

Midwestern University
College of Health Sciences
Glendale, AZ

PHYSICIAN ASSISTANT PROGRAM

Mission Statement (B1.01):

The Midwestern University Physician Assistant Program-Glendale is committed to educate and mentor students in a setting that cultivates excellence and prepares compassionate, competent physician assistants to serve in a changing healthcare environment.

2020 – 2021 CLINICAL ROTATIONS SYLLABUS

54 Credits

PASSG 691: Emergency Medicine
PASSG 692: Family Medicine
PASSG 693: Internal Medicine
PASSG 694: Pediatrics
PASSG 695: Psychiatry

PASSG 696: Surgery
PASSG 697: Women's Health
PASSG 698: Elective I (Online)
PASSG 699: Elective II

COURSE PURPOSE

The clinical year courses/rotations will provide overall instruction and supervised clinical practice experiences. The course(s) will cover common conditions and abnormalities encountered across the lifespan, with an emphasis on the conditions listed in the National Commission on Certification of Physician Assistants (NCCPA) Physician Assistant National Certification Examination (PANCE) content blueprint.

COURSE GOALS (B1.01)

The primary goal of the MWU PA Program is to meet student educational needs. Clinical year rotations provide meaningful direct patient care experiences with patients from diverse populations by working in a variety of clinical practice environments. They allow students an opportunity to apply the knowledge and skills learned throughout the didactic phase to enhance their clinical understanding and problem-solving skills. Clinical rotations will reinforce classroom teaching and allow for professional and interprofessional growth. Clinical rotations should prepare students for NCCPA certification and clinical practice as a physician assistant.

COURSE COORDINATORS (A2.01, A2.05, A2.13)

The course coordinators include the Director of Clinical Education, Clinical Coordinators, and clinical preceptors. Students should direct all questions regarding course administration to the program's clinical faculty.

Carla Shamblen, MSPAS, PA-C, DFAAPA
Director of Clinical Education/Associate Professor
Phone: 623-572-3677
Email: cshamb@midwestern.edu

Kimberly Carter, DMSc, PA-C
Clinical Coordinator/Assistant Professor
Phone: 623-572-3840
Email: kcarte@midwestern.edu

Gretchen Post, MSPAS, PA-C
Clinical Coordinator/Assistant Professor
Phone: 623-572-3763
Email: gpost@midwestern.edu

Midwestern University – Glendale, AZ
Physician Assistant Program
Phone: 623-572-3311
Fax: 623-572-3227
Email: azpaclinical@midwestern.edu

Office hours vary by faculty member and quarter. Appointments with the course coordinators can be made by phone or email.

COURSE LOCATION

Students will be asked to complete rotation requirements in the community setting, inpatient and outpatient setting(s), rural setting, etc.

COURSE PREREQUISITES

- 1) Successful completion of all didactic-year and Pre-Clinical quarter PA coursework.
- 2) Current BLS/ACLS status.
- 3) Current immunization status.
- 4) Successful completion of all required credentialing paperwork.
- 5) Successful completion of all required Everfi courses.
- 6) Current N-95 Respirator mask fit, per MWU PA Program policy.

COURSE DESCRIPTIONS & GOALS (B1.01, B2.08, B2.12, B2.14, B3.03, B3.04, B3.07)

INTERNAL MEDICINE: The Internal Medicine Course emphasizes the comprehensive care of the adult patient including chronic and acute disease management, preventive care and health maintenance, and patient education. Other principles include continuity of care, delivery of cost-effective quality care, and identifying supplemental sources of care within the community.

PASSG 693 Internal Medicine Goals:

- 1) Participate in the care of emergent, urgent, acute, and chronic conditions in adult and elderly patients encountered in the internal medicine setting.
- 2) Participate in the care of patients presenting for hospital follow-ups including but not limited to review of hospital records, reevaluation and formation of a comprehensive assessment and plan, management of abnormal test results, and coordination of care.
- 3) Elicit a comprehensive history to include a history of present illness, past medical history, past surgical history, family history, and appropriate review of systems necessary to evaluate the chief complaint.
- 4) Describe the epidemiology, etiology, pathophysiology, clinical presentation, differential diagnosis, diagnostic evaluation, and management of emergent, urgent, and acute and chronic conditions common to the internal medicine setting as indicated on the NCCPA PANCE Content Blueprint and the PAEA Internal Medicine Topic List.
- 5) Select, collect, and/or interpret common studies including but not limited to venipuncture, UA and drug screens, throat swabs, rapid strep testing, mono spot testing, vaginal secretions (KOH preps, wet mount, cultures), wound cultures, stool testing for occult blood, synovial joint aspirations, cardiac enzymes, and sputum cultures.
- 6) Order and interpret common laboratory and diagnostic studies including but not limited to routine radiographic studies, advanced imaging (CT/MRI), pulmonary function testing, EKG and ultrasonography.
- 7) Describe the indications, contraindications, side effects and complications of common procedures (i.e., I&D, SQ/IM injection, pap smear, immunization administration, joint injection, cryotherapy, ear irrigation, cerumen removal, finger/toenail removal, spirometry, shave and punch biopsy, infiltration with local anesthetic, digital block, and PPD skin test).
- 8) Know the mechanism of action, indication, contraindications, side effects, and drug interactions of common pharmacologic agents.
- 9) Be familiar with first-line antibiotics for common primary care infections including but not limited to cellulitis, sinusitis, bacterial conjunctivitis, diverticulitis, etc.
- 10) Be familiar with the physiological changes associated with aging as well as comorbidities and polypharmacy (i.e. Beers Criteria).
- 11) Be able to provide basic nutrition counseling to the patient with hyperlipidemia, hypertension, Type 2 Diabetes, etc.

- 12) Be able to recognize the need for referral to medical subspecialty or surgery consultation. Be involved in translational care management to include hospice and end of life care.
- 13) Apply the principles of health promotion and disease prevention to describe and select appropriate preventative screening and health maintenance measures.
- 14) Communicate clearly, concisely, and logically to colleagues, patients, and family members regarding the evaluation, management, and education of conditions managed in the internal medicine setting.

