



**Samford University**

School of Health Professions

Physician Assistant Studies

## Course Descriptions

### **PAST 501 Gross Anatomy**

This course content will be delivered by lectures and student dissection of cadavers. The students will be examining the normal structure of the human body, the embryologic basis of adult anatomy, the relationship between the human body structure and function. Students are expected to become skilled at proper dissection techniques, identification of anatomical structures, and to become proficient at recognition of structural arrangements and structural relationships. Students have the opportunity to further their knowledge of anatomy by using computer-assisted technology, which is available online.

### **PAST 502 Fundamentals of Physiology**

Within this course, students will be introduced to the physiological principles and regulatory processes that underlie the normal function of the human body. This course will be taught utilizing classroom lectures, small group assignments, as well as online media to enhance learning. Through this, the student will develop an understanding of the physiologic responses to changes in normal state of homeostasis and of pathophysiologic alterations that occur in disease. Topics include the physiology of the neuromuscular, cardiovascular, pulmonary, renal, digestive, endocrine and reproductive systems

### **PAST 503 Clinical Laboratory Diagnostics**

An introduction to laboratory diagnostics with an emphasis on pathology, microbiology, hematology, and clinical chemistry. This course utilizes different formats including lecture, practical learning in a clinical laboratory, cost effective diagnostic algorithms and problem-based case scenarios.

### **PAST 504 Foundations of the PA Profession**

Foundation of the PA profession presents and discusses the clinical practice, role, and responsibilities of physician assistants in a team based medical practice. In order to prepare the students for the PA profession, discussion and lectures will be held regarding; appropriate professional behavior and practices, cultural and social awareness, as well as basic concepts for quality healthcare delivery. This course will also examine the future of physician assistants and examine the diversity among health care teams and the physician assistant's role within them. Along with this, students will examine the PA oath and the core ethics that provide the foundation of our profession. In addition, it will also address acceptable practices for physician assistants and the legal limitations that govern physician assistant practice. This course will be delivered in a lecture style format with small group and large group discussions as well as reading assignments outside of the classroom.

### **PAST 505 Biomedical Ethics/Genetics**

The Bio-ethics component of this course is designed to expose the student to legal and ethical dilemmas faced in medical practice. The course presents approaches that facilitate critical thinking through the complex ethical issues that they will encounter in professional practice. In addition, representative opinions are offered. The format will include assigned readings, reflection and application papers, and classroom discussions. Topics include patient autonomy, veracity, truth telling and confidentiality, death and dying in the terminally ill, informed consent, decision making capacity, cultural and religious considerations, euthanasia and physician assisted suicide, genetic screening and stem cell use, and the use of humans in clinical research. Students will develop the ability to recognize and critically evaluate ethical issues as they arise in their professional practice.

The second part of this course is devoted to introducing the foundations of human genetics. By introducing the students to the ethical considerations in genetic testing, we will transition into human genetics and the genome. Topics include normal transmission of dominant and recessive genetic traits, sex-linked/autosomal-linked inheritance, common genetic defects and diseases, inheritance patterns and probabilities, genetic mapping, common risk factors in inherited/acquired.

### **PAST 506 Health Care Policy and Case Management/Risk Management**

This course is an overview of health care management and policy and its applications. This course will provide first year physician assistant students with an introduction to the legal, political and professional issues affecting physician assistant practice. This includes malpractice and risk management.

### **PAST 507 Patient Assessment I**

This is the first course in a three-part series in history and physical examination. An essential and basic skill of physician assistants is the ability to fully evaluate a patient's health status. An accurate medical history and thorough physical examination provides the foundation and basis of such an evaluation. The goal of this course is to provide the physician assistant student with the necessary skills to elicit a comprehensive medical history, perform a complete physical examination, and systematically report his/her findings. A variety of teaching formats will be utilized in delivering the course content, enabling the student with the necessary skills to:

1. Recognize and describe normal and common abnormal clinical conditions
2. Develop the proper techniques for performing a comprehensive physical examination
3. Organize relevant data gathered during history taking and physical assessment, and arranging this in the correct form within the history and physical documentation

### **PAST 508 Fundamentals of Clinical Medicine I**

This is the first class of a three-course series on instruction of clinical medicine. This course prepares students for clinical rotations by providing medical lectures dealing diseases and the pathology associated with them including recognition, diagnosis, and treatment. The course series will expand on information presented in earlier courses, and addresses clinical diseases associated with the Dermatological, Ophthalmologic, Musculoskeletal, Cardiac, Pulmonary, Gastrointestinal, & Neurological systems. Additionally, a brief basic radiology section is included dealing with the principles of radiology, the basic interpretation of chest, abdomen films, as well as basic neurological and musculoskeletal imaging to enhance the students understanding of the diagnostic modalities utilized to diagnose and treat disease processes.

