

# Wake Forest University Physician Assistant Program

## Curriculum Description

### Class of 2017

The Wake Forest University Physician Assistant Program has a unique history of innovation in medical education. From its beginning in 1969 it has featured small group, self-directed learning stimulated by real patient medical problems. The Masters Curriculum strengthens this tradition through an inquiry-based learning model with exceptional basic science, pharmacology, and evidence-based medicine with a focus on primary health care delivery. Our vision is to create a future generation of leaders for the PA profession. Our integrated curriculum incorporates the following educational goals of the Wake Forest Department of Physician Assistant Studies and the Wake Forest School of Medicine:

- Self-directed Learning and Lifelong Learning Skills
- Core Biomedical Science Education
- Evidence Based Medicine
- Clinical Skills
- Problem Solving and Clinical Reasoning Skills
- Interviewing and Communication Skills
- Information Management Skills
- Professional Attitudes and Behavior

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## Preclinical Year

### Unit 1

#### **Fundamentals of Basic Sciences**

The Fundamentals of Basic Science course is an intensive four-week human anatomy and physiology block presented at the beginning of the Preclinical Year. Students have the opportunity to develop a comprehensive model of the human body, building from molecules to the gross human form in a clinically relevant context. Course topics include cell and tissue metabolism, the musculoskeletal system, the nervous system, the cardiovascular system, the pulmonary system, the digestive system, and the urogenital system. Students are engaged in learning activities using multimodal approaches that include lecture-based instruction, self-inquiry, and practical laboratory experience. Following the completion of this basic science immersion, subsequent course work in the Preclinical Year reinforce this original basic science knowledge and introduces new content within systems-based primers and applied basic science activities.

#### **Fundamentals of Basic Sciences Course**

PA 626 (4 hrs.)

## Units 2 – 5

### **Clinical Reasoning and Inquiry-based Learning (IBL)**

Clinical Reasoning and Inquiry-based Learning (IBL) is a five-part course that spans the Preclinical Year. 'Inquiry-based Learning' is a broad term that describes educational approaches driven by the process of inquiry. Supported by faculty facilitation, students pursue lines of inquiry, drawing upon existing knowledge and experience. Students then identify and pursue new learning issues and objectives. Students seek evidence to support their ideas and assume responsibility for appropriate analysis and delivery of findings to a small group of peers and a faculty facilitator. Each student is engaged as a partner in the learning environments and is critical to the process of discovery and clinical reasoning.

The IBL course is the anchor to the *Wake Forest Method* – a constructivist model for PA education. The course uses patient cases and interactive technology which simulate the clinical practice experience. The course creates an enhanced learning environment that challenges students to direct their own learning and self-identify limitations in knowledge and proficiency. The small group model, or team approach, used in the delivery of the course content fosters active and applied learning, ensures a holistic approach to patient care and clinical reasoning, and facilitates the professional development of students within team-based care. Faculty facilitation supports a multi-dimensional approach to clinical reasoning by ensuring integration of the science of medicine, the art of medicine, health care delivery, and approaches to decision making that address the unique needs and respect the values and beliefs of patients.

In the IBL course, students face increasingly complex and diverse patient cases. The complexity within the mechanisms of illness and management increases. Students are presented with patient cases that highlight increasingly difficult and complex barriers to optimal patient health. The design and sequencing of the cases supports the introduction, development and reinforcement of medical knowledge and clinical reasoning.

#### **Clinical Reasoning and Inquiry-based Learning (IBL) Course**

PA 637 (1 hr.)

PA 611 (1 hr.)

PA 613 (2 hrs.)

PA 615 (2 hrs.)

PA 617 (1 hr.)