EMERGENCY MEDICINE: The Emergency Medicine Course emphasizes the care of the patient with acute disease management, stabilization, and proper follow-up. The purpose of this rotation is to provide the student with a knowledge base about decision-making and initiation of emergent care. The challenges faced by Physician Assistants in emergency medicine are to know a little about everything, know what you know, and know when to ask for help. The rotation will expose the student to many different situations, some not so challenging, some that are extremely challenging. The goal of the rotation is to expose the student to common emergency encounters to prepare them for everyday practice.

PASSG 691 Emergency Medicine Goals:

- 1) Identify and describe the etiology, risk factors, pathophysiology, clinical presentation, diagnostic evaluation, and management of common conditions encountered in emergency medicine including but not limited to neurologic, ENT, airway, orthopedic, urologic, endocrine emergencies as well as burns, skin and soft tissue infections, fever of unknown origin, trauma, fractures, sepsis, shock, hemorrhage, drug overdose, intoxication injuries, and environmental injuries.
- 2) Recognize life-threatening emergencies and initiate an appropriate course of action to stabilize the patient.
- 3) Elicit and perform an appropriate thorough history and physical exam for a patient presenting with an urgent and/or emergent condition.
- 4) Formulate an appropriate differential diagnosis for common urgent and emergent complaints including but not limited to chest pain, SOB/dyspnea, abdominal pain, altered mental status, etc.
- 5) Be familiar with the following acronyms/terms and have a basic understanding of their use in Emergency Medicine (i.e., GCS, Curb 65, PERC for Pulmonary Embolism, TIMI for chest pain, HEART score for chest pain, SIRS criteria for sepsis, PECARN for head injury in peds < 16 yo and ACEP 2008 head CT policy for age > 16 yo, NIH Stroke scale, NEXUS for spinal cord trauma).
- 6) Gain a basic understanding and interpretation of common laboratory and diagnostic studies used in emergency medicine including but not limited to CBC, CMP, lipase, HCG, cardiac enzymes, lactate, BNP, UA, urine drug screen, x-rays, EKG, POCUS, CT Head/Brain and CXR A/P.
- 7) Be familiar with common medications used including but not limited to Motrin, Tylenol, Morphine, Narcan, Epinephrine, and ACLS protocols/drugs.
- 8) Demonstrate the ability to assist or correctly perform, under direct supervision, common medical procedures including but not limited to I&D, wound irrigation and debridement, suture/skin staple placement and removal, application of splints, joint aspiration, infiltration with a local anesthetic, digital block, laceration repair, toenail or fingernail removal, IM and SQ injection, endotracheal intubation, urinary catheter insertion, lumbar puncture, fracture and dislocation reduction.
- 9) Participate in hospital admission, ER discharge with close follow up, or transfer of care orders.
- 10) Communicate clearly, concisely, and logically to colleagues, patients, and family members regarding the evaluation, management, and education of urgent and emergent conditions.

SURGERY: The Surgery Course provides students with clinical experience in pre-operative, intra-operative and post-operative care. Principles of pre-operative, operative and post-operative patient care are emphasized (i.e. initial history and physical exam for a surgical patient, preoperative risk assessment, recognize surgical emergencies, sterile technique/field, retraction, hemostasis, wound management, patient education, etc.). Regardless of rotation setting students are encouraged to focus on general surgical principles in preparation for the end of rotation examination and the PANCE. The course covers common conditions and abnormalities encountered in the adult populations, with an emphasis on the conditions listed in the National Commission on Certification of Physician Assistants (NCCPA) Physician Assistant National Certification Examination (PANCE) content blueprint.

PASSG 696 Surgery Goals:

- 1) Identify clinical presentations that warrant a surgical consult and know the appropriate timeframe for a referral.
- 2) Understand the roles of healthcare teams involved in the care of a surgical patient.
- 3) Understand and participate in pre-operative care of the surgical patient including but not limited to H/P surgical consultation, review of surgical technique, and education on the indications, contraindications, and risk/benefits of surgery.
- 4) Understand and participate in intra-operative care of the surgical patient including but not limited to sterile technique, positioning/draping, surgical instrument use, anatomic landmarks, retraction and exposure, wound closure, dressing application, and patient and provider safety.
- 5) Understand and participate in the post-operative care of the surgical patient including but not limited to antibiotic use, DVT prophylaxis, pain management, wound care, clinical assessments, laboratory monitoring, discharge planning, etc. Be familiar with components of a post-op note and post-op orders.
- 6) Participate in surgical rounds and inpatient consultations as able.
- 7) Understand the utility and participate in the interpretation of diagnostic studies in the evaluation of the surgical patient including but not limited to x-rays, ultrasounds, cross-sectional imaging, barium studies, and endoscopic procedures.
- 8) Be able to explain the differential diagnosis, evaluation, and management of abnormal vital signs in a post-op patient (i.e. tachycardia, fever, hypoxia, hypertension, hypotension) as well as postoperative complications. Know who to consult when needed.
- 9) Communicate clearly, concisely, and logically to colleagues, patients, and family members regarding the evaluation, management, and education of surgical conditions and surgical intervention.

WOMEN'S HEALTH: The Women's Health Course emphasizes the comprehensive care of the female patient, including preventive care and health maintenance, care of the mother and neonate, and patient education. Other principles include continuity of care, delivery of cost-effective quality care and identifying supplemental sources of care within the community. Labor and delivery is not a required component of this clinical rotation.

