

## **Didactic Course Descriptions**

### **PA 500 Practice, Policy, and Bioethics (1-Credit)**

This course is designed to aid the student in the transition into the medical profession, develop clinical leadership skills and serves as an introduction to bioethics. Areas of discussion include but are not limited to HIPAA, Principles of Bioethics, resource allocation, genetic testing and screening, assisted reproductive techniques and their use, PA patient relationship, death and dying, clinical research ethics, environmental ethics, and other ethical issues. Health care delivery systems, quality and safety, and reimbursement issues including Medicaid and Medicare, PA history of the profession, leadership and current law.

### **PA 510 Research and Evidence Based Medicine (1-Credit)**

This course is designed to provide a basic understanding of the principles of epidemiology, basic and clinical biostatistics and evidence-based medicine. Emphasis on study design in medical research, statistical methods, reading and analyzing the medical literature and summarizing and presenting data in tables and graphs. In addition, decision analysis and methods of evidence-based medicine will be explored.

### **PA 520 Foundations of Pharmaceutical Sciences (1-Credit)**

This course is designed to develop skills related to the principles of pharmacology as they relate to drug action. Emphasis on understanding dose-response relationships, drug absorption, distribution, elimination and termination of action, drug excretion, biotransformation (metabolism), and general pharmacokinetics.

### **PA 530 Foundations of Medical Sciences (4-Credits)**

This course is designed as an intensive review of normal anatomy, physiology, genetics, and pathophysiologic concepts of disease. The area of genetics and precision medicine is covered to provide an understanding of inheritance, genetic abnormalities, indications for genetic testing and patient counseling.

### **PA 601 Clinical Medicine I (4-Credits)**

This is the first in a series of three of courses designed to provide an intensive study of human diseases and disorders in the areas of clinical medicine including epidemiology, etiology, clinical signs and symptoms, progression of disease, therapeutic management, prevention, laboratory and diagnostic medicine, and prognosis. Primary focus will be placed on disease processes common to primary care medicine, the development of differential diagnoses and therapeutic plan based upon the patient's clinical presentation throughout the lifespan.

### **PA 603 Clinical Therapeutics I (3-Credits)**

This is the first of three courses designed to build upon the foundations of pharmaceutical sciences. The course is an intensive study on the principal mechanisms of action of therapeutic drug classes, understanding the indication and uses, side effects, and toxicities associated with the drugs. Clinical Therapeutics sequencing is designed to complement Clinical Medicine and Laboratory and Diagnostic Medicine.

### **PA 604 Laboratory and Diagnostic Medicine I (3-Credits)**

This is the first in a series of courses designed to develop a functional understanding of the appropriate uses and interpretations of clinical diagnostic testing, including radiographic testing. Students will learn to select, interpret and evaluate clinical laboratory, imaging and other diagnostic tests used for diagnosing, treating, and managing patient needs.

#### **PA 607 Medical Interviewing and Documentation I (3-Credit)**

This is the first of two courses designed to develop knowledge and skills needed to obtain, record, and interpret a complete medical history. Appropriate use of the medical record, organization of information, and oral presentation techniques, and medical equipment will be introduced. A foundation for creating a complete history will be obtained.

#### **PA 611 Clinical Medicine II (4-Credits)**

This is the second in a series of three of courses designed to provide an intensive study of human diseases and disorders in the areas of clinical medicine including epidemiology, etiology, clinical signs and symptoms, progression of disease, therapeutic management, prevention, laboratory and diagnostic medicine, and prognosis. Primary focus will be placed on disease processes common to primary care medicine, the development of differential diagnoses and therapeutic plan based upon the patient's clinical presentation throughout the lifespan.

#### **PA 613 Clinical Therapeutics II (3-Credits)**

This is the second of three courses designed to build upon the foundations of pharmaceutical sciences. The course is an intensive study on the principal mechanisms of action of therapeutic drug classes, understanding the indication and uses, side effects, and toxicities associated with the drugs. Clinical Therapeutics sequencing is designed to complement Clinical Medicine and Laboratory and Diagnostic Medicine.

#### **PA 614 Laboratory and Diagnostic Medicine II (3-Credits)**

This is the second in a series of courses designed to develop a functional understanding of the appropriate uses and interpretations of clinical diagnostic testing, including radiographic and EKG testing. Students will learn to select, interpret and evaluate clinical laboratory, imaging and other diagnostic tests used for diagnosing, treating, and managing patient needs.

