr>
<tr>
<td>DENT 1731</td>
<td>Public Health</td>
<td>2.0</td>
</tr>
<tr>
<td>DENT 1732</td>
<td>Restorative Dentistry VIII</td>
<td>1.5</td>
</tr>
<tr>
<td>DENT 1733</td>
<td>Ethics &amp; Character Dev VIII</td>
<td>0.5</td>
</tr>
<tr>
<td>DENT 1734</td>
<td>Perio III</td>
<td>1.5</td>
</tr>
<tr>
<td>DENT 1735</td>
<td>Practice Management II</td>
<td>2.0</td>
</tr>
<tr>
<td>DENT 1736</td>
<td>Dental Community Services V</td>
<td>0.5</td>
</tr>
<tr>
<td>DENT 2002</td>
<td>Dental Clinic II</td>
<td>10.0</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>23.0</td>
</tr>
</tbody>
</table>

### Spring Quarter

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DENT 1740</td>
<td>Dental/Medical Rounds IV</td>
<td>4.0</td>
</tr>
<tr>
<td>DENT 1741</td>
<td>Restorative Dentistry IX</td>
<td>2.5</td>
</tr>
<tr>
<td>DENT 1742</td>
<td>Hospital Dentistry I</td>
<td>1.5</td>
</tr>
<tr>
<td>DENT 1743</td>
<td>Ethics &amp; Character Dev IX</td>
<td>0.5</td>
</tr>
<tr>
<td>DENT 1744</td>
<td>Endo II</td>
<td>2.5</td>
</tr>
<tr>
<td>DENT 1745</td>
<td>Dental Community Services VI</td>
<td>0.5</td>
</tr>
<tr>
<td>DENT 2003</td>
<td>Dental Clinic III</td>
<td>12.0</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>23.5</td>
</tr>
</tbody>
</table>

### Fourth Year/11-12

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DENT 1810</td>
<td>Dental/Medical Rounds V</td>
<td>4.0</td>
</tr>
<tr>
<td>DENT 1811</td>
<td>Restorative Dentistry X</td>
<td>2.5</td>
</tr>
<tr>
<td>DENT 1812</td>
<td>Hospital Dentistry II</td>
<td>1.5</td>
</tr>
<tr>
<td>DENT 1813</td>
<td>Dental Community Services V</td>
<td>0.5</td>
</tr>
<tr>
<td>DENT 2004</td>
<td>Dental Clinic IV</td>
<td>12.5</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>21.0</td>
</tr>
</tbody>
</table>

### Fall Quarter

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DENT 1820</td>
<td>Dental/Medical Rounds VI</td>
<td>4.0</td>
</tr>
<tr>
<td>DENT 1821</td>
<td>Hospital Dentistry III</td>
<td>1.5</td>
</tr>
<tr>
<td>DENT 1822</td>
<td>Restorative Dentistry XI</td>
<td>2.5</td>
</tr>
<tr>
<td>DENT 1823</td>
<td>Dental Community Services VI</td>
<td>0.5</td>
</tr>
<tr>
<td>DENT 1824</td>
<td>Ethics &amp; Character Dev X</td>
<td>0.5</td>
</tr>
<tr>
<td>DENT 1825</td>
<td>Perio IV</td>
<td>2.0</td>
</tr>
<tr>
<td>DENT 2005</td>
<td>Dental Clinic V</td>
<td>12.0</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>23.0</td>
</tr>
</tbody>
</table>
Winter Quarter
DENT 1830 Dental/Medical Rounds VII 4.0
DENT 1831 Practice Management III 3.0
DENT 1832 Restorative Dentistry XII 2.0
DENT 1833 Dental Community Services IX 0.5
DENT 1834 Ethics & Character Dev XI 0.5
DENT 2006 Dental Clinic VI 12.0
Total 22.0

Spring Quarter
DENT 1840 Dental/Medical Rounds VIII 4.0
DENT 1841 Restorative Dentistry XIII 2.5
DENT 2007 Dental Clinic VII 13.5
Total 20.0

Total credits first year – 75.0
Total credits second year – 63.0
Total credits third year – 98.5
Total credits fourth year – 86.0
TOTAL FOR PROGRAM COMPLETION: 322.5

The Midwestern University College of Dental Medicine reserves the right to alter its curriculum however, and whenever, it deems appropriate.

