Physician Assistant Studies (PAS) - Graduate Courses

Courses

BIO/PAS/PTS 509 Cr.3
Human Gross Anatomy
A comprehensive consideration of human gross anatomy. Systems included are musculoskeletal, neurological, urogenital, gastrointestinal and cardiopulmonary. Function, development, and topographic correlations are emphasized as a means toward evaluating clinical applications. Biomechanical function, topographic and clinical applications are emphasized. Prerequisite: admission to the Biology CRNA Program, PAS Program, or DPT Professional Program; concurrent enrollment in BIO/PAS/PTS 510 under same department. (Cross-listed with BIO/PAS/PTS; may only earn credit in one department.) Offered Summer.

BIO/PAS/PTS 510 Cr.3
Applied Human Gross Anatomy
A comprehensive consideration of human anatomy including both neuro-musculoskeletal components and internal organ systems. Systems included are musculoskeletal, neurological, urogenital, gastrointestinal, and cardiopulmonary. The course provides an in-depth understanding of the gross anatomy of the human body through regional dissection. This understanding will then be demonstrated through the application of anatomy within clinical presentations. Prerequisite: admission to the Biology CRNA Program, PAS Program, or DPT Professional Program; concurrent enrollment in BIO/PAS/PTS 509 under same department. (Cross-listed with BIO/PAS/PTS; may only earn credit in one department.) Offered Summer.

PAS 624 Cr.2
Medical Biochemistry
A study of chemical processes in cells (i.e., enzymes, lipids, membranes, metabolism, nucleic acids, receptor-sites, etc.) with special emphasis on building a foundation for the study of methods for diagnosis and treatment of human diseases and disorders. Prerequisite: admission to the Physician Assistant Program. Offered Summer.

PAS 626 Cr.3
Physiology for the Medical Professional
An advanced study of the physiology of human organ systems focusing on topics that provide the basis for understanding disease and pharmacotherapeutic mechanisms. Prerequisite: admission to the Physician Assistant Program. May not earn credit for PAS 626 and BIO 718 or BIO 719. Offered Summer.

PAS 628 Cr.2
Clinical Infectious Disease
This course introduces the principles of infectious diseases and the characteristics of the important pathogens. The discussion will focus on the clinical aspects of each infectious disease building on previous knowledge of microbiology. Includes a survey of microorganisms that commonly infect humans including bacteria, fungi, viruses, and parasites. The immune system role in preventing and treating infectious diseases will also be discussed. Prerequisite: admission to the Physician Assistant Program and approval of the program director. Offered Fall.

PAS 630 Cr.4
Medical Pharmacology and Pharmacotherapeutics I
This course presents a broad survey of the general principles of pharmacology. Included are the essential principles of pharmacokinetics and pharmacodynamics; and the mechanism of action, physiologic effects, adverse effects and interactions, and clinical and therapeutic application of specific drugs and drug groups. Prerequisite: admission to the Physician Assistant Program and approval of the program director. Offered Fall.

PAS 631 Cr.1
Medical Pharmacology and Pharmacotherapeutics II
This course will continue to build on the knowledge of pharmacologic principles obtained in Medical Pharmacology and Pharmacotherapeutics I. It will focus on the mechanism of action, physiologic effects, adverse effects and interactions, and clinical and therapeutic application of specific drugs and drug groups. Prerequisite: PAS 630; admission to the Physician Assistant Program and approval of the program director. Offered Spring.

PAS 640 Cr.2
Introduction to the Physician Assistant Profession
This course provides an overview of the PA profession, its history, current role in health care and other issues of professional interest. Students also begin to develop patient interview and communication skills. Concepts of professionalism and professional ethics as a PA student and graduate physician assistant are introduced. Prerequisite: admission to the Physician Assistant Program. Offered Summer.

PAS 642 Cr.3
Medical History and Physical Exam
This course is designed to introduce the process of history taking, physical examination, and patient assessment. The course includes a review of anatomy and physiology relevant to physical examination skills, instruction and demonstration of proper examination and history taking techniques, with practical application of these skills in the clinical setting. The course is comprised of several components including: Medical History, Physical Examination, Clinical experience (including visits to local nursing homes and rural family practice mentorships). Prerequisite: concurrent enrollment in PAS 643; admission to the Physician Assistant Program and approval of the program director. Offered Fall.