#### **PA 610 Evidence-Based Physical Diagnosis (4-Credits)**

This course is designed to develop knowledge and clinical skills needed to perform a complete and focused physical exam. General and problem-focused physical exam techniques including special tests will be emphasized with the ability to document and give oral presentation of the findings.

#### **PA 617 Medical Documentation II (1-Credit)**

This is the second of two courses designed to develop knowledge and skills to obtain, record and interpret medical histories. Building upon skills in Medical Interviewing and Documentation I, an emphasis will be placed on problem-focused visits, writing progress notes, admission notes, writing orders, utilizing order-sets, and oral presentation for grand-rounds and problem focused encounters.

#### **PA 612 Pediatric Medicine (1-Credit)**

This course is designed to provide an intensive study of pediatric care with a foundation of understanding the population, professionalism, and ethical and legal issues. Areas of study will include but are not limited to well-child visits, growth and development, preventative care, clinical medicine focus that is common to primary care and emergency department visits and will include epidemiology, etiology, historical data, clinical manifestations, progression of disease, laboratory and diagnostic medicine, therapeutic management, developing and implementing differential diagnoses, care plans, and follow-up based on clinical situation and presentation.

#### **PA 615 Women's Health and Reproductive Medicine (1-Credit)**

This course is designed to provide an intensive study of Women's Health and Reproductive Medicine with a foundation of understanding the population, professionalism, and ethical and legal issues. Areas of study will include but are not limited to well-women visits, preventative care, clinical medicine focus that is common to primary care and emergency department visits and will include epidemiology, etiology, historical data, clinical manifestations, progression of disease, laboratory and diagnostic medicine, therapeutic management, developing and implementing differential diagnoses, care plan, and follow-up based on clinical situation and presentation.

#### **PA 616 Basic and Applied Clinical Skills (2-Credits)**

This course is designed to provide a foundation for clinical skills and procedures essential to primary care and emergency medicine for patients through the lifespan. Students will be introduced to clinical and technical tools, develop skills necessary for informed consent, patient counseling, and identifying risks and complications associated with performed procedures. Students will be immersed in lecture, team-based learning and hands on procedural experience.

#### **PA 618 Perioperative Medicine and Principles of Surgery (2-Credits)**

This course is designed to provide a foundation for management of pre- and post-surgical patients and surgical principles. An in-depth discussion on perioperative medication management including anticoagulants, anesthesia, and the role of prevention in surgical site, venous thromboembolism, and the identification and management of common postoperative problems. Development of basic surgical skills and the role of the surgery PA in common surgical cases.

#### **PA 621 Clinical Medicine III (4-Credits)**

This is the third in a series of three of courses designed to provide an intensive study of human diseases and disorders in the areas of clinical medicine including epidemiology, etiology, clinical signs and symptoms, progression of disease, therapeutic management, prevention, laboratory and diagnostic medicine, and prognosis. Primary focus will be placed on disease processes common to primary care medicine, the development of differential diagnoses and therapeutic plan based upon the patient's clinical presentation. Throughout the lifespan.

#### **PA 624 Laboratory and Diagnostic Medicine III (3-Credits)**

This is the third in a series of courses designed to develop a functional understanding of the appropriate uses and interpretations of clinical diagnostic testing, including radiographic testing. Students will learn to select, interpret and evaluate clinical laboratory, imaging and other diagnostic tests used for diagnosing, treating, and managing patient needs.

#### **PA 623 Clinical Therapeutics III (3-Credits)**

This is the third and final of three courses designed to build upon the foundations of pharmaceutical sciences. The course is an intensive study on the principal mechanisms of action of therapeutic drug classes, understanding the indication and uses, side effects, and toxicities associated with the drugs. Clinical Therapeutics sequencing is designed to complement Clinical Medicine and Laboratory and Diagnostic Medicine.

#### **PA 625 Basic Ultrasound Technique (1-Credit)**

This is the first of two courses designed to enhance students' clinical skills with ultrasound. This course is designed to provide students with the background and hands on experience to perform point-of-care-ultrasound (POCUS). Students will be introduced to the physics and knobology of ultrasound and develop skills in identifying and assessing normal and abnormal findings for Lung, Cardiac, Renal, and Bladder ultrasound.