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.

BASIC SCIENCE EDUCATION

Department of Anatomy
The study of anatomy is particularly germane to dental medicine because the relationship between structure and function is a fundamental tenet of dental philosophy. Direct observation of human structure is the essence of the anatomy courses. 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.

The anatomy faculty offers several elective courses, including Advanced Gross Dissection and Research. The anatomy faculty also participates in multidisciplinary elective courses including a Developmental Biology, Basic Science Application to Dental Medicine, which are presented in conjunction with the dental medicine faculty.

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 dentists and 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 dental 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 Microbiology
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 and dentists involve infectious diseases or immunologically-related disorders. The student doctor must possess a fundamental understanding of pathogenic microorganisms and immune mechanisms. Pertinent understanding for various diseases includes the etiology, epidemiology, clinical manifestations, diagnostic procedures, and necessary methods for prevention and control.

The 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 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/dental 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 dentistry. Dentists must be able to utilize pharmacology not only to treat but also to prevent disease. At Midwestern University College of Dental Medicine, dental students are shown the correlation between pharmacology and related medical sciences. They are 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. Mastery of physiologic concepts and problem-based learning are emphasized to provide a foundation that is conducive to the development of diagnostic skills.

Dental students interested in research are encouraged to participate in ongoing research projects. Several avenues exist by which students can become involved in research projects. These include volunteering, college work/study, research electives (for credit), and Midwestern University College of Dental Medicine’s planned Summer Research Fellowship Program. Students who are considering research should discuss their interests with members of the faculty.

The College of Dental Medicine works closely with Department of Basic Sciences and the departments of Anatomy, Biochemistry, Microbiology, Pharmacology, and Physiology to create an integrated multidisciplinary course in Oral Science Reviews.

ANAT 1513 Introduction to Gross Anatomy I
Histology/Oral Histology/ Embryology/Oral Embryology
This lecture/laboratory-based course provides dental students with a strong foundation in the anatomical sciences of histology, embryology and gross anatomy. In Histology, students study the structure of the cell and the distinguishing morphological characteristics of the four types of tissues: epithelium, connective tissues, muscular tissues and nervous tissue. After acquiring this basic knowledge, students learn how these four basic tissues are combined to form organs. The histology portion of the course will focus on the normal microscopic features of oral histology and the circulatory, lymphatic and respiratory systems, establishing a framework for understanding the pathological changes in diseases of these systems. In the embryology portion of this course, students will learn the general pattern and principles of normal development, followed by basic aspects of the development of the musculoskeletal, circulatory and respiratory systems. In Gross Anatomy, students receive a firm foundation in the knowledge of normal human morphology and learn the basic anatomical language that will be used throughout their clinical experience. The gross anatomy portion of this course includes study of the vertebral column, spinal cord, orientation to the peripheral nervous system, general circulatory systems and the thorax. Student progress is evaluated through both written and practical examinations.

ANAT 1523 Intro to Gross Anatomy II
Histology/Oral Histology II/ Embryology/Oral Embryology II
This lecture/laboratory-based course is a continuation of ANAT 1513. The course is taught primarily as a systems-based course in which students will study the basic gross anatomy, histology and embryology of the extremities and the gastro-intestinal, urinary, reproductive and endocrine systems. Oral Histology/Embryology will familiarize the student with the processes involved in development of the orofacial complex and specifically with development of the teeth and supporting complexes. We will review the structure and composition of enamel, dentin and cementum and the supporting periodontal complex and relate these topics to several pathological conditions. Oral histology and embryology are basic sciences, they will familiarize the student with the tissues they will be manipulating for the rest of their careers. A sound knowledge of normal and abnormal histology is essential to the dentist to effect healing and repair of diseased tissues, a lack of which reduces them to a mere technician. Student progress is evaluated through both written and practical examinations. Successful completion of ANAT 1513 is a pre-requisite for this class.