PASSG 697 Women's Health Goals:

- 1) Elicit and perform an appropriate OB/GYN history and physical exam for a patient presenting for a well-woman exam.
- 2) Elicit a problem-focused history and perform a targeted physical exam for a patient presenting for gynecologic, preconception, prenatal, obstetric, and postpartum care.
- 3) Describe the epidemiology, etiology, pathophysiology, clinical presentation, differential diagnosis, diagnostic evaluation, and management of emergent, urgent, and acute and chronic breast, vulvar, vaginal, cervical, uterine, and ovarian disorders as listed in the NCCPA PANCE Content Blueprint and the PAEA Women's Health Topic List.
- 4) Be familiar with sexual development, menstrual physiology, menstrual disorders, infertility, menopause, hormone replacement therapy, and abnormal uterine bleeding.
- 5) Perform breast and pelvic exams as well as pap smears.
- 6) Be familiar with the supervision of normal pregnancy including but not limited to prenatal (fundal height, fetal heart tones, screening labs) and postnatal care, uncomplicated labor and delivery (stages of labor, fetal monitoring, APGAR scores), postpartum care, and lactation.
- 7) Be familiar with the supervision of abnormal pregnancy including but not limited to abortion, abnormal labor, ectopic pregnancy, and fetal growth abnormalities.
- 8) Order and interpret common laboratory and diagnostic studies, including but not limited to, urine/serum beta HCG, CBC, TSH, FSH, LH, progesterone, prolactin, UA, KOH/wet mount, NAAT, vaginal culture, pap smear, HPV, transvaginal/pelvic US, breast US, DEXA scan, and mammogram.
- 9) Summarize and select an appropriate contraceptive and family planning method based on indications, contraindications, side effects, complications, cost, and cultural/religious preferences.
- 10) Identify which over-the-counter and prescription medications are safe for use in pregnancy and lactation.
- 11) Identify and manage encounters associated with physical abuse, sexual assault, and domestic violence.

- 12) Be familiar with pre, intra-operative, and post-operative care of common gynecologic and obstetric surgeries. Understand the surgical technique of common gynecologic and obstetric surgeries. Participate in gynecologic and obstetric surgeries as able. Assist in cesarean/vaginal delivery as able.
- 13) Describe the indications, contraindications, side effects and complications of common gynecologic procedures: i.e., IUD insertion/removal, colposcopy, D&C, LEEP, hysteroscopy, endometrial biopsy, etc.
- 14) Know the mechanism of action, indication, contraindications, side effects, and drug interactions of common pharmacologic agents used in the management of gynecologic and obstetric disorders.
- 15) Apply the principles of health promotion and disease prevention to describe and select appropriate preventative screening and health maintenance measures for women.
- 16) Communicate clearly, concisely, and logically to colleagues, patients, and family members regarding the evaluation, management, and education of gynecologic and obstetric disorders.
- 17) Be familiar with appropriate gynecologic and obstetric referrals.

PSYCHIATRY: The Psychiatry Course emphasizes the care of mental and emotional disorders. Clinical rotations may include the pharmacologic, behavioral and/or psychoanalytic management of psychological disorders. Acute and chronic conditions may be encountered.

PASSG 695 Psychiatry/Behavioral Health Goals:

- 1) Be familiar with behavioral problems of childhood, neurodevelopmental disorders, domestic violence, eating disorders, sexual disorders/dysfunction, trauma, and end-of-life care.
- 2) Conduct a psychiatric evaluation to include a behavioral health interview and Mental Status Exam for initial and ongoing assessments.
- 3) Describe the epidemiology, etiology, pathophysiology, clinical presentation, differential diagnosis, diagnostic evaluation, and management of emergent, urgent, and acute and chronic mental and behavioral health disorders as per the NCCPA PANCE Content Blueprint and the PAEA Psych Topic List.
- 4) Identify and manage patient encounters associated with physical abuse, sexual assault, and domestic violence, as able.
- 5) Demonstrate awareness of indications, contraindications, side effects, and adverse reactions of common pharmacologic medications used in the treatment of mental and behavioral health disorders (e.g. antidepressants, anti-anxiety, antipsychotics, mood stabilizers, stimulants, etc.).
- 6) Learn an effective referral process for someone who can benefit from psychotherapy, ECT therapy, community agencies, or other mental health professionals.
- 7) Review Motivational Interviewing and the Stages of Change model.
- 8) Be familiar with the withdrawal symptoms associated with alcohol and opioids.
- 9) Communicate clearly, concisely, and logically to colleagues, patients, and family members regarding the evaluation, management, and education of mental health disorders.
- 10) Acknowledge and maintain safety measures in working with behavioral health patients.
- 11) Understand the legal and ethical issues pertinent to the care of behavioral health patients including but not limited to HIPAA, confidentiality, mandatory reporting, etc.

PEDIATRICS: The Pediatrics Course emphasizes the comprehensive care of the patient under the age of 18 years old, including chronic and acute disease management, preventive care and health maintenance, and patient/family education. Other principles include continuity of care, delivery of cost-effective quality care and identifying supplemental sources of care within the community.

PASSG 694 Pediatrics Goals:

- 1) Elicit a comprehensive history and perform a complete physical exam on a newborn patient. Be able to identify congenital diseases.
- 2) Identify components of a thorough well-child exam including but not limited to obtaining a history and performing a physical exam, interpretation of growth charts, developmental milestones, Tanner staging, anticipatory guidance, and immunizations.
- 3) Complete well-child examinations for infants and children < 1 yr., 1-4 yrs., 5-11 years, and 12-17 years.
- 4) Know the focused history and targeted physical exam components of a sports physical and identify alarm signs/symptoms that warrant further evaluation before participation. Complete sports physicals.

- 5) Describe the epidemiology, etiology, pathophysiology, clinical presentation, differential diagnosis, diagnostic evaluation, and management of emergent, urgent, and acute and chronic pediatric conditions as noted in the NCCPA PANCE Blueprint and PAEA Peds Topic List.
- 6) Be familiar with common pediatric presentations including but not limited to eye pain, ear pain, rhinorrhea, sore throat, chest pain, abdominal pain, nausea/vomiting, diarrhea, constipation, rash, fractures.
- 7) Order and interpret common laboratory and diagnostic studies including, but not limited to, neonatal screening, visual acuity and hearing screening, vital signs and growth parameters, CBC, CMP, TSH, lipid panel, UA, GAS, mono spot, throat culture, ECG, and x-rays.
- 8) Describe the indications, contraindications, side effects and complications of common procedures performed in the pediatric setting, including but not limited to venipuncture, immunization administration, ear irrigation, cerumen removal, tympanogram, toenail or fingernail ablation/avulsion, I&D, and nebulizer treatment.
- 9) Demonstrate awareness of the indications, contraindications, side effects, and adverse reactions of common over the counter and pharmacologic agents used in the pediatric setting.
- 10) Demonstrate antibiotic stewardship.
- 11) Demonstrate the ability to calculate a pediatric dosage prescription.
- 12) Be familiar with preventative screening and health maintenance measures including but not limited to SIDS prevention, developmental milestones, nutrition, social determinants of health, vaccination, tobacco, alcohol and substance abuse, and high-risk behaviors.
- 13) Communicate clearly, concisely, and logically to colleagues, patients, and family members regarding the evaluation, management, and education of pediatric disorders.
- 14) Be familiar with appropriate pediatric referrals.
- 15) Maintain professional and ethical conduct related to HIPAA and confidentiality, consent, and mandatory reporting.

