

Wake Forest University Physician Assistant Program

Curriculum Description

Class of 2015

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 a 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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Pre-Clinical Year

Clinical Reasoning and Inquiry-based Learning (IBL)

Clinical Reasoning and Inquiry-based Learning (IBL) is a four-course series spanning the Pre-Clinical 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 611 (1 hr.)

PA 613 (2 hrs.)

PA 615 (2 hrs.)

PA 617 (1 hr.)

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 Pre-Clinical year. Students acquire competency in human structure, function and development with practical applications in human anatomy and physiology. 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 across multimodal approaches from lecture-based instruction, self inquiry and practical laboratory experiences. 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.)

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 (IBL) 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.)

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.

BPA Course

PA 641 (1 hr.)

PA 642 (1 hrs.)

PA 643 (2 hrs.)

PA 644 (1 hrs.)

PA 645 (1 hrs.)

PA 744 (1 hr.)

Patient Care

The Patient Care course (PC) 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 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.

Sections:

History and Medical Decision Making

History and Medical Decision Making (HMDM) is a four-part section of the Patient Care course which focuses on an evidence-based approach to patient history taking and medical decision making which maximizes quality of care and patient safety. The HMDM course introduces key concepts of evidence-based medicine including formulating a clinical question, identifying and evaluating evidence. The course will inform students of basic statistical and research methods, as well as interpretation, critical appraisal, and application of various types of research. Students will also learn strategies that assist in engaging patients in shared decision making.

Essentials of Physical Examination

Essentials of Physical Examination (EPE) is a two-part section of the Patient Care course that introduces students to the art and science of physical examination. Course activities develop and evaluate student competency in utilizing physical examination skills that are adaptable to different healthcare practice environments and appropriate for the individual patient. Students acquire an understanding for a broad range of physical examination techniques and maneuvers, which are delivered within an organ system-based approach. Performance-based evaluation of learners is used to ensure competency with thorough and accurate physical evaluation of the patient as well as a professional approach that demonstrates respect for patients. Skills acquired in the EPE course are applied through practical applications in other educational activities, such as within the Applied Patient Assessment section of Patient Care.

Applied Patient Assessment

Applied Patient Assessment (APA) is a four-part section of the Patient Care course which integrates basic science concepts with the history-taking and physical examination techniques used to formulate a comprehensive patient assessment. Students participate in “hands-on” practical sessions facilitated by faculty members to acquire competency in assessment skills. Students must synthesize knowledge to demonstrate a rationale for selection of maneuvers and interpretation of findings. The APA course develops the ability of learners to evaluate patients effectively in the delivery of preventive, emergent, acute, chronic, rehabilitative, palliative and end-of-life care. Practical applications provide instruction in the appropriate application of these clinical skills across the lifespan and within various settings. Emphasis is also placed on performance of oral patient presentations and the development of proper documentation for all types of patient encounters.

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 the mechanisms of action and other pharmacologic properties prerequisite to rational and effective prescribing and monitoring. Principles which support the clinical application of drugs to dynamic patients, who exist in a variety of health states, will be shared. 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. Students apply evidence based practice behaviors through S-T-E-P-S criteria with case-based exercises and group discussions which are designed to develop pharmacotherapy decision making skills. These case exercise also inform students of strategies to educate patients and caregivers effectively about the safety and efficacy of prescribed drug therapies.

Pharmacology and Therapeutics Course

PA 631 (1 hr.)

PA 632 (1 hr.)

PA 633 (1 hr.)

PA 634 (1 hr.)

Clinical and Diagnostic Skills

Clinical and Diagnostic Skills (CDS) is a four-course sequence focusing on providing the student with a functional understanding of the appropriate uses and interpretations of clinical diagnostic testing. Through exploration of each of the major body systems, this courses presents instruction in medical procedures used in the diagnosis and treatment of the common disorders of each system. Students will learn to select, interpret and evaluate clinical laboratory, imaging, electrocardiography and other diagnostic tests used for diagnosing, treating, and managing patient needs, perform clinical procedures, as well as perform the basic clinical laboratory procedures most often performed in an ambulatory practice.

Clinical Year Preparation

Clinical Year Preparation (CYP) is a two-week section of the CDS course which is designed to prepare the PA students for entry into the Clinical Year, during which students are subject to multiple requirements that are mandated by the clinical precepting sites. These requirements, along with lectures and workshops covering a wide variety of clinically relevant skills, will make up the predominant part of the curriculum. Additional sessions will cover orientation topics, evaluation sessions and curriculum feedback. Occasionally special sessions are conducted when guest speakers can be arranged.

Clinical and Diagnostic Skills Course

PA 621 (1 hr.)

PA 622 (1 hr.)

PA 623 (1 hr.)

PA 624 (1 hr.)

PA 629 (1 hr.)

The Graduate Project

The Graduate Project is a two-part course in which students apply concepts and skills related to evidence-based medicine and decision making. Students work collaboratively and under the supervision of experienced faculty mentors to develop a scholarly project or participate in research activity, which may include educational research, community participatory research or biomedical science. For the development of a scholarly product or publication-ready manuscript, students formulate a relevant topic, perform a thorough review of the literature, critically appraise and synthesize results, and develop a publication-ready manuscript. Students present summary findings to a faculty panel and provide a defense. The Graduate Project is purposefully designed to provide an opportunity for students to engage in research or other scholarly activities. All projects must be relevant to the practice of medicine or patient care. 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 (1 hr.)

PA 708B (1 hr.)

Clinical Year

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

PA 644 Being a PA (1 hr.) (see course description above)

Clinical Rotation Descriptions – Core and Elective Rotations

PA 701 Family Medicine (4 hrs.)

This four week 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 Obstetrics and Gynecology (4 hrs.)

This four week course provides the PA student with experience in managing common gynecologic disorders. Obstetric experience will include labor and delivery plus routine prenatal and postpartum care. Students will also gain experience in the surgical aspects of this specialty.

PA 705 Pediatrics (4 hrs.)

This four week course provides the PA student with experience in outpatient and some in-patient 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 the pediatric specialty.

PA 706 A & B Internal Medicine (4 hrs. each)

These two four-week clinical courses provide the PA student with experience in internal medicine and other medicine specialties. The student will gain in-depth knowledge of a variety of medical problems and learn the skills necessary for providing patient care in an in-patient, hospital-based setting for four weeks and an outpatient setting for 4 weeks.

PA 709 Psychiatry (4 hrs.)

This four week course will expose students to both in-patient and out-patient psychiatric and psychological disorders & diseases. A generalist emphasis underlies the objectives of this rotation.

Clinical Rotation Electives**PA 707A Elective I (4 hrs.)****PA 707B Elective II (4 hrs.)****PA 707C Elective III (4 hrs.)**

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