#### **PA 620 Public Health and Preventive Medicine (2-Credits)**

This course is designed to introduce the history and evolution of public health and provide a basis for understanding public health theory. An in-depth look at the global, national, state, and local community level of public health will take place while exploring the interconnectedness of epidemiology, biostatistics, environmental health, behavioral and community health and health policy. With an emphasis on service, students will identify and propose solutions to state and local community health issues.

#### **PA 626 Advanced Ultrasound Technique (1-Credit)**

This is the second of two courses designed to enhance students' clinical skills with ultrasound. This course is designed to provide students with the skills to perform clinical skills using point-of-care-ultrasound (POCUS). Students will develop skills in ultrasound-guided peripheral access, paracentesis, assessment of abscesses and cellulitis and the ability to perform focused examination for free fluid (FAFF), and the extended focused assessment with sonography for trauma (eFAST) examinations.

#### **PA 627 Infectious Disease and Medical Microbiology (2-Credits)**

This course is designed to develop skills related to infectious diseases related to bacteria, viruses, fungi, and parasites. Discussion will include basic mechanisms of infection, clinical manifestations, progression of disease, laboratory and diagnostic medicine, developing and implementing differential diagnoses and therapeutic plans of action. An in-depth review of clinical therapeutics related to antibacterial, antimycobacterial agents, antifungal agents, antiviral drugs, and antiparasitic drugs will be discussed as well as their role in disease management.

#### **PA 628 Telemedicine (1-Credit)**

This course is designed to develop skills in delivering telehealth. This course will cover delivery systems of telehealth, legal and regulatory issues, and use in local and international humanitarian outreach. Telehealth essentials on patient interviewing, physical exam, and special topics that include but are not limited to tele-stroke management, telepsychiatry, tele-dermatology, and emergent and critical care telehealth recognition and management.

#### **PA 630 Introduction to Master's Scholarly Project (1-Credit)**

This course is designed to build upon Research and Evidence Based Medicine coursework to develop students' interest in a scholarly project with a focus on service and community. Students will work with a faculty research advisor to develop a targeted research topic or service/community need.

### **PA 629 Inpatient and Critical Care Medicine (2-Credits)**

This course is designed and delivered by experts at the Cleveland Clinic Medical Intensive Care Unit to provide an in-depth study of inpatient and critical care medicine. The course will discuss professionalism in hospital medicine, admission through discharge of patients, management as primary and consult based medicine and management of critically ill patients. A focus on basic and advanced cardiac life support (BLS and ACLS), airway management and recognition and management of mechanical ventilation, acid-base disturbances, shock, acute-respiratory failure, and basic burn support.

### **Clinical Phase Course Descriptions**

#### **PA 651 (Family Medicine SCPE)**

This course will provide a 4-week supervised clinical experience in Family Medicine. A hands-on experience working with a clinical preceptor in the outpatient evaluation of acute and chronic illness in pediatric, adolescent, adult, and elderly patients. Students will be able to synthesize knowledge, interpersonal skills, technical skills, therapeutic management planning, and professionalism related to the UCPA Core Competencies. The Post-Clinical Residency-Comprehensive Review (PCR-CR) portion provides students a comprehensive review of the Family Medicine clinical residency. Students will be able to synthesize and demonstrate medical knowledge, clinical and technical skills, and professional behaviors related to the UCPA core competencies.

#### **PA 652 (Pediatric SCPE)**

This course will provide a 4-week supervised clinical experience in Pediatric Medicine. A hands-on experience working with a clinical preceptor in the outpatient evaluation of acute and chronic illness and preventative medicine in infants, children, and adolescent patients. Students will be able to synthesize knowledge, interpersonal skills, technical skills, therapeutic management planning, and professionalism related to the PA Core Competencies. The Post-Clinical Residency-Comprehensive Review (PCR-CR) portion provides students with a comprehensive review of the Pediatric Medicine clinical residency. Students will be able to synthesize and demonstrate medical knowledge, clinical and technical skills, and professional behaviors related to the PA core competencies.

#### **PA 653 (Surgery SCPE)**

This course provides a 4-week supervised clinical experience in the specialty of surgery. Students will gain hands-on experience in perioperative medicine and valuable intra-operative hands-on experience in assessing and managing surgical patients throughout their experience. Students will be able to synthesize knowledge, interpersonal skills, technical skills, therapeutic management planning, and professionalism related to the UCPA Core Competencies. The Post Clinical

Residency-Comprehensive Review (PCR-CR) portion provides students a comprehensive review of the Surgery clinical residency. Students will be able to synthesize and demonstrate medical knowledge, clinical and technical skills, and professional behaviors related to the UCPA core competencies.