### **Being a PA**

Being a PA (BPA) is a five-part course which introduces professional practice issues specific to the physician assistant and further develops students as professionals with emphasis on mindfulness and exceptional leadership character. Students begin to assimilate the art of medicine and acquire a patient-centered approach to care, which is complimentary to training in the medical interview, physical examination, diagnosis, and management of medical illnesses. Students gain familiarity and engage current topics in medicine, including public health, health care delivery, continuous professional development, the medical humanities, and advocacy skills. The BPA course spans the Preclinical and Clinical Years of training. Multiple approaches are used including lecture-learner, discussion and reflection, self-inquiry, community engagement, and interprofessional experiences. Experienced faculty and providers serve as role models and facilitate the construction of students into successful PAs and leaders. Course topics include these: history of the PA profession, professional organizations,

professionalism, communication skills, coding and reimbursement, health delivery and insurance, health reform, biomedical ethics, health literacy and cultural competency, addiction illness, diversity issues, domestic violence, human sexuality, and end of life issues. The Being a PA course supports and enriches the clinical reasoning and inquiry-based learning experience.

#### **BPA Course**

PA 642 (1 hrs.)

PA 643 (2 hrs.)

PA 644 (1 hrs.)

PA 645 (1 hrs.)

PA 744 (1 hr.)

### **Clinical and Diagnostic Skills**

Clinical and Diagnostic Skills (CDS) is a four-course sequence that provides the student with a functional understanding of the appropriate use and interpretation of clinical testing. Through exploration of each of the major body systems, students will learn to select, interpret and evaluate clinical laboratory, imaging, electrocardiography and other tests used for diagnosis, treatment, management, and monitoring of common disorders.

In the CDS course laboratory, students are instructed in the performance and interpretation of basic laboratory and other diagnostic procedures. Classroom and laboratory instruction in specific tests and procedures is structured to complement the clinical reasoning and inquiry-based learning experience.

#### **Clinical and Diagnostic Skills Course**

PA 621 (1 hr.)

PA 622 (1 hr.)

PA 623 (1 hr.)

PA 624 (1 hr.)

### **Foundations of Medicine and Surgery**

The Foundations of Medicine and Surgery (FMS) is a four-part course that spans the Preclinical Year. The current practice of medicine requires a strong foundation in the biomedical sciences and evidence-based medicine. It also requires deep understanding of concepts underlying health and disease at both the individual and population levels. The FMS course begins with the essential elements of human structure and function, and the course sections progress through each body system, highlighting manifestations and mechanisms of disease across the lifespan and across various health care settings.

The FMS course supports and enriches the clinical reasoning and inquiry-based learning experience. Course content includes primers and lecture-learner activities in applied basic sciences, including anatomy, physiology, and genetics. The FMS course delivers core medical knowledge across the key areas of medicine, including dermatology, hematology, cardiology, pulmonology, endocrinology, gastroenterology, neurology, orthopedics and sports medicine, psychiatry, nephrology, urology, infectious diseases, and obstetrics & gynecology. Emphasis is given to the individualization of care across developmental stages with emphasis on key issues facing neonates and pediatric patients, adolescents, women (including pregnant and lactating mothers), geriatric patients, and vulnerable populations.

The FMS course serves to build foundational knowledge which is requisite for success in other small group and applied learning course activities. Students learn to recognize, prevent and manage common clinical disorders; support the maintenance of optimal health; understand the pathophysiologic alterations underlying common medical illnesses; follow best practices for approaching patients with illness or health maintenance goals; reinforce clinical reasoning skills; recognize and use guidelines for preventative care and disease screening; and achieve a sound understanding of appropriate use of diagnostic and therapeutic interventions for clinical care across a wide spectrum of medical and surgical conditions in various settings.

### **Foundations of Medicine and Surgery Course**

PA 627 (1 hr.)

PA 628 (3 hrs.)

PA 629 (2 hrs.)

PA 636 (2 hrs.)

