

PRECLINICAL EDUCATION

Unit 1

Fundamentals of Basic Sciences

The Fundamentals of Basic Science (FBS) course is an intensive four-week human anatomy and physiology course 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 reinforces 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 four-course series that spans the Preclinical Year. The IBL course series is the anchor to the *Wake Forest Method* – a constructivist model for PA education. The course uses patient cases and interactive technology that simulate the clinical practice experience, creating 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, fosters active and applied learning, ensures a holistic approach to patient care and clinical reasoning, and facilitates professional development 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 series, 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) Series

PA 611 (1 hr.)

PA 613 (2 hrs.)

PA 615 (2 hrs.)

PA 617 (1 hr.)

VITALS of Being a PA

VITALS of Being a PA (VBPA) is a four-course series that spans the Preclinical Year. The practice of medicine encompasses more than interviewing and examining patients, and diagnosing and treating illnesses. Awareness of – and appreciation for – the contexts surrounding, intersecting, and supporting medical practice are necessary for successful practice as a PA. This course is designed to provide you with that awareness and appreciation.

A variety of methods may be used for instruction, including readings, lectures, films, community service experiences, student presentations, panel presentations, written assignments, small group collaborative work, and classroom discussions. Topics covered may include biomedical ethics, clinician-patient communication, cultural humility, end-of-life care, health disparities, health literacy, the healthcare system, the history of the PA profession, implicit bias, narrative medicine, PA and medical professional organizations, professionalism in medicine, provider wellness and self-care, and spirituality and faith in medicine.

In addition to the required curriculum, you will also be invited to attend the monthly optional supplemental sessions that constitute the Reflection and Resilience curriculum (R&R). These sessions focus on exploring selected nonclinical dimensions of the medicine you are learning. Methods used may include films, readings, discussion, activities, reflective writing, and various types of wellness training.

VITALS of Being a PA Series

PA 642 (1 hr.)

PA 643 (2 hrs.)

PA 644 (1 hr.)

PA 645 (1 hr.)

Clinical and Diagnostic Skills

Clinical and Diagnostic Skills (CDS) is a four-course series that spans the Preclinical Year. The course series 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, electrocardiographic, 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 diagnostic procedures and other advanced interventions. 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 Series

PA 621 (1 hr.)

PA 622 (2 hrs.)

PA 623 (1 hr.)

PA 624 (1 hr.)

Foundations of Medicine and Surgery

The Foundations of Medicine and Surgery (FMS) is a four-course series 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 series begins with the essential elements of human structure and function and progresses through each body system, highlighting manifestations and mechanisms of disease across the lifespan and across various health care settings.

The FMS course series supports and enriches the clinical reasoning and inquiry-based learning experience. Course series content includes primers and lecture-learner activities in applied basic sciences, including anatomy, physiology, and genetics. The course series 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 series serves to build foundational knowledge required 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 Series

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-course series that provides students with foundational knowledge, introduces practical skills, and develops professional attitudes and behaviors relevant to the clinical assessment of a patient. Students learn physical examination skills, evidence-based history taking, preventive medicine, and appropriate documentation, including use of various clinical informatics systems and health records. Instruction in the art of assessment is complimented by topics in evidence-based medicine and clinical problem solving. Instructional methods include lecture-learner activities, small-group activities, practical and laboratory experiences, simulated patient experiences and introductory immersions into various clinical settings. Students undergo performance-based evaluation. The course emphasizes integrating medical history taking and physical examination with basic and other clinical sciences. The Patient Care course supports and enriches the clinical reasoning and inquiry-based learning experience.

Patient Care Series

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, effective prescribing and monitoring. Principles include pharmacokinetics, pharmacodynamics, precision medicine, and human behavior impacting adherence and therapeutics. The impact of stage of development and disease on the drug safety and drug development process is discussed. 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 rationales 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-course series in which students work to formulate a relevant topic, review the related literature, and critically appraise and synthesize results. Students orally 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 series spans the Preclinical and Clinical Years of training.

The Graduate Project Series

PA 708A (0.5 hr.)

PA 708B (0.5 hr.)

CLINICAL EDUCATION

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

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

PA 744 Preparing Future Professionals (1 hr.)

The Preparing Future Professionals (PFP) course spans the Clinical Year. Course activities are divided among four “call-backs” interspersed at 2-3 month intervals during the clinical year. The course content supports the students’ clinical year training and growth via focused sessions on medical education, professional, ethical, leadership and health system topics relevant to current and emerging areas of PA practice.

PA 691 Clinical Year Preparation (4 hrs.)

This 4-week course offers lectures, clinical skills workshops, electronic medical records training, medical interpreter orientation, ACLS training, various orientation sessions, and other activities that are designed to prepare the student for clinical rotations.

Core Rotations

PA 700 Primary Care (12 hrs.) This twelve-week clinical course provides the PA student with experience across the realms of primary care, to include family medicine, women’s health, and pediatrics. Students will engage in the outpatient evaluation of pediatric and adult patients, including health maintenance exams and the management of acute and chronic illness across the lifespan. Students will also manage common women’s health disorders across primary care or obstetrics/gynecology specialty settings, gaining experience in prenatal and gynecologic conditions. Students may gain exposure to the care of women within integrated practice settings, to labor and delivery, and to surgical care within women's health. This course also 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 with expertise in pediatric practice. Students gain experience in general pediatrics; they may also gain experience in a pediatric subspecialty area. This longitudinal experience is also designed to facilitate student exposure to key facets of care, including continuity of care, transitions of care, and performance improvement. The series may run continuously or be separated as appropriate to ensure adequate exposures to all target populations.

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 in 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 department setting.

PA 706 Internal Medicine (4 hrs.) This four-week clinical 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 clinical course will expose students to outpatient and/or inpatient behavioral health and psychological disorders and diseases.

Selective Rotation

PA 720 Subspecialty Selective Rotation (4 hrs.) This four-week required 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 report a preference for a medical, surgical or blended specialty.

Specialty areas:

- Cardiology
- Dermatology
- Ear/Nose/Throat
- Endocrinology
- Gastroenterology
- General Outpatient Medicine
- Hematology/Oncology
- Infectious Diseases
- Nephrology
- Neurology
- Orthopedics
- Pulmonology
- Urology

Elective Rotations

Each required four-week course may be chosen from any medical specialties and subspecialties. Students may also choose an elective in clinical and translational research or clinical quality and performance improvement. Each student will take two rotation electives during the clinical year.

PA 707A Elective I (4 hrs.)

PA 707B Elective II (4 hrs.)