PAS 643 Cr.1
Applied Medical History and Physical Exam
This course is designed to apply principles of history taking, physical examination, and patient assessment discussed in Medical History and Physical Exam in the laboratory setting. Prerequisite: concurrent enrollment in PAS 642; admission to the Physician Assistant Program and approval of the program director. Offered Fall.

PAS 644 Cr.1
The Clinical Patient Examination
This course prepares PA students for sensitive portions of the complete clinical examination of patients. Necessary skills are presented in lecture, and then demonstrated using plastic models. Students then practice these skills with professional patients. Lect. 3; Lab 4. Prerequisite: admission to the Physician Assistant Program and approval of the program director. Offered Winter.
PAS 647 Cr.4
Clinical Practice Skills
This course facilitates the transition from didactic learning to clinical practice by bringing together the knowledge and skills developed previously in the program to perform and document the comprehensive patient history and physical examination, as well as more focused patient encounters. Clinical critical thinking becomes an integral part of patient evaluation through the development of differential diagnoses, diagnostic strategies, and treatment plans. Students gain further experience in using the medical literature to answer focused clinical questions and expand their skills to include critical evaluation of the secondary medical literature and the application of clinical practice guidelines to individualized patient care. This course also covers the topics of geriatric patient evaluation and billing/coding, and provides students with experiences in oral patient presentation, interprofessional education, and bedside diagnostic ultrasound. Lect. 2, Lab 4. Prerequisite: admission to the Physician Assistant Program and approval of the program director. Offered Spring.

PAS 649 Cr.1
Health Care Administration, Law, and Ethics in Medicine
This course provides the PA student with an introduction to the current health care and reimbursement systems in America, their operation and impact on community health and medical practice. Legal and regulatory aspects of medical care as a physician assistant are explored. Issues of the ethical practice of medicine are also explored. Prerequisite: admission to the Physician Assistant Program and approval of the program director. Offered Winter.

PAS 651 Cr.1
Behavioral Medicine
This course includes presentation of behavioral and social concepts in medicine including personality development, normative responses to stress, psychosomatic manifestations of illness, sexuality, basic counseling skills, and emotional problems of daily living. Prerequisite: admission to the Physician Assistant Program and approval of the program director. Offered Winter.

PAS 652 Cr.2
Clinical Procedures
Developing a variety of clinical procedural skills such as starting IV lines, drawing blood, giving injections and Advanced Cardiac Life Support. Students learn various surgical protocols and procedures and other standard hospital procedures such as suturing and casting. Lect. 8; Lab 16. Prerequisite: admission to the Physician Assistant Program and approval of the program director. Pass/Fail grading. Offered Summer.

PAS 654 Cr.1
Medical Diagnostics
This course is designed to introduce the PA student to the basic principles of diagnostic laboratory medicine and radiology commonly used in the clinical setting. Prerequisite: admission to the Physician Assistant Program and approval of the program director. Offered Fall.

PAS 661 Cr.1
Pathology
This course presents the general principles of pathology, including cell injury, inflammation, healing, neoplasia, genetic and developmental pathology and immunopathology, as a foundation for the study of medicine. Prerequisite: admission to the Physician Assistant Program and approval of the program director. Offered Summer.

PAS 670 Cr.1
Evidence Based Medicine
This course presents a systematic approach to the development of information literacy in clinical practice by providing a framework for self-directed inquiry and lifelong learning. Students learn to develop answerable clinical questions and then to use the best evidence by searching out relevant medical literature, interpreting the literature through a basic knowledge of study design and medical statistics, critically examining the literature, and applying findings to individualized patient care. Prerequisite: admission to the Physician Assistant Program and approval of the program director. Offered Fall.