### **Patient Care**

The Patient Care (PC) course is a four-part series that provides foundational knowledge, introduces practical skills, and develops professional attitudes and behaviors relevant to the clinical assessment of a patient. Students are instructed in physical examination, evidence-based history taking, preventive medicine and appropriate documentation. Instruction in the art of assessment is complimented by topics in evidence-based medicine and clinical problem solving. Multiple instructional approaches are used, and students undergo performance-based evaluation. Methods used include lecture-learner activities, small group activities, practical and laboratory experiences, simulated patient experiences and introductory immersions into various clinical settings. An emphasis of the course is the integration of physical examination and medical history taking with basic and other clinical sciences. Students also learn to document the patient assessment appropriately and interact with various clinical informatics systems and health records. The Patient Care course supports and enriches the clinical reasoning and inquiry-based learning experience.

### **Patient Care Course**

PA 612 (3 hrs)

PA 614 (4 hrs)

PA 616 (2 hrs)

PA 618 (2 hrs)

### **Pharmacology and Therapeutics**

This four-course series provides students with a working knowledge of the application of pharmacologic agents for the maintenance of health, prevention of illness, and the treatment of common disease processes or related symptoms.

The series begins by delivering the fundamental principles of pharmacology necessary for an understanding of rational and effective prescribing and monitoring. Principles include pharmacokinetics, pharmacodynamics, pharmacogenetics, human behavior impacting adherence and therapeutics. Discussions of the impact of stage of development and disease on the drug safety and drug development process will be made. Awareness of key roles of other health professionals relating to safe, effective drug therapy will be provided to enhance interprofessional care and patient safety.

The series then presents fundamental principles of pharmacotherapy by describing rationale and recommended treatment plans for a broad range of disease processes, symptoms and conditions. The course series is aligned with concurrent clinical problem solving and applied basic sciences coursework. Students learn to individualize pharmacologic regimens based on drug specific parameters, clinical evidence, comorbidities, drug mechanism of action, drug safety, treatment cost and monitoring parameters. The Pharmacology and Therapeutics course supports and enriches the clinical reasoning and inquiry-based learning experience.

### **Pharmacology and Therapeutics Course**

PA 631 (1 hr.)

PA 632 (1 hr.)

PA 633 (1 hr.)

PA 634 (1 hr.)

## **The Graduate Project**

The Graduate Project is a four-part course in which students work with the course director and a faculty mentor to formulate a relevant topic, review the related literature, and critically appraise and synthesize results. Students present summary findings from their project to a faculty panel and provide a defense, prepare a scholarly manuscript, and present the project in a poster session at the Graduate Project Symposium. The Graduate Project is purposefully designed to provide an opportunity for students to engage in research or other scholarly activities and to equip them with the skills needed to engage in evidence-based medical decision making and informed, shared decision making with patients. All projects must be relevant to the practice of medicine or patient care and must include a literature review; within these limits, a variety of topics and types of projects are possible. Projects must either represent original research or emulate a form of scholarship as defined by Boyer—the scholarship of discovery, integration, application, or teaching and learning.

### **The Graduate Project Course**

PA 708A (.5 hr.)

PA 708B (.5 hr.)

PA 708C (1 hr.)

PA 708D (1 hr.)

## **The Sacred Seven (elective)**

The Sacred 7 is a four-part health humanities elective. The course name was chosen to echo the seven questions students are taught to ask when eliciting a patient's history of present illness. This course's sacred seven are empathy, compassion, humility, integrity, reflection, resilience, and self-awareness; and course activities are planned to provide students with opportunities to explore and develop these qualities in themselves. During the Preclinical Year, sessions complement and enhance the organ-system-based science and medicine students are learning in the required curriculum. Using literature, film, visual arts, writing, reflection, meditation, and discussion, students explore nonclinical dimensions of the scientific material in which they are immersed. Course topics specifically relate to the content of the curriculum in its natural progression throughout the Preclinical Year of training. During the Clinical Year, students prepare parallel charts of patients seen during rotation and share them with classmates during callbacks. In sharing parallel charts and in responding to those of their classmates, students are able to explore how the course objectives can be manifested during the actual care of patients.