FAMILY MEDICINE/PRIMARY CARE: The Family Medicine/Primary Care Course emphasizes the comprehensive care of the patient and family, including chronic and acute disease management, preventive care and health maintenance, and patient/family education. Other principles include continuity of care, delivery of cost-effective quality care and identifying supplemental sources of care within the community.

PASSG 692 Family Medicine Goals:

- 1) Participate in the care of preventive, acute, and chronic patient encounters, across the life span, including infants, children, adolescents, adults, and the elderly.
- 2) Elicit a comprehensive history to include a history of present illness, past medical history, past surgical history, family history, and appropriate review of systems necessary to evaluate the chief complaint.
- 3) Describe the epidemiology, etiology, pathophysiology, clinical presentation, differential diagnosis, diagnostic evaluation, and management of emergent, urgent, and acute and chronic conditions common to the family medicine setting as indicated on NCCPA PANCE Content Blueprint and the PAEA Family Medicine Topic List.
- 4) Select, collect, and/or interpret common studies used including but not limited to venipuncture, UA and drug screens, throat swabs, rapid strep testing, mono spot testing, vaginal secretions (KOH preps, wet mount, cultures), wound cultures, stool testing for occult blood, synovial joint aspirations, cardiac enzymes, and sputum cultures.
- 5) Order and interpret common laboratory and diagnostic studies used including but not limited to routine radiographic studies, advanced imaging (CT/MRI), pulmonary function testing, EKG, ultrasonography.
- 6) Describe the indications, contraindications, side effects and complications of common procedures performed in the family medicine setting (i.e., SQ/IM injection, pap smear, immunization administration, joint injection, cryotherapy, ear irrigation, cerumen removal, finger/toenail removal, spirometry, shave and punch biopsy, infiltration with local anesthetic, digital block, and PPD skin test).
- 7) Know the mechanism of action, indication, contraindications, side effects, and drug interactions of common pharmacologic agents used.
- 8) Be able to recognize the need for referral to medical subspecialty or surgery consultation.

- 9) Apply principles of health promotion and disease prevention to describe and select appropriate preventative screening and health maintenance measures for patients across the lifespan presenting to the family medicine setting.
- 10) Communicate clearly, concisely, and logically to colleagues, patients, and family members regarding the evaluation, management, and education of conditions managed in the family medicine setting.

ELECTIVE: The Elective Course allows students to explore areas of interest in more depth. Students remain responsible for general rotation objectives. Additionally, students are encouraged to develop a list of objectives based on elective specialty. Students should emphasize conditions listed in the NCCPA content blueprint as well as principles of continuity of care, delivery of cost-effective quality care and identifying supplemental sources of care within the community.

INSTRUCTIONAL OBJECTIVES

(Aligned with ARC-PA Accreditation Standards, 5th Ed: A2.16, A2.17, B1.01, B1.03, B2.02, B2.04-B2.10, B2.12, B2.14, B2.19, B3.03-B3.07)

The following set of professional, cognitive, and skills objectives are intended to serve as a guide for the student and the preceptor during the clinical rotation. In reviewing this list, the PA preceptor should be able to identify those areas in which he/she will be able to provide teaching encounters during the rotation based on the course description(s) and goals (B2.06). The student is responsible for learning all the material in these objectives even if a certain disease/disorder is not seen during the rotation. There may be an overlap of objectives between Family Medicine, Internal Medicine, Emergency Medicine, Pediatrics, Women's Health, Psychiatry, and Surgery.

PROFESSIONALISM OBJECTIVES:

Upon successful completion of this course, the second-year PA student will be able to complete the following objectives:

- 1) Demonstrate appropriate professional interaction with patients.
- 2) Demonstrate appropriate professional interaction with healthcare professionals.
- 3) Dress in a professional manner, appropriate to the rotation.
- 4) Demonstrate a positive attitude, showing enjoyment in work.
- 5) Accept feedback and advice as learning opportunities.
- 6) Take the initiative and be a self-directed learner.
- 7) Cooperate with all staff.
- 8) Keep all office and patient information confidential.
- 9) Arrive on time for rotation and any assigned educational opportunities.
- 10) Handle stress and complexities of clinical situations well.
- 11) Complete assignments and chart work.
- 12) Exhibit self-confidence, knowing limitations.

SKILLS OBJECTIVES:

During clinical rotations, the Physician Assistant student is expected to advance their proficiency level from a fundamental awareness to either novice or intermediate proficiency in the areas listed below, as they pertain to each rotation. The following list of skills intends to serve as a guide for both the student and the preceptor during the clinical rotation.

History Taking and Physical Exam Skills

- Elicit a chief complaint
- Obtain an accurate, concise history of present illness
- Obtain pertinent details of past medical history (e.g. medications, allergies, associated allergic reaction, chronic conditions, surgeries, immunizations, etc.)
- Obtain appropriate family and social history

- Obtain a complete review of systems, or relevant items for focused evaluation
- Perform problem-focused physical exams.
- Perform several complete physical exams, either for routine well-person evaluation and screening or for patients' presenting complaints.
- Identify pertinent positive physical findings.
- Perform gynecological and breast exams.
- Perform male genital and rectal exams.