ANAT 1533 Head and Neck Anatomy and Neuroscience
Dental students learn the detailed gross anatomy of the head and neck through didactic lectures and dissection laboratories. Included in this portion of the course are the normal development of the face, oral cavity and structures derived from the pharyngeal arches. In Neuroscience students learn fundamental concepts about the anatomy and function of the nervous system. Students will study the surface anatomy, neuroanatomy and blood supply of the spinal cord, brain and meninges. This is followed by a system-based approach to the sensory, motor and limbic systems of the central nervous system. The course will include correlations of basic neuroscience with clinically-relevant material. Student progress is evaluated through both written and practical examinations. Successful completion of ANAT 1513 and ANAT 1523 is a pre-requisite for this class.

PHYS 1516/1526 Human Physiology I & II
In this two-quarter series, students are introduced through didactic instruction and clinical case scenarios to the basic physiologic principles that underlie the normal function of various organs and organ systems. Emphasis is given to developing an understanding of health in physiologic terms and an appreciation of the diverse regulatory processes that maintain the homeostasis of the human body. Analysis and interpretation of deviations from normal physiology will also be explored. Topics presented include a general study of cell function, properties of excitable cells, and the function of the cardiovascular, respiratory, renal gastrointestinal and endocrine systems. Successful completion of PHYS 1516 is a pre-requisite for PHYS 1526. Fall: 3 credits; winter: 2 credits; Physiology Faculty
PHAR 1611, 1622 Pharmacology I, II
The overall goal of pharmacology is to provide the student with a firm understanding of the effects of therapeutically important drugs in man, from a molecular to a behavioral level of organization. Adequate knowledge of the principles of basic and clinical pharmacology should allow a practitioner to formulate and monitor a rational course of drug therapy for any disease he or she is required to treat. Lectures are organized by ORGAN SYSTEM, with emphasis on distinctive uses of drugs. Prototype drugs that represent specific drug groups will be discussed in detail, so that the student may then compare all other drugs in that group with the prototype. This will allow the student to understand the common actions of drugs in a group, learn the characteristics that make one or two drugs stand out, and enable the student to evaluate new drugs as they are developed and added to the various drug groups. Successful completion of PHAR 1611 is a pre-requisite for PHAR 1622.

BIOCHEM 1517 Biochemistry
Biochemistry 1517 is the first of two required courses in Biochemistry for Dental students. The course is offered in the fall quarter and presents an overview of proteins and enzymes, cell biology, metabolism and molecular biology. The course is four credits and is team-taught by the entire Biochemistry faculty.

BIOCHEM 1624 Genetics and Nutrition
Biochemistry 1624 is the second of two required courses in Biochemistry for Dental students. The course is offered in the winter quarter and presents an overview of Genetics and Nutrition for Dental students. The course is three credits and is team-taught by the entire Biochemistry faculty. Successful completion of Biochem 1517 is a pre-requisite for this class.

IMMUNO 1528 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.

MICRO 1525 Microbiology
The didactic component of the course covers basic morphologic, cultural, physiologic, and antigenic characteristics of microorganisms with special emphasis on factors pertinent to clinical dentistry. 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, and public health importance.

PSYC 1511, 1522, 1536 Introduction to Human Behavior I, II, and III
This module 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. Successful completion of preceding courses in a series is required as a pre-requisite for subsequent courses.

INTERDISCIPLINARY EDUCATION
CORE 1460, 1470, 1480 Interdisciplinary Health Care
Changes in our health care delivery system are creating a growing demand for health professionals with skills in collaboration and teamwork. The Interdisciplinary Health Care course involves the colleges of health sciences, dental medicine, cardiovascular perfusion and pharmacy in order to teach nurse anesthesia, occupational therapy, dental medicine, pharmacy, physician assistant, and podiatric medicine students together about the importance of an interdisciplinary approach to patient care. The course meets for one hour, every other odd week of the fall, winter, and spring quarters for 0.5 credits/quarter. Attendance is mandatory. Successful completion of preceding courses in a series is required as a pre-requisite for subsequent courses.

CLINICAL EDUCATION
PSYC 1634 Psychopathology
Psychopathology and treatment will be discussed in detail. Presentations and will provide the students with a first-hand look and more in-depth study of the major psychiatric illnesses that the dentist will see in her/his practice.