### **PAST 509 Clinical Therapeutics I**

Clinical therapeutics is a three-course series that serves as an introduction to pharmacology with an emphasis on pathology, physiology, pharmacokinetic, pharmacodynamics and pharmacotherapeutic information of a specific drug or drug class will be emphasized. This course utilizes different formats including: lecture, podcasts, cost effective diagnostic algorithms, case based studies and problem-based case scenarios. As the first two courses will examine the pharmacokinetics behind drug classes and medications, the final course will look at the clinical uses of the medications including: dosing, common and trade names for medications, routes of administration, as well as cost and drug allergies.

### **PAST 510 Evaluating Electrocardiography/Diagnostic Imaging**

This course is designed to develop the student's ability to order, interpret, analyze, and evaluate 12 lead electrocardiograms and well as radiologic imaging. The development of these skills are essential to PA providing medical care. Emphasis will be placed on ischemic heart disease, heart blocks, atrial flutter and atrial fibrillation, arrhythmias and multiple other cardiac abnormalities and its appearance on electrocardiogram.

This course will also address the basic interpretation of radiologic studies including common fractures, effusions and fat pad signs, dislocations, and also teach the students the basic techniques used to evaluate both CT and MRI. Students will learn to select, interpret, and evaluate these diagnostic studies to guide their treatment.

### **PAST 511 Fundamentals of Surgery I**

This is the first class in two part course that will delivered by didactic instruction, instructional videos, and case based studies that focuses on the diagnosis and treatment of surgical disease. This course evaluates the signs and symptoms associated with surgical disease processes, the preoperative evaluation of surgical patients, intraoperative surgical care as well as post-operative management involved in their care. This series will systematically evaluate the multiple surgical procedures including procedures in; general surgery, urology, cardiovascular surgery, neurosurgery, orthopedic surgery, trauma and trauma surgery, thoracic surgery, transplant surgery and other core surgical areas providing the students with a solid surgical foundation and the ability to recognize and treat surgical disease processes.

### **PAST 512 Pathophysiology**

This is an introductory pathophysiology course that will enable the students to identify and describe the pathologic processes involved in common medical disorders and diseases. It will focus on the pathologic basis for disease and the recognition of it. It will provide the foundation that the physician assistant student will need as the further there education in clinical medicine.

### **PAST 513 Patient Assessment II**

This is the second course in a three-part series in history and physical examination. We will continue to expand our assessment skills and learn new body systems and exam techniques. An essential and basic skill of physician assistants is the ability to fully evaluate a patient's health status. An accurate medical history and thorough physical examination provides the foundation and basis of such an evaluation. The goal of this course is to provide the physician assistant student with the necessary skills to elicit a comprehensive medical history, perform a complete physical examination, and systematically report his/her findings. A variety of teaching formats will be utilized in delivering the course content, enabling the student with the necessary skills to:

1. Recognize and describe normal and common abnormal clinical conditions
2. Develop the proper techniques for performing a comprehensive physical examination
3. Organize relevant data gathered during history taking and physical assessment, and arranging this in the correct form within the history and physical documentation

### **PAST 514 Fundamentals of Clinical Medicine II**

This is the second course of a three-course series on instruction of clinical medicine. This course prepares students for clinical rotations by providing medical lectures dealing diseases and the pathology associated with them including recognition, diagnosis, and treatment. The course series will expand on information presented in earlier courses, and addresses clinical diseases associated with the Dermatological, Ophthalmologic, Musculoskeletal, Cardiac, Pulmonary, Gastrointestinal, & Neurological systems. Additionally, a brief basic radiology section is included dealing with the principles of radiology, the basic interpretation of chest, abdomen films, as well as basic neurological and musculoskeletal imaging to enhance the students understanding of the diagnostic modalities utilized to diagnose and treat disease processes.

