

# Program Courses

## **PAS 500 Introduction to the PA Profession**

This course is designed to introduce the student to the inner workings of the PA profession; its history, development, organizations, current trends in the profession, the physician/PA team, professionalism, patient consent, HIPAA, credentialing, and licensure. This course also explores cultural issues and patient care, quality assurance, and risk management.

**Semester hour(s):** 1.0

**Prerequisite(s):** Matriculation into the LMU-SMS PA Program

## **PAS 505 Pharmacology**

This course will introduce students to the general principles of pharmacology (pharmacokinetics, pharmacotherapy, and pharmacodynamics). The focus will be the basic science principles that provide the foundation for clinical pharmacology and pharmacotherapeutics. The course will also review medical microbiology, human biochemistry and physiology as it relates to pharmacokinetics and pharmacodynamics.

**Semester hour(s):** 1.0

**Prerequisite(s):** Matriculation into the LMU-SMS PA Program

## **PAS 510 Anatomy**

This course is focused on the body's structure. The course is organized according to six major body regions: lower limb and back; upper limb; thorax; abdomen; pelvis; and head and neck. Lectures, tutorials, and computer aided instruction will be given throughout the course. Students will work with prosections in the anatomy laboratory. Each student is expected to learn anatomical terminology as well as three-dimensional and radiological anatomy. Throughout the course students will be challenged to relate the anatomy to the solution of clinical problems. The latter is an integral part of the anatomy curriculum. Students will be evaluated by a series of written and laboratory practical examinations.

**Semester hour(s):** 5.0

**Prerequisite(s):** Matriculation into the LMU-SMS PA Program

### **PAS 515 Physiology/Pathophysiology**

This is the first of three courses covering human physiology and pathophysiology. In particular, this course covers the normal physiologic concepts, mechanisms and relevant anatomy involved in the healthy individual. In some cases, pathophysiology and disease mechanisms and presentation will also be discussed to add additionally layers of context to the material and how it relates with material presented in concomitant and subsequent courses. Additional clinical correlate and exam sessions will also be required components. Individual study and group work/presentations will be required. Time management, a high level of organization, team work and self-motivation are essential to success in this course.

**Semester hour(s):** 3.0

**Prerequisite(s):** Matriculation into the LMU-SMS PA Program

### **PAS 516 Physiology/Pathophysiology II**

This is the second of four course series in Physiology and Pathophysiology. Students acquired basic knowledge of general principles of cellular physiology, fundamentals of regulatory and organ systems physiology. In this second course, students will build on and apply their knowledge to analyze the pathophysiology of hematology, as well as the renal, endocrine, cardiovascular and respiratory systems. This course runs in parallel with Clinical Medicine I (PAS 550) and Pharmacology/Pharmacotherapy I (PAS 535), covers the same organ systems; and is designed to lay the foundation for those courses.

**Semester hour(s):** 2.0

**Prerequisite(s):** PAS 500, 505, 510, 515, 520, and 575

### **PAS 517 Physiology/Pathophysiology III**

This is the third of three course series in Physiology and Pathophysiology. Students acquired basic knowledge of general principles of cellular physiology, fundamentals of regulatory and organ systems physiology. In this third course, students will build on and apply their knowledge to analyze the pathophysiology of neurologic, orthopedic, rheumatologic, gastrointestinal, and reproductive systems. This course runs in parallel with Clinical Medicine II (PAS 551) and Pharmacology/Pharmacotherapy II (PAS 536), covers the same organ systems; and is designed to lay the foundation for those courses.

**Semester hour(s):** 2.0

**Prerequisite(s):** PAS 500, 505, 510, 515, 516, 520, 521, 535, 550, 560, and 575

### **PAS 520 Physical Diagnosis I**

This course is designed to introduce the student to patient history taking and communication skills. Students will begin using medical diagnostic equipment as they develop the skills needed to perform complete and focused physical examinations. This course is in the lecture, small group, and laboratory formats. Students will examine assigned laboratory partners and simulated patients to gain the skills and knowledge to perform a thorough history and physical examination. Students will build on their clinical assessment and documentation skills through participation in small group case studies and Objective Structured Clinical Encounters (OSCE) using human patient simulators. In addition, students will complete the Basic Life Support (BLS) and learn airway management skills.