DENT 1512, 1529, 1531, 1614, 1625, 1636, 1722, 1732, 1741, 1811, 1822, 1832, 1841 Restorative Dentistry I, II, III, IV, V, VI, VII, VIII, IX, X, XI, XII, XIII
These continuously running courses will take the student from the basics in dental anatomy and tooth morphology, through the basics of clinical dentistry in operative and prosthodontic restorative procedures. The courses will start with a mixture of didactic and simulation clinic exercises and continue through all clinical years. The content of the dental anatomy course addresses the morphology and structure of the teeth and their parts as they relate with their function. Also, it gives the opportunity to acquire hand skills necessary for further laboratory and clinical experience. This course teaches foundational knowledge in dental anatomy and occlusion that will give the students the opportunity to interact with the rest of the
dental profession. Specific topics include defining and identifying and nomenclature relating to dental anatomy, drawing and identifying primary and permanent teeth, waxing teeth singly and in relation to adjacent teeth and function, concepts and principles of occlusion and recognizing the relationship between Dental Anatomy and different areas in Dentistry. During the learning experience the students have the opportunity to put this knowledge into hands-on practice by means of functional tooth waxing. The students will acquire basic hand skills to be used in future courses.

Additional courses are lecture, laboratory, and clinical courses which teach the foundational knowledge and develop basic skills in the fundamentals of oral examination, diagnosis and treatment planning, infection control, dental instrumentation, patient management, nomenclature and principles of operative dentistry, restorative isolation techniques, and manual skills related to restorative dentistry. Concepts and techniques for placement of direct resin-based adhesive restorations are introduced. Dental materials are reviewed with an emphasis on clinical considerations. Emphasis is placed on the development of motor skills, self-evaluation, and clinical judgment. The continuation of the lecture, laboratory, and clinical courses teach foundational knowledge and develop basic skills related to the management of non-curious dental pathology (erosion, abrasion, tooth fractures, and restoration failures) and esthetic dentistry needs of patients. The course teaches concepts and techniques for the preparation and restoration of teeth with dental gold, glass ionomer, and composite resin materials. Dental materials are reviewed with an emphasis on clinical considerations. Emphasis is placed on the enhancement of motor skills, self-evaluation, and clinical judgment. Successful completion of preceding courses in a series is required as a pre-requisite for subsequent courses.

DENT 1515 Cariology
Cariology is the study of the prevention and pathogenesis of one of the most common infectious diseases known to man—dental caries. In order for this disease to develop it needs several factors: a susceptible host; a cariogenic bacterial flora; the factor of time; and the bacteria need a substrate (usually refined carbohydrates) which can be metabolized to produce acid. It is these acids which cause the demineralization of the hard tissue of the teeth; enamel, dentin and cementum. This demineralization and subsequent bacterial invasion of the hard tissues of the tooth will cause, without intervention, the pulp of the tooth to become infected. The result is loss of vitality ending possibly in loss of the tooth. Understanding the etiology, prevention and treatment of this multifactorial infectious disease defines the clinical and scientific parameters of Cariology.

DENT 1510, 1520, 1534 Dental Health Promotion/Disease Prevention I, II and III
These courses will cover the prevention and management of dental diseases (dental caries and periodontal disease) and prepare the student to become an ambassador and teacher for dental health and disease prevention both for the individual patient and the community. Infection control procedures for the dental office according to OSHA guidelines will also be covered. Successful completion of preceeding courses in a series is required as a pre-requisite for subsequent courses.

DENT 1638 Medical Emergencies
This course, along with Dental Emergencies I and II, 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 1613, 1624, 1635 Oral Health Sciences I, II, III
These courses cover some of the basic sciences applied specifically to dentistry, as well as in-depth analysis of cariology, oral medicine, and the study of the cause of periodontal disease.

DENT 1532 Pathology/Oral Pathology/Oral Medicine
Pathology is derived from the Greek word patho (suffering) and logos (discourse). As a discipline, it deals with the causes and ways in which symptoms are produced, the forms which disease may take, and the complications that may follow. In reality, Pathology is many sciences correlated into one field and, as such, represents the bridge between the basic sciences and the clinical and therapeutic aspects of dentistry and medicine. General, Systemic, and Oral Pathology are, therefore, the common correlated areas for all the biologic disciplines.

DENT 1637, 1721 Anesthesia I, II
Dental anesthesia and intravenous sedation will be covered in these courses. Didactic and clinical demonstrations and experiences will be included. Successful completion of DENT 1637 is a pre-requisite for DENT 1721.