### **PAST 515 Clinical Therapeutics II**

Clinical therapeutics II is a continuation from the first course, and is part two of a three course series that serves as an introduction to pharmacology with an emphasis on pathology, physiology, pharmacokinetic, pharmacodynamics and pharmacotherapeutic information of a specific drug or drug class will be emphasized. This course utilizes different formats including: lecture, podcasts, cost effective diagnostic algorithms, case based studies and problem-based case scenarios. As the first two courses will examine the pharmacokinetics behind drug classes and medications, the final course will look at

the clinical uses of the medications including: dosing, common and trade names for medications, routes of administration, as well as cost and drug allergies.

### **PAST 516 Fundamentals of Clinical Research/Literature Evaluation**

This course is designed to prepare students to critically evaluate medical literature and use as basis for making medical decisions. It will focus on the examination of medical studies, looking at statistics, confounders, and biases within the study that can and often will affect their clinical practice. This class will be presented in a lecture format with small group discussion and assignments, as well as independent media research and reading assignments.

### **PAST 517 Fundamentals of Surgery II**

This is the second class in a two-part course that will be delivered by didactic instruction, instructional videos, and case-based studies that focus on the diagnosis and treatment of surgical disease. This course evaluates the signs and symptoms associated with surgical disease processes, the preoperative evaluation of surgical patients, intraoperative surgical care as well as post-operative management involved in their care. This series will systematically evaluate the multiple surgical procedures including procedures in: general surgery, urology, cardiovascular surgery, neurosurgery, orthopedic surgery, trauma and trauma surgery, thoracic surgery, transplant surgery and other core surgical areas providing the students with a solid surgical foundation and the ability to recognize and treat surgical disease processes.

### **PAST 518 Advanced Procedures I**

This is the first course in a two-part series designed to introduce the student to the technical skills and knowledge required to perform in the operating room and also perform various medical procedures. The course will consist of lectures and practical/technical laboratories and will lay the foundation for the subsequent course. This course begins by teaching the students surgical instrumentation and its uses within the operating room. Emphasis is placed on learning surgical technique including, first assisting, scrubbing, suturing, and wound care. Students will learn this in a live vivisection pig lab performing advanced surgical procedures with faculty instruction.

### **PAST 519 Patient Assessment III-Clinical Decision Making**

This is the third course in a three-part series in history and physical examination. We will continue to expand our assessment skills and will begin to look at the application of these skills in forming working differential diagnoses, ordering and interpreting lab data and imaging, and forming treatment plans. This course will examine common pathologic conditions and focus on critical thinking and making an appropriate diagnosis. This course will also contain instruction in the study of medical ethical considerations, the care of the geriatric patients, difficult patient encounters and cultural considerations to patient care in an effort to develop a well-rounded culturally competent provider.

### **PAST 520 Clinical Medicine III**

This is the third course of a three-course series on instruction of clinical medicine. This course prepares students for clinical rotations by providing medical lectures dealing

diseases and the pathology associated with them including recognition, diagnosis, and treatment. The course series will expand on information presented in earlier courses, and addresses clinical diseases associated with the Dermatological, Ophthalmologic, Musculoskeletal, Cardiac, Pulmonary, Gastrointestinal, & Neurological systems. Additionally, a brief basic radiology section is included dealing with the principles of radiology, the basic interpretation of chest, abdomen films, as well as basic neurological and musculoskeletal imaging to enhance the students understanding of the diagnostic modalities utilized to diagnose and treat disease processes.

### **PAST 521 Clinical Therapeutics III-Practical Application**

Clinical therapeutics III is a continuation from the first and second course, and is part three of a three course series that serves as an introduction to pharmacology with an emphasis on pathology, physiology, pharmacokinetic, pharmacodynamics and pharmacotherapeutic information of a specific drug or drug class will be emphasized. This course utilizes different formats including: lecture, podcasts, cost effective diagnostic algorithms, case based studies and problem-based case scenarios. As the first two courses will examine the pharmacokinetics behind drug classes and medications, the final course will look at the clinical uses of the medications including: dosing, common and trade names for medications, routes of administration, as well as cost and drug allergies. This course will have emphasis on the clinical uses, dosing and indications of the medications learned within the first two courses. This will we mostly presents as case studies with an interactive educational environment.