#### **PA 654 (Behavioral Health SCPE)**

This course provides a 4-week hands-on clinical experience in the specialty of Behavioral Medicine. Evaluation and management of psychiatric and behavioral health disorders will take place in outpatient and inpatient settings. Students will be able to synthesize knowledge, interpersonal skills, technical skills, therapeutic management planning, and professionalism related to the UCPA Core Competencies. The Post Clinical Residency-Comprehensive Review (PCR-CR) component provides students with a comprehensive review of the Behavioral Medicine clinical residency. Students will be able to synthesize and demonstrate medical knowledge, clinical and technical skills, and professional behaviors related to the UCPA core competencies.

#### **PA 655 (Women's Health SCPE)**

This course provides a 4-week supervised clinical experience in the specialty of Women's Health. Students will gain hands-on experience in assessing and managing adult female patients throughout their experience. Students will be able to synthesize knowledge, interpersonal skills, technical skills, therapeutic management planning, and professionalism related to the PA Core Competencies. The Post-Clinical Residency-Comprehensive Review (PCR-CR) component provides students a comprehensive review of the Women's Health clinical residency. Students will be able to synthesize and demonstrate medical knowledge, clinical and technical skills, and professional behaviors related to the PA core competencies.

#### **PA 656 (Emergency Medicine SCPE)**

This course provides a 4-week supervised clinical experience in Emergency Medicine. Students will have hands-on experience in various settings, including large medical facilities and stand-alone emergency departments, and gain experience in triage assessment, differential diagnoses of possible emergent and life-threatening conditions, and therapeutic management of possible emergent and life-threatening conditions. Students will be able to synthesize knowledge, interpersonal skills, technical skills, therapeutic management planning, and professionalism related to the UCPA Core Competencies. The Post-Clinical Residency-Comprehensive Review (PCR-CR) component provides students with a comprehensive review of the Emergency Medicine clinical residency. Students will be able to synthesize and demonstrate medical knowledge, clinical and technical skills, and professional behaviors related to the UCPA core competencies.

#### **PA 657 (Internal Medicine SCPE)**

This course provides students with a 4-week supervised clinical experience in Internal Medicine. Students will work in various settings, gaining hands-on experience in acquiring complete and problem-focused medical histories, physical examination techniques, assessment of differential diagnoses, and developing and implementing therapeutic management plans. Students will be able to synthesize knowledge, interpersonal skills, technical skills, therapeutic management planning, and professionalism related to the UCPA Core Competencies. The Post-Clinical Residency-Comprehensive Review (PCR-CR) component provides students with a comprehensive Internal Medicine clinical residency review. Students will be able to synthesize and demonstrate

medical knowledge, clinical and technical skills, and professional behaviors related to the UCPA core competencies.

**PA 658 (Elective SCPE)**

This course allows students to select a medical specialty (within or outside the core Clinical Experience) for a 4-week supervised clinical practice experience. Students will be able to synthesize knowledge, interpersonal skills, technical skills, therapeutic management planning, and professionalism related to the UCPA Core Competencies. This Post-Clinical Residency-Comprehensive Review (PCR-CR) component provides students with a comprehensive review of the Clinical Residency Elective. Students will be able to synthesize and demonstrate medical knowledge, clinical and technical skills, and professional behaviors related to the UCPA core competencies.

**PA 649 Applied Clinical Medicine (5-Credits)**

This course is designed as an intensive review of key clinical concepts and skills. A hybrid approach with hi-fidelity simulation, clinical skills and procedures will be intermixed with small group discussion. The culmination of the course requires students to successfully complete a summative exam and summative OSCE experience as they synthesize knowledge, interpersonal skills, technical-skills, therapeutic management planning, and professionalism as it relates to the UCPA Core Competencies.

**PA 640 UCPA Capstone (2-Credits)**

This course is designed for students to synthesize their knowledge and work within core research and evidence-based medicine practices as it relates to their clinical experiences or interests. Students will work closely with faculty advisors to create a final poster presentation to supplement their research involving quality improvement, service learning, or a meta-analysis.