DENT 1711, 1728, 1734, 1825 Periodontics I, II, III, IV
Periodontics 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. Successful completion of preceeding courses in a series is required as a pre-requisite for subsequent courses.

DENT 1713 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 1714 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 1715 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 1716, 1735, 1831 Practice Management I, II, III
Practice Management I. This course presents the basic principles of small business management applied to the practice of dentistry. Classroom exercises and small group discussions address topics including entrepreneurship, goal setting, developing a practice philosophy, office design, marketing, staff recruiting and team building, risk management, financial management and analysis, and factors related to patient satisfaction and retention. Practice Management II. Exercises provide experiences with decision making, group dynamics, and application of principles to increase practice efficiency. Ethical responsibility in patient treatment will be covered in this course. Practice Management III. This course provides opportunities for advanced applications of practice management principles. Students will attend a series of seminars conducted by experts on topics such as considerations in starting a practice, setting up in association with another dentist, marketing, risk management, office design, equipment selection, insurance coverage, financial management, and banking issues. Students guide the presentations by preparing questions for each topic. Students will also participate in a computer-generated practice simulation. Included are exercises in developing a philosophy or mission, setting operational goals, preparing business tax returns, and reporting on progress to a banker. Successful completion of preceding courses in a series is required as a pre-requisite for subsequent courses.

DENT 1717, 1744 Endodontics I, II
These courses are the foundation for all other endodontic courses and are lecture courses supplemented by reading assignments. Endodontics is concerned with the morphology, physiology, and pathology of the human dental pulp and periradicular tissues. Its study and practice encompass the basic clinical sciences, including the biology of the normal pulp; the etiology, diagnosis, prevention, and treatment of diseases and injuries of the pulp; and associated periradicular conditions. Students will develop skills to enable them to diagnose, provide nonsurgical conventional treatment, and evaluate healing in uncomplicated single and multirooted teeth. The goal of this course is to present the biological rationale for endodontic therapy, diagnostic criteria and principles of case selection. Endodontic materials and medicaments are studied and clinical management procedures for irreversible pulp pathology and its sequelae are considered. Successful completion of DENT 1717 is a pre-requisite for DENT 1744.

DENT 1731 Public Health
Dental public health involves assessing the oral health needs of a community and developing and implementing oral health policy to provide programs and services that address oral health issues. This course will cover the origins and determinants of disease and preventive methods that can be applied to a population as well as individuals.

DENT 1742, 1812, 1821 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. Successful completion of preceding courses in a series is required as a pre-requisite for subsequent courses.

DENT 1710, 1720, 1730, 1740, 1810, 1820, 1830, 1840 Dental/Medical Rounds I, II, III, IV, V, VI, VII, VIII
Interesting cases and topics will be presented each morning by students and faculty. Methods will involve lecture, discussion, groups, and treatment planning.

Clinic policies and procedures will be discussed in addition to rotational responsibilities. 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 three 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 Review & Progression
Two faculty committees of CDM will review the academic performance of students: the Preclinical Promotions Committee for the first two years and the Clinical Promotions Committee for the third and fourth years.

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 year, provided all tuition and fees have been paid.

Students with one or more failures in a single academic quarter, are required to meet with the Preclinical Promotions Committee. The Chair of this Committee will be the Associate Dean of Preclinical Affairs. 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. Decisions of the committee are mailed to the student. 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.

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. 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 telephone. The Chair of this Committee will be the Associate Dean of Clinical Affairs. Decisions of the committee are mailed to the student. 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.

Remediation/Retake
Remediation/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. 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 Promotion and Graduation Committee 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.

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.

DENT 1514, 1523, 1535, 1615, 1621, 1633, 1724, 1733, 1743, 1824, 1834 Ethics and Character Development I, II, III, IV, V, VI, VII, VIII, IX, X, XII

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 full autonomy. This course will follow on with making decisions concerning invasive treatment on the highest ideals of integrity and ethics as they are entrusted with making decisions concerning invasive treatment on the general public with full autonomy. This course will follow on
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 non-decelerated 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 probation is not noted on transcripts. Students on academic probation are ineligible to hold student organizational offices. 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 or academic deceleration into an Extended Study Program, a student may appeal in writing the decision within three working days 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 rotations. Divisions may establish their own attendance requirements. Attendance at all Division of Clinical Education courses and rotations is mandatory for all four years.