PAS 681 Cr.1
Internal Medicine: Gastroenterology and Pulmonology
This course is designed to teach content and integrate the basic principles of pathophysiology, clinical diagnosis and management of pulmonary, gastrointestinal, hepatic, biliary, and pancreatic diseases. This course will expand on the basic medical sciences of human anatomy, physiology, and medical biochemistry as it applies to clinical medicine. The course is designed to allow PA students to develop clinical reasoning skills and an advanced understanding of disease processes and treatment specific to the pulmonary and gastrointestinal systems. Prerequisite: admission to the Physician Assistant Program and approval of the program director. Offered Fall.

PAS 682 Cr.3
Internal Medicine: Cardiology
This course is designed to teach and integrate the basic principles of pathophysiology, clinical diagnosis and management of cardiovascular disease. This course will expand on the basic medical sciences of human anatomy, physiology, and medical biochemistry as it applies to clinical medicine. The course is designed to allow PA students to develop clinical reasoning skills and an advanced understanding of disease processes and treatment specific to the cardiovascular system. The course will also provide instruction in the interpretation of the 12 lead EKG’s. Prerequisite: admission to the Physician Assistant Program and approval of the program director. Offered Fall.

PAS 683 Cr.3
Internal Medicine Subspecialty: Nephrology
This course is designed to teach content and integrate the basic principles of pathophysiology, clinical diagnosis and management of a spectrum of disorders in nephrology. This course will expand on the basic medical sciences of human anatomy, physiology, and medical biochemistry as they apply to clinical medicine. Issues related to nutrition, medical imaging and diagnostic testing in nephrology are also presented. The course is designed to allow PA students to develop clinical reasoning skills and an advanced understanding of renal disease processes and their treatment. Prerequisite: admission to the Physician Assistant Program and approval of the program director. Consent of department. Offered Spring.

PAS 701 Cr.1
Internal Medicine Subspecialty: Endocrinology
This course is designed to teach content and integrate the basic principles of pathophysiology, clinical diagnosis and management of a spectrum of disorders in endocrinology. This course will expand on the basic medical sciences of human anatomy, physiology, and medical biochemistry as they apply to clinical medicine. Issues related to nutrition, medical imaging and diagnostic testing in endocrinology are also presented. The course is designed to allow PA students to develop clinical reasoning skills and an advanced understanding of endocrine disease processes and their treatment. Prerequisite: admission to the Physician Assistant Program and approval of the program director. Consent of department. Offered Spring.
PAS 707 Cr.2
Internal Medicine Subspecialties II: Hematology and Rheumatology
This course integrates presentation of the pathophysiology, clinical diagnosis and management of a spectrum of disorders in hematology and rheumatology. Issues related to medical imaging in these disciplines are also presented. The course is designed to allow PA students to develop critical clinical reasoning skills, and an advanced understanding of hematologic and rheumatologic disease processes and their treatment. Prerequisite: admission to the Physician Assistant Program and approval of the program director. Offered Fall, Winter, Spring, Summer.

PAS 709 Cr.1
Emergency Medicine
This course integrates presentation of the pathophysiology, clinical diagnosis and management of a spectrum of disorders commonly seen in the emergency room setting. The course is designed to allow PA students to develop critical clinical reasoning skills, and an advanced understanding of emergency room setting disease processes and their treatment. Prerequisite: admission to the Physician Assistant Program and approval of the program director. Offered Spring.

PAS 711 Cr.2
Clinical Neuroscience
This course builds on the knowledge of anatomical principles obtained in Neuroanatomy. It integrates presentation of the pathophysiology, clinical diagnosis and management of a spectrum of disorders in neurology and psychiatry. Issues related to medical imaging in these medical disciplines are also presented. The course is designed to allow PA students to develop critical clinical reasoning skills and an advanced understanding of disease processes involving the nervous system. Prerequisite: admission to the Physician Assistant Program and approval of the program director. Offered Spring.

PAS 720 Cr.4
Family Medicine Rotation I
This 4-week rotation provides students with clinical experience in a broad, primary care setting during which students refine their skills in performing the history and physical exam, ordering and interpreting diagnostic tests, and developing treatment plans for the diversity of patients in a typical family medicine practice. Where possible, students participate in grand rounds, noon conferences and other clinically relevant didactic presentations. A set of cognitive objectives guides student reading in preparation for a written examination at the end of the rotation. Prerequisite: admission to the Physician Assistant Program and approval of the program director. Offered Fall, Winter, Spring, Summer.