Laboratory and Diagnostic Studies

** The following list intends to serve as a guide for the student and preceptor. Labs and diagnostic study exposure may vary based upon rotation type, setting, and available opportunities. **

Select, collect, and/or interpret the following:

- Blood for hematology & chemistry evaluations
- Urinalysis/urine drug screens
- Throat swabs
- Rapid strep testing
- Monospot® testing
- Complete blood count, complete metabolic panel, and other blood/serum studies
- Vaginal secretions (KOH preps/wet mount/cultures)
- Wound cultures
- Stool testing for occult blood and/or O&P
- Synovial joint aspirations
- Blood gases
- Cardiac enzymes
- Sputum cultures
- Blood culture

Diagnosis Formulation (be able to order and make a preliminary assessment of the following diagnostic tests)

- Routine radiographic studies
- Pulmonary function tests
- Electrocardiogram
- Ultrasonography

Formulating Most Likely Diagnosis (includes presentation & documentation skills)

- Correlation between normal and abnormal diagnostic data.
- Formulation of differential diagnosis.
- Selection of most likely diagnosis in light of available data.
- Present the patient's case to the supervising preceptor in an organized, accurate, and concise manner.

Scientific Concepts

- Understand the underlying pathologic processes or pathways associated with a given condition
- Understand normal and abnormal anatomy and physiology
- Understand normal and abnormal microbiology

Clinical Interventions

Observe, perform or assist with the following procedures: according to the standards taught by the preceptor and/or by the MWU PA Program.

***The following list is intended to serve as a guide for the student and preceptor. Labs and diagnostic study exposure may vary based upon rotation type, setting, and available opportunities. ***

- Shave & punch biopsies
- Cryotherapy
- Ear irrigation

- Suture/skin staple placement and removal
- Snellen eye chart reading
- Fluorescein eye staining & Wood's lamp exam
- Joint aspiration
- Injections: IM and SQ
- Tonometry
- Tympanogram
- Infiltration with a local anesthetic
- Digital block
- Toenail or fingernail removal
- Perform Slit-Lamp examination
- Insert/remove skin staples
- Drainage of subungual hematoma
- Endotracheal intubation
- Defibrillation
- Cardioversion
- Lumbar puncture
- Thoracentesis
- Paracentesis
- Central line placement
- Gastric lavage
- Urinary catheter
- Splint application
- Anoscopy, sigmoidoscopy
- Demonstrate sterile technique

Non-Pharmacologic Clinical Interventions

- Develop a treatment plan based on the most likely diagnosis.
- Select appropriate non-pharmacologic modalities.

Pharmacologic Clinical Interventions

- Select appropriate pharmacologic agents for the most likely diagnosis.
- Demonstrate the ability to write prescriptions in the proper format.
- Demonstrate awareness of indications, contraindications, side effects, adverse reactions, and appropriate monitoring and follow-up of pharmacologic interventions.
- Observe and/or assist with the following procedures:
 - Joint injection
 - Injections: intramuscular and subcutaneous

Health Maintenance & Patient Education

- Identify risk factors for conditions amenable to prevention or detection in an asymptomatic individual.
- Understand the relative value of common screening tests for conditions amenable to prevention or detection in an asymptomatic individual.
- Implement appropriate immunization schedules for infants, children, adults, and foreign travelers.

Provide patient education in the following areas

- Management/treatment of common medical disorders.
- Side effects, risks, and benefits of both pharmacologic and non-pharmacologic treatment.
- Potential complications of medical disorders.
- Potential complications of treatment.
- Instruction to patients regarding follow-up.
- Counseling regarding exercise, nutrition, and weight loss.
- Instructions regarding preparation for diagnostic studies.

Medical Documentation

Record data in a legible, organized format, using paper charting or electronic medical records (EMR). Use a full history and physical format or SOAP note format when appropriate.

COGNITIVE OBJECTIVES:

During clinical rotations, the Physician Assistant student is expected to attain an adequate level of knowledge in the areas listed below. Adequate knowledge is defined as knowledge which, when combined with adequate skills, will allow the individual to do the following:

- 1) Successfully manage a significant number of conditions one would expect to encounter in professional practice as a physician assistant.
- 2) Appreciate the limits of their capabilities and promptly recognize those cases where the skills and talents of a physician or consultant are needed.
- 3) Recognize the diversity of the patients they are treating and develop an understanding of the impact of race, ethnic and socioeconomic health disparities as they relate to health care delivery.
- 4) Discuss the etiology and pathophysiology, signs/symptoms including physical examination findings, appropriate laboratory and/or diagnostic evaluation, medical management, complications, and patient education involved with the following medical disorders grouped by system:

The Dermatological System

Dermatitis: atopic, contact, diaper, dyshidrotic, nummular, perioral, seborrheic, stasis, lichen simplex chronicus

Benign and Malignant Neoplasms: basal cell, melanoma, squamous cell, seborrheic keratosis, actinic keratosis

Dermatophyte Infections: tinea versicolor, tinea corporis, tinea pedis

Bacterial Infections: abscess, cellulitis, erysipelas, impetigo

Parasitic infestation: pediculosis pubis, pediculosis capitis, scabies

Viral Diseases: condyloma accuminatum, herpes simplex, molluscum contagiosum, zoster/varicella

Exanthems: erythema infectiosum (fifth disease), hand-foot-and-mouth disease, measles

Desquamation: Stevens-Johnson Syndrome, Toxic Epidermal Necrolysis, erythema multiforme

Acneiform Lesions: acne vulgaris, rosacea, folliculitis

Hair and Nails: alopecia areata, alopecia androgenetic, onychomycosis, paronychia

Melasma

Urticaria

Vitiligo

Papulosquamous disorders: drug eruptions, lichen planus, pityriasis rosea, psoriasis

Vesiculobullous disease: pemphigoid, pemphigus

Other: burns, decubitus ulcers, venous stasis ulcers, ulcers associated with arterial insufficiency and diabetes mellitus, acanthosis nigricans, hidradenitis suppurativa, lipomas, epithelial inclusion cysts, pilonidal disease, erythema multiforme minor, erythema nodosum, cherry angioma, telangiectasia, and photosensitivity reactions