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.

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 Midwestern University will perform 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 Midwestern University background check does not meet a facility’s requirement, other procedures must be performed at the student’s expense. Criminal background information will be shared with clinical sites that are affiliated with MWU educational programs.
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 may be shared with clinical sites that are affiliated with Midwestern University educational programs.

Dismissal
Students who fail three or more courses in a single academic year during the DENT I and DENT II years, and extended course of study students who accumulate two or more failures while extended during the DENT I and DENT II years, usually receive a recommendation for dismissal. Students who fail two or more clinical rotations 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 and 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)

Extended Study Program (ESP)

Voluntary. The Extended Study Program allows students additional time to address personal 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 for personal reasons 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 medical emergency. Proposed schedules for all students on an extended study program are sent to department chairs for their approval prior to providing the schedule to the student.

Academic. A student will be placed in the Extended Study Program for academic reasons at the discretion of the appropriate Promotions Committee. A student placed in the ESP for academic reasons is automatically placed on academic probation and will 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 Promotion Committee’s options for recommendation for dismissal. Thus, the student may be dismissed for academic reasons while in the ESP. Proposed schedules for all students on an extended study program are sent to department chairs for their approval prior to providing the schedule to the student.

Students who accumulate three failures over more than a single academic year or two failures in a single quarter may be recommended for dismissal or placed in the Extended Study Program and on academic probation. 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. The Preclinical Promotions Committee individually reviews ESP students who fail academic courses.

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 unless they are placed on an extended study program. Likewise, second-year students can only begin clinical rotations and be promoted to the third year if they pass all requirements of the basic science 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 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/Academic Review 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.

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.

Grades

If a student receives a failing grade, that grade is recorded on the transcript as a numeric or "F" (pass/fail courses) entry. Upon repetition of a failed course, the original grade remains on the transcript and the repeated course and grade are entered on the transcript. The grade for a course that is repeated at an outside institution and passed will be recorded as a transfer credit with a grade of C. For all the repeat courses during the DENT I and DENT II years passed at MWU a grade of C will be recorded on the transcript. For all repeat clinical rotations during the DENT III and DENT IV years passed at MWU a score of “P” (pass/fail course/rotation) will be recorded on the transcript. In both instances a grade of C will be used.

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 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>3.750</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>F</td>
<td>&lt;70</td>
<td>0.000</td>
<td>-</td>
</tr>
<tr>
<td>I</td>
<td>-</td>
<td>0.000</td>
<td>An Incomplete (I) grade may be assigned by an instructor 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 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 the 10 days, it may be converted to a grade of “F,” which signifies failure of the course.</td>
</tr>
<tr>
<td>Grade</td>
<td>Points</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>--------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>P</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>
<td></td>
</tr>
<tr>
<td>W</td>
<td>0.000</td>
<td>Withdrawal before the end of the quarter with passing work. There is no penalty and no credit.</td>
<td></td>
</tr>
<tr>
<td>W/P</td>
<td>0.000</td>
<td>Withdrawal/Passing 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 satisfactory. This grade is not counted in any GPA calculations and is not counted in credit hour accruals for graduation.</td>
<td></td>
</tr>
<tr>
<td>W/F</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 Academic Review Committee. Students are not allowed to withdraw from a course after the end of the eighth week of class.</td>
<td></td>
</tr>
<tr>
<td>AU</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>
<td></td>
</tr>
<tr>
<td>AP</td>
<td>0.000</td>
<td>This designation indicates the decision of a college to award academic credit that precludes a student from taking required coursework. The designation of Advanced Placement (AP) is applied toward credit hour accruals but is not counted in the GPA calculation.</td>
<td></td>
</tr>
</tbody>
</table>

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

**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.

**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.

5. 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 enrolled in a program with a clinical component are required to have all immunizations as outlined in the general policy section of this handbook. Full-time students enrolled in a program without a clinical component (Biomedical Sciences) 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.

Liaison Committees
Problems related to interdivisional academic activities are the province of the four Faculty-Student Liaison Committees.