**Semester hour(s):** 3.0

**Prerequisite(s):** Matriculation into the LMU-SMS PA Program

### **PAS 521 Physical Diagnosis II**

This course is a continuation of Physical Diagnosis I. Students will learn additional components of the physical examination, recognize abnormal and normal findings, and communicate the information in oral and written formats. Special issues involving the health histories and physical examination of the pediatric and geriatric patient will be addressed. Students will also learn and practice the male and female genitourinary examination on human patient simulators. Students will build on their clinical assessment, documentation, and Basic Life Support (BLS) skills through small group case studies, OSCEs, and 3-D mannequin simulations. In addition, students will complete the Advanced Cardiac Life Support (ACLS), learn venipuncture and intravenous catheter insertion, and practice airway management skills.

**Semester hour(s):** 3.0

**Prerequisite(s):** PAS 500, 505, 510, 515, 520, and 575

### **PAS 525 Medical Law, Ethics, and Health Care Delivery Systems**

This course is designed to provide a fundamental level of knowledge of the structure and function of the U.S. healthcare delivery system, its medical laws, and the ethical theories and issues associated as they apply to the PA and PA/physician team. Issues discussed will include reimbursement, inequality to accessing health care issues, health care policies, and the roles of the different members of the health care professional team.

**Semester hour(s):** 1.0

**Prerequisite(s):** PAS 500, 505, 510, 515, 516, 517, 520, 521, 535, 536, 545, 550, 551, 560, and 575

### **PAS 535 Pharmacology/Pharmacotherapeutics I**

The focus of this course is basic pharmacology and pharmacotherapeutics of selected drug classes. The course runs parallel to Physiology/Pathophysiology II (PAS 516) and Clinical Medicine I (PAS 550) courses and is designed to provide a background understanding of medication actions in health and disease.

**Semester hour(s):** 2.0

**Prerequisite(s):** PAS 500, 505, 510, 515, 520, and 575

### **PAS 536 Pharmacology/Pharmacotherapeutics II**

This is the second course in Pharmacology and Pharmacotherapeutics. Students will add to their knowledge of general principles of pharmacology, pharmacokinetics, and pharmacotherapeutics. The course runs parallel to the Physiology/Pathophysiology III (PAS 517) and Clinical Medicine II (PAS 551) courses and is designed to provide a background understanding medication actions in health and disease.

**Semester hour(s):** 2.0

**Prerequisite(s):** PAS 500, 505, 510, 515, 516, 520, 521, 535, 550, 560, and 575

### **PAS 540 Behavioral Medicine**

This course is designed to provide the student with tools to evaluate, diagnose, and manage psychiatric conditions. Students will gain an appreciation for the Diagnostic and Statistical Manual (DSM) classifications of mental illness as well as the importance of timely referrals to other healthcare professionals. Information will be provided on behavioral issues that impact health, the genetic and environmental aspects of behavioral disorders, etiology and treatment of substance abuse, responses and coping mechanisms for stress, growth and development, life cycle development, personality development, human sexuality, death and dying and bereavement.

**Semester hour(s):** 2.0

**Prerequisite(s):** PAS 530, PAS 550, PAS 535.

### **PAS 545 Clinical Skills I**

This is the first of a two-semester course designed to help students develop clinical and procedural skills common to office and emergency department settings. Students will receive instruction in lumbar puncture, slit lamp evaluation, insertion of nasogastric and urinary catheters, interpretation of images obtained by x-ray, computed tomography, and magnetic resonance imaging, examination of the neurologic system, special orthopedic examination techniques, joint injection/aspiration, and interpretation of cardiac rhythm strips and 12-lead electrocardiographs. Students will have an opportunity to practice learned skills during laboratory sessions. Additionally, students will have an opportunity to practice previously learned skills of airway management, venipuncture, and peripheral venous access during open

laboratory sessions. Students will build on their clinical assessment and documentation skills learned in PAS 520 and PAS 521, Basic Life Support (BLS) and Advanced Cardiac Life Support (ACLS) skills through OSCEs and 3-D mannequin simulations. In addition, students will complete the Pediatric Advanced Life Support (PALS) course.