The Eye, Ear, Nose & Throat

Eye Disorders: conjunctivitis, cataract, corneal ulcer, keratitis, pterygium, dacrocystitis, blepharitis, chalazion, ectropion, entropion, hordeolum, nystagmus, optic neuritis, papilledema, orbital cellulitis, macular degeneration, retinal detachment, retinopathy (diabetic and hypertensive), blowout fracture, corneal abrasion, globe rupture, hyphema, retinal vascular occlusion, amaurosis fugax, amblyopia, glaucoma, scleritis, and strabismus

Ear Disorders: cerumen impaction, otitis externa, trauma, acoustic neuroma, barotrauma, dysfunction of Eustachian tube, labyrinthitis, vertigo, cholesteatoma, otitis media, tympanic membrane perforation, hearing impairment, mastoiditis, Meniere disease, and tinnitus

Foreign Bodies

Neoplasms: benign and malignant

Nose/sinus Disorders: epistaxis, nasal polyps, rhinitis, sinusitis, trauma

Oropharyngeal Disorders: diseases of the teeth/gums, aphthous ulcers, candidiasis, deep neck infection, epiglottitis, herpes simplex, laryngitis, peritonsillar abscess, pharyngitis, sialadenitis, parotitis, trauma, and leukoplakia

The Cardiovascular System

Hypotension: orthostatic/postural, cardiogenic shock, vasovagal

Hypertension: essential, secondary, hypertensive emergency

Cardiomyopathy: dilated, hypertrophic, restrictive

Heart Failure

Conduction Disorders: atrial fibrillation and flutter, atrioventricular block, bundle branch block, paroxysmal supraventricular tachycardia, premature beats, ventricular tachycardia, ventricular fibrillation, sinus arrhythmia, sick sinus syndrome, Torsades de pointes

Coronary Artery Disease: stable angina, unstable angina, variant (Prinzmetal) angina, acute myocardial infarction (ST and non-ST segment elevation)

Vascular Disease: acute rheumatic fever, arterial/venous embolism and thrombosis, chronic/acute arterial occlusion, giant cell arteritis, peripheral vascular disease, phlebitis and thrombophlebitis, varicose veins, aortic aneurysm/dissection, arteriovenous malformation

Valvular Disease: aortic stenosis/insufficiency, mitral stenosis/insufficiency, mitral valve prolapse, tricuspid stenosis/insufficiency, pulmonary stenosis/insufficiency

Congenital Heart Disease: atrial septal defect, coarctation of the aorta, patent ductus arteriosus, Tetralogy of Fallot, and ventricular septal defect

Other Forms of Heart Disease: endocarditis, acute pericarditis, cardiac tamponade, pericardial effusion

The Pulmonary System

Infectious Disorders: acute bronchiolitis, acute bronchitis, influenza, types of pneumonia (i.e. bacterial, viral, fungal, HIV-related), epiglottitis, croup, pertussis, RSV, and tuberculosis

Neoplastic Disease: bronchogenic, carcinoid tumors, metastatic tumors, pulmonary nodules

Obstructive Pulmonary Disease: asthma, chronic bronchitis, bronchiectasis, emphysema, cystic fibrosis

Pleural Diseases: pleural effusion, pneumothorax

Pulmonary Circulation: pulmonary embolism, pulmonary hypertension, cor pulmonale

Restrictive Pulmonary Disease: idiopathic pulmonary fibrosis, pneumoconiosis, sarcoidosis

Sleep Apnea

Other Pulmonary Disease: hyaline membrane disease, ARDS, foreign body aspirations, and lung cancer

The Gastrointestinal/Nutritional System

Esophageal Disorders: esophagitis, GERD, motility disorders, Mallory-Weiss tear, strictures, varices

Gastric Disorders: gastritis, peptic ulcer disease, upper GI perforation, pyloric stenosis

Biliary Disorders: acute/chronic cholecystitis, cholelithiasis, choledocholithiasis, cholangitis

Hepatic Disorders: acute/chronic hepatitis, cirrhosis

Hernias

Infectious Diarrhea

Ingestion of Toxic Substances or Foreign Bodies

Metabolic Disorders: G6PD deficiency, Paget disease, Phenylketonuria, and Rickets

Neoplasms: Benign and malignant

Pancreas: acute/chronic pancreatitis

Small Intestine/Colon: constipation, diverticular disease, abscess/fistula, anal fissure, fecal impaction, irritable bowel disease, inflammatory bowel disease, obstruction, ischemic bowel disease, toxic megacolon, appendicitis, Celiac disease, intussusception, polyps, hemorrhoids

Nutritional Deficiencies: Niacin, Thiamine, Vitamin A, Vitamin B12, Vitamin C, Vitamin D, Vitamin K

Food Allergies and Food Sensitivities: lactose intolerance, gluten intolerance, and nut allergies

Hernia

The Musculoskeletal System

Fracture/dislocation: hip, knee, ankle, shoulder, wrist, hand, rib

Sprains/strains: ankle, knee, shoulder, wrist, back

Hip disorders: aseptic (avascular) necrosis of the hip, slipped capital femoral epiphysis, developmental dysplasia

Knee disorders: ligamentous tears of the knee, meniscus injuries, Osgood-Schlatter disease

Shoulder disorders: rotator cuff tears, impingement syndrome, dislocation

Elbow disorders: lateral and medial epicondylitis

Wrist and Hand disorders: Colles fracture, scaphoid fracture, gamekeeper's thumb, boxer's fracture, carpal tunnel syndrome, De Quervain tenosynovitis

Disorders of Back/Spine: ankylosing spondylitis, back strain/sprain, cauda equina, herniated nucleus pulposus, kyphosis/scoliosis, low back pain (lumbago), spinal stenosis, thoracic outlet syndrome, torticollis

Infectious: acute/chronic osteomyelitis, septic arthritis

Compartment Syndrome

Neoplasms: benign and malignant

Osteoarthritis

Rheumatologic Conditions: fibromyalgia, gout, pseudogout, Juvenile rheumatoid arthritis, osteoporosis, polyarteritis nodosa, polymyositis, polymyalgia rheumatica, reactive arthritis (Reiter's syndrome), rheumatoid arthritis, systemic lupus erythematosus, systemic sclerosis (Scleroderma), and Sjögren syndrome