According to Rita Charon, the physician who developed the parallel chart as a teaching tool, this device enables students “to recognize more fully what their patients endure and to examine explicitly their own journeys through medicine.” Course directors are Tanya Gregory, PhD, and Jill Grant, PA-C, MMS, MS; various other members of the faculty also act as facilitators for sessions during the Preclinical Year.

**The Sacred Seven Course**

PA 650 (1 hr.)

PA 715 (1 hr.)

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**Clinical Year Preparation**

The Clinical Year Preparation (CYP) course is designed to prepare the PA student for entry into the Clinical Year and to meet the multiple requirements that are mandated by the clinical precepting sites. These required events, along with lectures and workshops covering a variety of clinical skills, will make up the predominant part of the curriculum. Additional sessions will orient students to clinical year, evaluate skills and collect feedback on the Preclinical Year curriculum.

**Clinical Year Preparation**

PA 691 (4 hrs.)

## Clinical Year

**PA 708D The Graduate Project (1 hr.)** (see course description above)

**PA 744 Being a PA (1 hr.)** (see course description above)

**PA 715 The Sacred Seven elective (1 hr.)** (see course description above)

### CLINICAL ROTATION DESCRIPTIONS – CORE AND ELECTIVE ROTATIONS

#### Core Rotations

**PA 701 Family Medicine (4 hrs.)**

This four-week clinical course provides the PA student with experience in outpatient evaluation of pediatric and adult patients, including health maintenance exams and acute and chronic illness.

**PA 702 Surgery (4 hrs.)**

This four-week clinical course provides the PA student with hands-on experience in the operating room as well as pre- and postoperative assessment and outpatient follow-up.

**PA 703 Emergency Medicine (4 hrs.)**

This four-week clinical course provides the PA student with experience in triage, evaluation, and management of patients in the emergency room setting.

**PA 704 Women's Health (4 hrs.)**

This four-week clinical course provides the PA student with experience in managing common women's health disorders. Emphasis is placed on prenatal and gynecologic conditions throughout the rotation experience. Students may also gain exposure to labor and delivery, as well as the surgical aspects of this specialty.

**PA 724A Women's Health (2 hrs.)** – Two-week rotation

**PA 724B Women's Health (3 hrs.)** – Three-week rotation

**PA 724C Women's Health (1 hr.)** – One-week rotation

**PA 705 Pediatrics (4 hrs.)**

This four-week clinical course provides the PA student with experience in the management of pediatric patients. The student will have the opportunity to perform well-child exams as well as problem-oriented exams under the supervision of a preceptor working in a general pediatrics setting.

**PA 705A General Pediatrics Rotation (2 hrs.)**

Students will spend two weeks in a general pediatrics setting.

**PA 725 Pediatric Subspecialty Rotation (2 hrs.)**

Students will spend two weeks in a pediatric subspecialty setting.

**PA 706 Internal Medicine (4 hrs.)**

This four-week course provides the PA student with an in-depth knowledge of a variety of medical problems and the skills necessary for providing patient care in an inpatient, hospital-based setting.

**PA 709 Behavioral Health (4 hrs.)**

This four-week course will expose students to outpatient and/or inpatient behavioral health and psychological disorders & diseases.

**Selective Rotation****PA 720 Subspecialty Selective Rotation (4 hrs.)**

This four-week clinical course provides the PA student with experience in a medical or surgical specialty that is featured as a topic area on the Physician Assistant National Certifying Exam (PANCE). Students may select a medicine track or a surgical track.

**Medicine track:**

- General outpatient medicine
- Cardiology
- Endocrinology
- Gastroenterology
- Hematology/Oncology
- Infectious diseases
- Neurology
- Pulmonology

**Surgical Track:**

- Orthopedics
- Dermatology
- ENT
- Urology

**Elective Rotations**

Each four-week course is chosen from all of the medical specialties and subspecialties. Each student will take two rotation electives during the clinical year.

**PA 707A Elective I (4 hrs.)****PA 707B Elective II (4 hrs.)**