**Semester hour(s):** 3.0

**Prerequisite(s):** PAS 500, 505, 510, 515, 516, 520, 521, 535, 550, 560, and 575

### **PAS 546 Clinical Skills II**

A continuation of PAS 545, this is the second of a two-semester course designed to help students develop clinical and procedural skills common to office, emergency department, and operating room settings. Students will receive instruction in several skills including gowning, gloving, surgical scrubbing, sterile technique, wound closure, surgical knot tying, surgical instrument recognition, review of protective personal equipment, skin lesion biopsy techniques, spinal immobilization techniques, orthopedic splinting, ultrasound techniques, arterial and central line insertion, chest tube thoracostomy and needle decompression, interpretation of images obtained by x-ray, computed tomography, magnetic resonance imaging, and ultrasound, interpretation of cardiac rhythm strips and 12-lead electrocardiographs, and billing and coding. Students will have the opportunity to practice learned skills during laboratory session. Additionally, students have an opportunity to practice previously learned skills of airway management, venipuncture, peripheral venous access, joint injections, lumbar puncture, and endotracheal intubation during open laboratory sessions. Students will build on their clinical assessment and documentation skills learned in PAS 520 and PAS 521, Basic Life Support (BLS), Advanced Cardiac Life Support (ACLS), and Pediatric Advanced Life Support (PALS) skills through OSCEs and 3-D mannequin simulations.

**Semester hour(s):** 3.0

**Prerequisite(s):** PAS 500, 505, 510, 515, 516, 517, 520, 521, 535, 536, 545, 550, 551, 560, and 575

### **PAS 550 Clinical Medicine I**

This course is designed to examine the epidemiology, etiology, clinical presentation, diagnostic evaluation, management, and follow-up of various diseases and disorders encountered in the primary care setting. Students will learn how to formulate differential diagnoses, recognize important history and physical examination clues, order appropriate diagnostic studies, interpret the results of the diagnostic studies, and apply this information to the diagnosis and treatment of various diseases and disorders encountered in the primary care setting. This course emphasizes diseases and disorders related to the immune (infectious disease), hematologic (including oncology), renal, ophthalmologic, otolaryngologic, endocrine, cardiovascular, and pulmonary systems.

**Semester hour(s):** 9.5

**Prerequisite(s):** PAS 500, 505, 510, 515, 520, and 575

## **PAS 551 Clinical Medicine II**

This course is a continuation of Clinical Medicine I (PAS 550) examining the epidemiology, etiology, pathophysiology, clinical presentation, diagnostic evaluation and management of various diseases and disorders. Students will learn to correlate epidemiologic data, physiology and pathophysiology concepts, and history and physical examination findings to formulate differential diagnoses for common complaints found in the primary care setting. Students will learn what diagnostic studies are indicated for a given clinical presentation, how to interpret the results of those diagnostic studies, and how to decide if follow-up testing is required. Students will also learn the appropriate pharmacologic and non-pharmacologic management for common complaints found in the primary care setting. Emphasis in this course will be on conditions of the neurologic, gastroenterologic, rheumatologic, musculoskeletal, and reproductive systems.

**Semester hour(s):** 9.5

**Prerequisite(s):** PAS 500, 505, 510, 515, 516, 520, 521, 535, 550, 560, and 575

## **PAS 552 Clinical Medicine III**

This course is a continuation of Clinical Medicine I (PAS 550) and Clinical Medicine II (PAS 551) studying the epidemiology, etiology, pathophysiology, clinical presentation, diagnostic evaluation, and management of common conditions encountered in the primary care setting. This course will focus on the health maintenance and evaluation and management of common disorders encountered in pediatric and geriatric patients. Students will also learn the etiology, epidemiology, pathophysiology, clinical presentation, diagnostic evaluation, and management of dermatologic conditions encountered in the primary care setting. Additionally, students will learn how to evaluate and manage common conditions encountered in the hospitalized patient and provide for patient safety.

**Semester hour(s):** 5.0

**Prerequisite(s):** PAS 500, 505, 510, 515, 516, 517, 520, 521, 535, 536, 545, 550, 551, 560, and 575

## **PAS 560 Research Methods**

This course emphasizes the incorporation of evidence-based medicine, through evaluation and interpretation of current research, into clinical practice. Students will become familiar with research methodology and various forms of research presentation. Methods for critically appraising medical literature and strategies for keeping current with new medical findings are stressed throughout the course. Additionally, students will be instructed on how to complete patient education materials, poster presentations, clinical application papers, and research papers.