The Endocrine System

Diseases of the Parathyroid and Thyroid Gland: hyperparathyroidism, hypoparathyroidism, parathyroid crisis, hyperthyroidism including Grave's Disease and thyroid storm, hypothyroidism, thyroiditis, myxedema coma

Adrenal Disorders: Cushing syndrome, primary adrenal insufficiency, adrenal crisis

Pituitary Disorders: acromegaly/gigantism, diabetes insipidus, dwarfism, pituitary adenoma

Diabetes Mellitus: Type 1, Type 2, metabolic syndrome

Hypoglycemia

Diabetic Ketoacidosis

Non-ketotic Hyperosmolar Coma

Hypogonadism

Neoplasms: multiple endocrine neoplasias (MEN), neoplastic syndrome, primary endocrine malignancy, syndrome of inappropriate antidiuretic hormone secretion (SIADH)

Psychiatric/Behavioral Science

Anxiety disorders: generalized anxiety, panic, post-traumatic stress, phobias

Psychoses: delusional disorder, schizophrenia

Mood disorders: adjustment disorder, bipolar, depression, dysthymia, premenstrual dysphoric disorder, suicide/homicidal behaviors

Eating disorders: anorexia, bulimia, obesity

Personality disorders

Obsessive-Compulsive and Related Disorders

Conduct disorder

Neurodevelopmental Disorders: ADD/ADHD, Autism Spectrum Disorder

Abuse and Neglect: domestic violence, child/elder abuse, sexual abuse

Human Sexuality

Substance-Related and Addictive Disorders

Dissociative Disorders

Feeding and Eating Disorders

Somatic Symptom and Related Disorders

Sleep-Wake Disorders: narcolepsy, parasomnias

The Neurologic System

Cognitive Diseases: Alzheimer disease, dementia, delirium

Neuromuscular Disorders: Guillain-Barre syndrome, myasthenia gravis, cerebral palsy

Diseases of Peripheral Nerves: diabetic peripheral neuropathy, Bell palsy, carpal tunnel syndrome, complex regional pain syndrome

Movement Disorders: essential tremor, Huntington's chorea, Parkinson's disease, multiple sclerosis

Seizure Disorders: generalized convulsive, generalized non-convulsive, focal seizures, status epilepticus

Headaches: cluster, migraine, tension

Vascular Diseases: cerebral aneurysm, cerebral vascular accident, transient ischemic attack, intracranial hemorrhage (epidural, subdural bleed, subarachnoid bleed), arteriovenous malformation, syncope

Coma

Closed Head Injuries: concussion, post-concussion syndrome, traumatic brain injury

Infectious Disorders: meningitis, encephalitis

Hepatic and Alcoholic Encephalopathy

Skull Fracture

Neoplasms: benign and malignant

The Genitourinary System (Male and Female)

Bladder Disorders: incontinence, overactive bladder, prolapse

Congenital and Acquired Abnormalities: cryptorchidism, Peyronie disease, trauma, vesicoureteral reflux

Human Sexuality

Infectious Disorders: cystitis, epididymitis, orchitis, prostatitis, pyelonephritis, urethritis

Neoplasms: bladder cancer, penile cancer, prostate cancer, testicular cancer

Nephrolithiasis/urolithiasis

Penile Disorders: erectile dysfunction, hypospadias/epispadias, paraphimosis, phimosis

Benign Prostatic Hypertrophy

Testicular Disorders: hydrocele, varicocele, testicular torsion, orchitis

Urethral Disorders: prolapse, stricture, urethritis

The Renal System

Acute Kidney Injury (acute renal failure)

Chronic Kidney Disease

End-Stage Renal Disease

Glomerulonephritis

Nephrotic Syndrome

Pyelonephritis

Congenital or Structural Renal Disorders: horseshoe kidney, hydronephrosis, polycystic kidney disease, renal vascular disease

Fluid and Electrolyte Disorders: acid-base disorders, dehydration, hyperkalemia/hypokalemia, hypervolemia, hyponatremia

Neoplasms: renal cell carcinoma, Wilms tumor

The Reproductive System (Male and Female)

Breast: mastitis, abscess, fibroadenoma, fibrocystic disease, galactorrhea, gynecomastia

Cervix: cervicitis, cervical dysplasia

Vaginal/vulvar Disorders: cystocele, prolapse, rectocele, vaginitis

Contraceptive methods

Human Sexuality

Infertility

Menopause

Menstrual Disorders: abnormal uterine bleeding, dysmenorrhea, amenorrhea

Uterine: endometriosis, leiomyoma, endometrial hyperplasia, prolapse

Ovarian: cysts, polycystic ovarian syndrome, tubo-ovarian abscess, torsion

Neoplasms of the Breast and Reproductive Tract: benign and malignant

Sexually Transmitted Infections/Pelvic Inflammatory Disease

Trauma: physical assault, sexual assault, trauma in pregnancy

Uncomplicated Pregnancy: normal labor/delivery, postnatal/postpartum care, preconception/prenatal care

Complicated Pregnancy: abortion, abruptio placenta, breech presentation, Cesarean delivery, cord prolapse, dystocia, ectopic pregnancy, fetal distress, gestational diabetes, gestational trophoblastic disease, hypertension disorders in pregnancy, incompetent cervix, multiple gestations, placenta previa, postpartum hemorrhage, premature rupture of membranes, Rh incompatibility, shoulder dystocia

The Hematologic System

Autoimmune Disorders

Coagulation Disorders: factor VIII disorders, factor IX disorders, factor XI disorders, thrombocytopenia including idiopathic thrombocytopenic purpura and thrombotic thrombocytopenic purpura, Von Willebrand disease

Anemias: aplastic anemia, vitamin B12 deficiency, folate deficiency, iron deficiency, G6PD deficiency, hemolytic anemia

Leukopenia

Hemoglobinopathies: hemochromatosis, sickle cell disease, thalassemia

Malignancies: acute/chronic lymphocytic leukemia, acute/chronic myelogenous leukemia, lymphoma, multiple myeloma, myelodysplasia