PAS 722 Cr.4
Internal Medicine Rotation I
This 4-week rotation provides students with clinical experience in an internal medicine setting during which students refine their skills in performing the history and physical exam, ordering and interpreting diagnostic tests, and developing treatment plans for the diversity of patients in a typical internal medicine practice. Where possible, students participate in grand rounds, noon conferences and other clinically relevant didactic presentations. A set of cognitive objectives guides student reading in preparation for a written examination at the end of the rotation. Prerequisite: admission to the Physician Assistant Program and approval of the program director. Offered Fall, Winter, Spring, Summer.

PAS 724 Cr.4
General Surgery Rotation
This 4-week rotation provides students with clinical experience in a general surgery setting during which students refine their skills in performing the history and physical exam, ordering and interpreting diagnostic tests, assisting with surgery and developing treatment plans for the diversity of patients in a typical general surgery practice. Where possible, students participate in grand rounds, noon conferences and other clinically relevant didactic presentations. A set of cognitive objectives guides student reading in preparation for a written examination at the end of the rotation. Prerequisite: admission to the Physician Assistant Program and approval of the program director. Offered Fall, Winter, Spring, Summer.

PAS 726 Cr.4
Obstetrics and Gynecology Rotation
This 4-week rotation provides students with clinical experience in an obstetrics and gynecology setting during which students refine their skills in performing the history and physical exam, ordering and interpreting diagnostic tests, assisting with deliveries and gynecologic surgery, and developing treatment plans for the diversity of patients in a typical ob/gyn practice. Where possible, students participate in grand rounds, noon conferences and other clinically relevant didactic presentations. A set of cognitive objectives guides student reading in preparation for a written examination at the end of the rotation. Prerequisite: admission to the Physician Assistant Program and approval of the program director. Offered Fall, Winter, Spring, Summer.

PAS 728 Cr.4
Pediatric Rotation
This 4-week rotation provides students with clinical experience in a pediatric setting during which students refine their skills in performing the history and physical exam, ordering and interpreting diagnostic tests, and developing treatment plans for the diversity of patients in a typical pediatric practice. Where possible, students participate in grand rounds, noon conferences and other clinically relevant didactic presentations. A set of cognitive objectives guides student reading in preparation for a written examination at the end of the rotation. Prerequisite: admission to the Physician Assistant Program and approval of the program director. Offered Fall, Winter, Spring, Summer.

PAS 730 Cr.4
Psychiatry Rotation
This 4-week rotation provides students with clinical experience in a psychiatry setting during which students refine their skills in performing the history and physical exam, ordering and interpreting diagnostic tests, and developing treatment plans for the diversity of patients in a typical psychiatry practice. Where possible, students participate in grand rounds, noon conferences and other clinically relevant didactic presentations. A set of cognitive objectives guides student reading in preparation for a written examination at the end of the rotation. Prerequisite: admission to the Physician Assistant Program and approval of the program director. Offered Fall, Winter, Spring, Summer.

PAS 732 Cr.4
Emergency Medicine Rotation
This 4-week rotation provides students with clinical experience in an emergency medicine setting during which students refine their skills in performing the history and physical exam, ordering and interpreting diagnostic tests, and developing treatment plans for the diversity of patients in a typical emergency medicine practice. Where possible, students participate in grand rounds, noon conferences and other clinically relevant didactic presentations. A set of cognitive objectives guides student reading in preparation for a written examinations at the end of the rotation. Prerequisite: admission to the Physician Assistant Program and approval of the program director. Offered Fall, Winter, Spring, Summer.
PAS 756 Cr.4
**Selective Rotation 1**
The student selects a clinical area for the selective clinical rotation(s) with the approval of program faculty. The clinical rotation is to be completed within the student’s assigned health system. Students may select clinical experiences from specialty areas not included in the required rotations, or in one of the required clinical areas. During this rotation, students will refine their skills in performing the history and physical examination, ordering and interpreting diagnostic tests, and developing plans for the diversity of patients in the chosen medical or surgical specialty. Where possible, students participate in grand rounds, noon conferences and other clinically relevant didactic presentations. A set of cognitive objectives guides student reading in preparation for a written examination at the end of the rotation. Prerequisite: admission to the Physician Assistant Program and approval of the program director. Consent of department. Offered Fall, Winter, Spring, Summer.