**Semester hour(s):** 2.0

**Prerequisite(s):** PAS 500, 505, 510, 515, 520, and 575

## **PAS 565 Surgery and Emergency Medicine**

In this course students will learn the epidemiology, etiology, pathophysiology, clinical presentation, diagnostic evaluation, and management of common surgical conditions and emergent medical conditions. Students will learn the important concepts necessary for pre-, intra-, and post-operative care of surgical patients. Students will also learn how to prioritize the evaluation and management of patients presenting with acute surgical and emergent medical conditions. Students will have the opportunity to practice concepts learned in this course and build on their clinical assessment and documentation skills, Basic Life Support (BLS), Advanced Cardiac Life Support (ACLS), and Pediatric Advanced Life Support (PALS) skills through OSCEs and 3-D mannequin simulations.

**Semester hour(s):** 2.0

**Prerequisite(s):** PAS 500, 505, 510, 515, 516, 517, 520, 521, 535, 536, 545, 550, 551, 560, and 575

### **PAS 575 Public Health Issues**

This course will introduce students to public health initiatives unique to the United States, and more specifically, rural Appalachia. The areas of health communication and cultural competency will be discussed as it applies to public health initiatives. Students will identify community resources and health services of benefit to individual patients and the community.

**Semester hour(s):** 2.0

**Prerequisite(s):** Matriculation into the LMU-SMS PA Program

### **PAS 600 Capstone Project**

This course is designed to enable PA students to interpret research, write scholarly papers on approved topics in clinical medicine and do various other activities, including obtaining certifications and participation in continuing medical education which leads to professional development of the student.

**Semester hour(s):** 4.0

**Prerequisite(s):** PAS 500, 505, 510, 515, 516, 517, 520, 521, 525, 535, 536, 545, 546, 550, 551, 552, 560, 565 and 575

### **PAS 610 Family Medicine**

This is a required 8-week rotation in family practice under the supervision of a clinical site preceptor. The student will gain experience and be able to integrate the knowledge and skills learned during the didactic phase to interact with patients and their families, order and interpret lab and diagnostic tests, evaluate, and manage patients effectively. Students will have the opportunity to manage acute and chronic care in addition to patient education and increase their knowledge in the use of psychoactive pharmaceuticals. (Minimum of 240 hours for rotation)

**Semester hour(s):** 8.0

**Prerequisite(s):** PAS 500, 505, 510, 515, 516, 517, 520, 521, 525, 535, 536, 545, 546, 550, 551, 552, 560, 565 and 575

### **PAS 620 Internal Medicine**

This is a required 8-week rotation in internal medicine under the supervision of a clinical site preceptor. The student will gain experience and be able to integrate the knowledge and skills learned during the didactic phase to interact with patients and their families, order and interpret lab and diagnostic tests, evaluate, educate patients about health maintenance, review patient records and evaluate established patients for their continual medical care. Students will have the opportunity to manage acute and chronic care in addition to patient education. With experience in both inpatient and outpatient settings, the student will be able to recognize emergent, acute, and chronic diagnoses and participate in the necessary continuity of care for each. (Minimum of 240 hours for rotation)

**Semester hour(s):** 8.0

**Prerequisite(s):** PAS 500, 505, 510, 515, 516, 517, 520, 521, 525, 535, 536, 545, 546, 550, 551, 552, 560, 565 and 575

### **PAS 625 Behavioral Medicine**

This is a required 4-week rotation under the supervision of the site preceptor in which students will have the opportunity to learn about behavioral health conditions and interact with patients and their families. The student will gain experience in interviewing and assessing the behavioral health patient, ordering and interpreting lab and diagnostic tests, evaluating, and managing patients in a behavioral health setting. (Minimum of 120 hours for rotation)

**Semester hour(s):** 4.0

**Prerequisite(s):** PAS 500, 505, 510, 515, 516, 517, 520, 521, 525, 535, 536, 545, 546, 550, 551, 552, 560, 565 and 575