Immunologic Disorders: transfusion reaction

Infectious Diseases

Bacterial Disease: botulism, *campylobacter jejuni* infection, chlamydia, diphtheria, cholera, gonococcal infections, Methicillin-resistant *Staphylococcus aureus*, rheumatic fever, salmonellosis, shigellosis, tetanus, Rocky Mountain spotted fever

Parasitic Disease: helminth infestations, malaria, toxoplasmosis, pinworms, trichomoniasis

Mycobacterial Disease: tuberculosis, atypical mycobacterial disease

Viral Diseases: congenital varicella, varicella-zoster infections, CMV infections, human immunodeficiency virus, human papilloma virus, influenza, Epstein-Barr virus, erythema infectiosum, measles, mumps, rubella, rubeola, rabies

Fungal Disease: candidiasis, cryptococcosis, histoplasmosis, pneumocystis

Spirochetal Disease: Lyme borreliosis, syphilis

LEARNING OUTCOMES (B1.03)

Following successful completion of clinical rotations, the clinical year student will:

- 1) Integrate critical thinking skills with evidence-based medical knowledge and patient care to provide entry-level primary health care services for a diverse population in a variety of settings.
- 2) Understand the basic scientific principles of anatomy, physiology, pathophysiology, and pharmacology necessary to practice medicine as a physician assistant.
- 3) Assess the health status of individuals of all ages by obtaining a history and physical examination, recommending and interpreting appropriate diagnostic studies, diagnosing, formulating appropriate differential diagnoses, and developing a management plan for primary care conditions.
- 4) Apply the principles of health promotion and disease prevention to provide primary health care across the life span.
- 5) Provide counseling, patient education, interventions, and appropriate referral for promotion, maintenance, and restoration of optimal levels of health for individuals of all ages.
- 6) Refine interpersonal and communication skills to result in effective information exchange with patients, families, and members of the professional health care team.
- 7) Develop professional accountability to patients, society and the profession, and a commitment to excellence, integrity, and ongoing professional development.
- 8) Demonstrate a high level of responsibility and ethical practice while acknowledging professional and personal limitations.

COURSE TEXTBOOKS

EMERGENCY MEDICINE

- 1) Yeh D, Marthedal E. *The Physician Assistant Student's Guide to the Clinical Year: Emergency Medicine*. New York, NY: Springer Publishing Company, LLC: 2020.

FAMILY MEDICINE

- 1) Kayingo G, Opacic D. *The Physician Assistant Student's Guide to the Clinical Year: Family Medicine*. New York, NY: Springer Publishing Company, LLC: 2020.

Recommended:

- 1) Papadakis M, McPhee SJ, Rabow MW. *CURRENT Medical Diagnosis and Treatment 2017*. New York, NY: McGraw Hill; 2016.
- 2) Wolff, K et al. *Fitzpatrick's Color Atlas & Synopsis of Clinical Dermatology*, 8th ed. New York, NY: McGraw-Hill; 2013.
- 3) Gilbert, DN, et al. *The Sanford Guide to Antimicrobial Therapy 2018*, 48th ed. Antimicrobial Therapy, Inc.

INTERNAL MEDICINE

- 1) Knechtel D, Opacic D. *The Physician Assistant Student's Guide to the Clinical Year: Internal Medicine*. New York, NY: Springer Publishing Company, LLC: 2020.

Recommended:

- 1) Kasper, DL et al. *Harrison's Principles of Internal Medicine*, 20th ed. New York, NY: McGraw-Hill; 2018.

PEDIATRICS

- 1) Fernandez T, Akerman A. *The Physician Assistant Student's Guide to the Clinical Year: Pediatrics*. New York, NY: Springer Publishing Company, LLC; 2020.

Recommended:

- 1) Hay WW, et al. (2016). *CURRENT Diagnosis & Treatment: Pediatrics*, 23rd ed. McGraw-Hill.
- 2) Kliegman, RM, et al (2015). *Nelson Textbook of Pediatrics*, 20th ed.
- 3) American Academy of Pediatrics. *Red Book 2018: Report of the Committee on Infectious Disease*, 31st ed.
- 4) Gilbert, D et al. (2018). *The Sanford Guide to Antimicrobial Therapy*, 48th ed. Antimicrobial Therapy.
- 5) The John Hopkins Hospital, Engorn B. and Flerlage J. (2015). *The Harriet Lane Handbook*, 20th ed.

PSYCHIATRY / BEHAVIORAL HEALTH

- 1) Cavalet J. *The Physician Assistant Student's Guide to the Clinical Year: Behavioral Health*. New York, NY: Springer Publishing Company, LLC; 2020.

Recommended:

- 1) Ganti L, Kaufman, MS and Blitzstein, SM. *First Aid for the Psychiatry Clerkship*. 4th ed. New York, NY: McGraw Hill; 2016.
- 2) *American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders*, 5th ed. Arlington, VA, American Psychiatric Association, 2013.

SURGERY

- 1) Bowker B. *The Physician Assistant Student's Guide to the Clinical Year: Surgery*. New York, NY: Springer Publishing Company, LLC; 2020.

Recommended:

- 1) Lawrence, Peter F. *Essentials of General Surgery*. 5th ed. Philadelphia, PA: Lippincott, Williams, Wilkins; 2012.
- 2) Brunicaudi F, Andersen D, Billiar T. *Schwartz's Principles of Surgery*. 10th ed. McGraw-Hill Professional; 2014.

WOMEN'S HEALTH

- 1) Watkins E. *The Physician Assistant Student's Guide to the Clinical Year: OB-GYN*. New York, NY: Springer Publishing Company, LLC; 2020.

Recommended:

- 1) DeCherney AH et al. (2019). *Current Diagnosis & Treatment: Obstetrics & Gynecology*. 12th ed. McGraw-Hill: New York
- 2) Hatcher RA, Ziemann M, et al. (2017-2018). *Managing Contraception: for your pocket*. 14th ed.
- 3) Szymanski LM, Bienstock, JL (2016). *The Johns Hopkins handbook of obstetrics and gynecology*. McGraw-Hill Education Medical.
- 4) Beckmann CRB et al. (2019). *Beckmann and Ling's Obstetrics and Gynecology*. 8th ed., Lippincott, Williams & Wilkins: Philadelphia.