PAS 757 Cr.4
**Selective Rotation 2**
The student selects a clinical area for the selective clinical rotation(s) with the approval of program faculty. The clinical rotation is to be completed within the student’s assigned health system. Students may select clinical experiences from specialty areas not included in the required rotations, or in one of the required clinical areas. During this rotation, students will refine their skills in performing the history and physical examination, ordering and interpreting diagnostic tests, and developing plans for the diversity of patients in the chosen medical or surgical specialty. Where possible, students participate in grand rounds, noon conferences and other clinically relevant didactic presentations. A set of cognitive objectives guides student reading in preparation for a written examination at the end of the rotation. Prerequisite: admission to the Physician Assistant Program and approval of the program director. Consent of department. Offered Fall, Winter, Spring, Summer.

PAS 758 Cr.4
**Selective Rotation 3**
The student selects a clinical area for the selective clinical rotation with the approval of program faculty. The clinical rotation may be completed within or outside of the student’s assigned health system. Students may select clinical experiences from specialty areas not included in the required rotations, or in one of the required clinical areas. With the consultation and approval of program faculty, the student develops an individualized learning contract that includes objectives for the rotation, and a method to demonstrate achievement of these objectives at the conclusion of the rotation. Where possible and appropriate, students participate in grand rounds, noon conferences and other clinically relevant didactic presentations. Prerequisite: admission to the Physician Assistant Program and approval of the program director. Pass/Fail grading. Offered Fall, Winter, Spring, Summer.

PAS 759 Cr.4
**Selective Rotation 4**
The student selects a clinical area for the selective clinical rotation with the approval of program faculty. The clinical rotation may be completed within or outside of the student’s assigned health system. Students may select clinical experiences from specialty areas not included in the required rotations, or in one of the required clinical areas. With the consultation and approval of program faculty, the student develops an individualized learning contract that includes objectives for the rotation, and a method to demonstrate achievement of these objectives at the conclusion of the rotation. When possible and appropriate, students participate in grand rounds, noon conferences and other clinically relevant didactic presentations. Prerequisite: admission to the Physician Assistant Program and approval of the program director. Consent of department. Pass/Fail grading. Offered Fall, Winter, Spring, Summer.

PAS 760 Cr.1
**Obstetrics - Maternal/Fetal Care**
This course is designed to teach content and integrate the basic principles of embryology, anatomy, pathophysiology, clinical diagnosis and management of the obstetric patient and developing fetus. The course is designed to allow PA students to develop clinical reasoning skills, formulation of treatment plans, as well as an advanced understanding of maternal and fetal health. Prerequisite: admission to the Physician Assistant Program. Offered Spring.

PAS 761 Cr.1
**Gynecology and Women's Health**
This course is designed to teach content and integrate the basic principles of anatomy, pathophysiology, clinical diagnosis and management of a spectrum of disorders in gynecology along with wellness care and disease prevention. The course is designed to allow PA students to develop clinical reasoning skills, formulation of treatment plans, as well as an advanced understanding of gynecologic health. Prerequisite: admission to the Physician Assistant Program. Offered Winter.

PAS 762 Cr.1
**Pediatric and Adolescent Medicine**
This course is designed to teach content and integrate the basic principles of anatomy, pathophysiology, clinical diagnosis and management of a spectrum of disorders in Pediatrics & Adolescent Medicine along with wellness care and disease prevention. The course is designed to allow PA students to develop clinical reasoning skills, formulation of treatment plans, as well as an advanced understanding of pediatric and adolescent health. Prerequisite: admission to the Physician Assistant Program. Offered Spring.

PAS 770 Cr.1
**Principles of Surgical Medicine I: General Surgery and Anesthesia**
This course integrates presentation of the pathophysiology, clinical diagnosis and management of a spectrum of disorders in anesthesia and general surgery. A suture skills laboratory is also incorporated into the course. The course is designed to allow PA students to develop the critical reasoning skills and an advanced understanding of surgical disease processes and their treatment. Prerequisite: admission to the Physician Assistant Program. Offered Spring.