### **PAST 522 Advance Practice Procedures II**

The course is designed to help the 1st year Physician Assistant student's transition into the 2nd year clinical rotations by exposing them to the operating room environment, the clinic as well as the development of clinical skills that will prepare them for the clinical setting. These will be essential to their clinical year and their professional practice. In this course the students will be divided into three cohorts, with each cohort rotating within the semester to the operating room, medical clinic, and one month of training in advanced techniques. Each cohort will rotate within these areas in four-week cycles.

#### **Cohort A**

In the first portion of this course, the student will be assigned to a specific hospital where they will be given daily assignments through the operating room supervisor. These assignments will include exposure to operating room etiquette, first and second assisting on a variety of surgical procedures, exposure to aseptic technique, and an increasing awareness of surgical conscience. This is not a true clinical rotation, but is designed to acclimate students to the operating room and make them feel more comfortable when they begin clinical rotations. The hours the student will be responsible for are 6:00am to 11:30am, depending on the OR start times at each hospital and the student will be required to spend 80 hours in the operating room during the 4-week rotation. The hospitals through which students will rotate are: St. Vincent's Medical Center, St. Vincent's East, Trinity Medical Center, Baptist Medical Center Princeton, Gadsden Medical Center, Baptist Medical Center Shelby, Huntsville, Cancer Center of America and

other local hospitals. There will be a hospital orientation prior to the beginning of the class with the faculty.

### **Cohort B**

In the second portion of this course students will develop advanced clinical skills and techniques over a four-week block that will be imperative for their clinical their and practice. This includes: central venous lines, arterial lines, intravenous lines, naso-gastric tubes, arterial lines, ultrasound and its uses in invasive procedures, intubation, and draining skin lesions and abscesses. Students will perform these procedures under faculty supervision with a focus on sterile technique, as well as overall technique and understanding of the procedure.

### **Cohort C**

In the third portion of this course students will be assigned to a physician assistant within the clinical setting enabling them to gain valuable experience before transitioning into the clinical year. Students will be performing history and physical exams, ordering tests, interpreting tests and building differential diagnoses.

### **PAST 523 Behavioral Health**

This course is designed to provide an overview of the field of behavioral medicine appropriate to a PA. The student will be able to relate the etiology, epidemiology, clinical presentation, diagnostic features, prognosis, appropriate differential diagnoses, screening, prevention, acute, chronic and end-of-life (as appropriate) treatment plans, and referral in relation to behavioral medicine patients and their associated disorders. This course will also cover rehabilitation, adherence to treatment plans, behavior modification, basics of counseling, culturally competent care, human sexuality as well as the response to stress and illness.

### **PAST 524 Pre-Clinical Seminar**

The course is designed to bridge the gap from the didactic year to the clinical year. The student will spend time in an assigned clinical site with a clinical year student. This will allow the student to gain insight of the professional behavior required during the clinical year.

### **PAST 525 Advanced Medical Simulation**

Laboratory simulated clinical experience to provide supervised practice in clinical skills, practical procedures, teamwork, patient management, and decision making in preparation for the student's clinical year (1 semester credit), meeting once a week for 2 hours. This course will be an interactive team-based learning environment where students will focus on patient assessment, diagnoses, invasive procedures and treatment. This will include ACLS, BLS, intubation, and multiple other advanced practice techniques.

**PAST 601-612 Clinical Service I – XII**

During the clinical phase, students complete 12 four-week rotations (7 mandatory and 5 elective). The clinical phase provides the student with the experience necessary to diagnose, treat, and manage a broad spectrum of medical and surgical conditions. Students will learn the importance of working in interprofessional teams with physicians, physician assistants, nurses, and various other members of the health care team.

**PAST 613 Summative Review**

This course is designed to provide end of program review course. This is to prepare the student for Physician Assistant national certifying examination (PANCE). Also, there will be the ARC-PA required objective structured clinical examination (OSCE), programmatic summative examination and a 350 question PANCE style practice examination. This is the culmination of the student's clinical year. Students will need to demonstrate the mastery of the clinical year goals.