Liaison Committee #1 deals with the academic activities of first-year students.
Liaison Committee #2 deals with the academic activities of second-year students.
Liaison Committee #3 deals with the academic activities of third-year students.
Liaison Committee #4 deals with the academic activities of fourth-year students.

Each of these committees has two elected student representatives and Course/Division Directors who teach in courses or clinical experiences appropriate to that portion of the curriculum.

Licensure Requirements
Dental clinicians 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:

1. the state accepts a certificate issued by the National Board of Dental Examiners; and
2. the state accepts a certificate issued by the Regional Board of Dental Examiners;
3. 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.

Make-up Courses
Summer make-up courses are only open to students with one or two failures in a given academic year. Such 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 department director and Dean (the grade is accepted as transfer credit and is calculated as Pass/Fail); or
3. departments may offer, and students can elect to 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 course during the summer. They are limited to the second option if the department chooses not to offer a directed readings program.

Students who have successfully passed failed courses will be recommended for promotion. Students who are unsuccessful in passing failed courses are reviewed and notified of a decision by the Preclinical Promotions Committee before the start of the next academic year.

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 starting year three. 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 rotation 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 allowed to start the clinical component of the curriculum. Students must retake and pass NBDE Part I prior to the end of the Fall Quarter of the third year.
- must meet with the Dean of Basic Sciences, the Dean of Student Services, the Associate Dean, MWU CDM to develop an individualized course of study focused towards retaking and passing the NBDE Part I
examination. This will include recommendations to the student to uncover potential test-taking challenges and develop a structured study schedule.

- 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 is then eligible to restart full-time clinical experiences.

Students who fail to pass NBDE Part I examination for the third time will be remanded to come before the Preclinical 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.

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 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.

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.

Suspension
Academic suspension 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. Academic suspension 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. Academic suspension is noted on the student’s transcript.

The Student who has been suspended 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.

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. 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 Program Director and the CDM Dean. If the approval is granted, the student receives one of the following grades: W (withdrew), W/P (withdrew passing), or W/F (withdrew failing).

Withdrawal (W) can be given only during the first three weeks of the course. There is no penalty and no credit. 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/Passing (W/P) 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 fourth week and the end 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.
accruals for graduation. W/F may be considered as a failure by a Pre-clinical 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
Dean and Professor

Russell O. Gilpatrick, DDS
University of the Pacific
Associate Dean

Robert W. Hasel, DDS
University of Minnesota
Associate Professor

Allan Dovigi, DDS, MS
University of North Carolina
Associate Professor

Howard Polk, DDS
University of Illinois at Chicago, College of Dentistry
Associate Professor

Martin Zais, DDS
University of California, San Francisco
Associate Professor

Basic Science

Layla Al-Nakkash, PhD
University of Newcastle-Upon-Tyne
Assistant Professor

Thomas L Broderick, PhD
University of Alberta
Associate Professor

John R Burdick, PhD
Iowa State University
Professor

Richard F Collins, PhD
University of Oklahoma Health Sciences Center
Professor

Wade A Grow, PhD
University of Idaho
Associate Professor

Christopher P. Heesy, PhD
University of New York at Stony Brook
Assistant Professor

Lauritz Jensen, MS, DA
University of Northern Colorado
Professor

Sam Katzif, PhD
Georgia State University
Assistant Professor

Laszlo Kerecsen, MD
Medical School of Debrecen
Professor

Tyler A Kokjohn, PhD
Loyola University
Professor

Kathryn J Leyva, PhD
Northern Arizona University
Associate Professor

David F Mann, PhD
Michigan State University
Professor

Gregory A Mihailoff, PhD
Ohio State University
Professor
Randall L Nydam, PhD
University of Oklahoma
Associate Professor

Robin R Parmley, PhD
Rush University
Assistant Professor

Pamela E Potter, PhD
Dalhousie University
Professor

Michael Quinlan, PhD
Arizona State University
Associate Professor

Fred Romano, PhD
Loyola University of Chicago
Professor

Linda M Walters, PhD
Loyola University, Stritch School of Medicine
Professor

Y. Gloria Yueh, PhD
University of Connecticut
Associate Professor

Myriam Zylstra, PhD
University of Toronto
Assistant Professor