### **PAS 630 Emergency Medicine**

This is a required 4-week rotation under the supervision of the site preceptor in which the student will have the opportunity to evaluate and treat a wide variety of urgent, emergent and life-threatening conditions. The student will learn to triage patients, interact with patients' families, and become more proficient at taking rapid accurate histories, performing physical examinations, ordering appropriate diagnostic tests, and formulating a treatment plan. The student will have the opportunity to improve their oral presentations in a fast-paced environment. This rotation should give the student the opportunity to practice many clinical procedures such as suturing, endotracheal intubation, and ACLS. (Minimum of 120 hours for rotation)

**Semester hour(s):** 4.0

**Prerequisite(s):** PAS 500, 505, 510, 515, 516, 517, 520, 521, 525, 535, 536, 545, 546, 550, 551,



552, 560, 565 and 575

### **PAS 640 Surgery**

This is a required 4 week rotation in surgery under the supervision of a clinical site preceptor. The student will participate in pre, peri, and postoperative care. Students will gain experience in the evaluation of acutely ill surgical patients, assist in surgery, and identify indications, contraindications, and potential complications. (Minimum of 120 hours for rotation)

**Semester hour(s):** 4.0

**Prerequisite(s):** PAS 500, 505, 510, 515, 516, 517, 520, 521, 525, 535, 536, 545, 546, 550, 551, 552, 560, 565 and 575

### **PAS 650 Pediatrics**

This is a required 4 week rotation in pediatrics under the supervision of a clinical site preceptor. The student will refine their history taking and physical examination skills in the pediatric population, perform well child checks, evaluate children for developmental milestones, and diagnose and treat acute and chronic illnesses in children and adolescents. The student will have the opportunity to educate and counsel the patient and their parent or guardian. (Minimum of 120 hours for rotation)

**Semester hour(s):** 4.0

**Prerequisite(s):** PAS 500, 505, 510, 515, 516, 517, 520, 521, 525, 535, 536, 545, 546, 550, 551, 552, 560, 565 and 575

### **PAS 680 Elective I**

This is a required 4-week rotation in a field chosen by the student. This experience gives the student the opportunity to enhance their knowledge and skills in a particular specialty of medicine. The site must be approved by the Director of Clinical Education and will optimally be scheduled later in the clinical year. (Minimum of 120 hours for rotation).

**Semester hour(s):** 4.0

**Prerequisite(s):** PAS 500, 505, 510, 515, 516, 517, 520, 521, 525, 535, 536, 545, 546, 550, 551, 552, 560, 565 and 575

### **PAS 685 Elective II**

This is a required 4-week rotation in a field chosen by the student. This experience gives the student

the opportunity to enhance their knowledge and skills in a particular specialty of medicine. The site must be approved by the Director of Clinical Education and will optimally be scheduled later in the clinical year. (Minimum of 120 hours for rotation).

**Semester hour(s):** 4.0

**Prerequisite(s):** PAS 500, 505, 510, 515, 516, 517, 520, 521, 525, 535, 536, 545, 546, 550, 551, 552, 560, 565 and 575

### **PAS 670 Women's Health**

This is a required 4 week rotation under the supervision of the site preceptor in which students will have the opportunity to see a wide variety of concerns related to the female reproductive system. Students will further develop their knowledge of assessment and treatment, preventive care, and screening recommendations of women's health issues. The rotation will also provide the opportunity for the student to become more familiar with women's health exams, pregnancy, menopause, and infertility. The student will have opportunities to participate in pre- and post-natal care. (Minimum of 120 hours for rotation)

**Semester hour(s):** 4.0

**Prerequisite(s):** PAS 500, 505, 510, 515, 516, 517, 520, 521, 525, 535, 536, 545, 546, 550, 551, 552, 560, 565 and 575

### **PAS 690 Orthopedics**

This is a required 4 week rotation in orthopedics under the supervision of the site preceptor. Students will have the opportunity to develop skills to care for patients with orthopedic problems that can be found in the primary care setting. Students will have the opportunity to participate in pre-, intra-, and postoperative care. (Minimum of 120 hours for rotation)

**Semester hour(s):** 4.0

**Prerequisite(s):** PAS 500, 505, 510, 515, 516, 517, 520, 521, 525, 535, 536, 545, 546, 550, 551, 552, 560, 565 and 575