PAS 771 Cr.1
**Principles of Surgical Medicine II: Orthopedics**
This course integrates presentation of the pathophysiology, clinical diagnosis and management of a spectrum of disorders in orthopedic surgery. Issues related to medical imaging and diagnostics in this medical discipline are also presented. The course is designed to allow PA students to develop critical reasoning skills and an advanced understanding of orthopedic disease processes and their treatment. Prerequisite: admission to the Physician Assistant Program. Offered Spring.

PAS 772 Cr.1
**Principles of Surgical Medicine III: Surgical Subspecialties**
This course integrates presentation of the pathophysiology, clinical diagnosis and management of a spectrum of disorders in the surgical subspecialties of otorhinolaryngology, ophthalmology and urology. Issues related to medical imaging and diagnostics in these medical disciplines are also presented. The course is designed to allow PA students to develop critical reasoning skills and an advanced understanding of otorhinolaryngologic, ophthalmologic, and urologic disease processes and their treatment. Prerequisite: admission to the Physician Assistant Program. Offered Spring.
PAS 773 Cr.1
Dermatology
This course integrates presentation of the pathophysiology, clinical diagnosis and management of a spectrum of disorders in dermatology. The course is designed to allow PA students to develop critical reasoning skills and an advanced understanding of dermatologic disease processes and their treatment. Prerequisite: admission to the Physician Assistant Program. Offered Spring.

PAS 790 Cr.2
Capstone Seminar 1
The Capstone Seminar 3-course series occurs during the clinical year and aims to develop skills important to the professional physician assistant practice. This seminar series addresses a broad range of current and trending topics pertinent to health care delivery. Topics include, but are not limited to: humanistic care, inter-professional collaboration, patient communication and health literacy, diverse populations, public health, difficult patient encounters, patient safety and quality of care, resume preparation and job seeking skills, systematic review of the literature, interpretation of the medical literature to answer clinical questions, appreciation of practice regulations, clinical skill refinement and preparedness to practice. Completion of the Capstone Seminar series supports our program's mission of educating highly competent and compassionate PAs who are grounded in professional ethics, cultural sensitivity, and the use of evidence based medicine. Prerequisite: admission to the Physician Assistant Program and approval of the program director. Offered Summer.

PAS 792 Cr.2
Capstone Seminar 2
The Capstone Seminar 3-course series occurs during the clinical year and aims to develop skills important to the professional physician assistant practice. This seminar series addresses a broad range of current and trending topics pertinent to health care delivery. Topics include, but are not limited to: humanistic care, inter-professional collaboration, patient communication and health literacy, diverse populations, public health, difficult patient encounters, patient safety and quality of care, resume preparation and job seeking skills, systematic review of the literature, interpretation of the medical literature to answer clinical questions, appreciation of practice regulations, clinical skill refinement and preparedness to practice. Completion of the Capstone Seminar series supports our program's mission of educating highly competent and compassionate PAs who are grounded in professional ethics, cultural sensitivity, and the use of evidence based medicine. Prerequisite: admission to the Physician Assistant Program and approval of the program director. Offered Fall.

PAS 794 Cr.2
Capstone Seminar 3
The Capstone Seminar 3-course series occurs during the clinical year and aims to develop skills important to the professional physician assistant practice. This seminar series addresses a broad range of current and trending topics pertinent to health care delivery. Topics include, but are not limited to: humanistic care, inter-professional collaboration, patient communication and health literacy, diverse populations, public health, difficult patient encounters, patient safety and quality of care, resume preparation and job seeking skills, systematic review of the literature, interpretation of the medical literature to answer clinical questions, appreciation of practice regulations, clinical skill refinement and preparedness to practice. Completion of the Capstone Seminar series supports our program's mission of educating highly competent and compassionate PAs who are grounded in professional ethics, cultural sensitivity, and the use of evidence based medicine. Prerequisite: admission to the Physician Assistant Program and approval of the program director. Offered Spring.