

# Physician Assistant, M.M.S.

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LEWIS KATZ SCHOOL OF MEDICINE (<http://www.temple.edu/medicine>)

## About the Program

The Master of Medical Science (M.M.S.) program is designed to train outstanding Physician Assistants who enhance patient care in our North Philadelphia community and beyond. Graduates of the program will be recognized as leaders, educators, and innovators in the delivery of high-quality healthcare that is accessible, affordable, compassionate, and respectful of cultural diversity.

The Physician Assistant program facilitates delivery of an innovative curriculum for medical students that meets the accreditation standards for inter-professional education set by the Liaison Committee on Medical Education (LCME). The program is designed to prepare students to provide patient-centered care in practice settings under the supervision of and in collaboration with physicians and inter-professional teams. The curriculum satisfies all of the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA) standards and provides instruction in all areas tested by the National Commission on Certification of Physician Assistants (NCCPA) licensing examination. The goals of the program are to:

- Admit highly qualified students representing diverse backgrounds.
- Prepare compassionate and highly trained physician assistants to become leaders in healthcare.
- Train physician assistants to develop and use an evidence-based approach in the delivery of the highest quality patient-centered healthcare.
- Develop the skills needed as effective lifelong learners.
- Cultivate collaborative patient care through integrated inter-professional training experiences.
- Foster high individual and professional ethical standards.
- Promote cultural awareness in the provision of care to a diverse society.

**Time Limit for Degree Completion:** 3 years

**Campus Location:** Health Sciences

**Full-Time/Part-Time Status:** The curriculum is designed to be completed in approximately 26 months. Students begin in early June of the first year and complete their studies 26 months later at the end of the 12-week summer session, around July 30, to receive an August diploma.

**Interdisciplinary Study:** The Physician Assistant program is part of inter-professional education at the Lewis Katz School of Medicine. Inter-professional education is a collaborative exercise that involves students from the School of Medicine as well as from Temple University's College of Public Health, Maurice H. Kornberg School of Dentistry, School of Pharmacy, and School of Podiatric Medicine.

**Ranking:** The 2014 *U.S. News and World Report* ranked Temple University's School of Medicine number 54 in Research and among the Best Medical Schools.

**Job Prospects:** A critical need for Physician Assistants to work as part of a medical team providing access to quality healthcare has resulted from a looming critical shortage of physicians and an increase in the number of Americans covered through the Affordable Care Act (ACA) of 2010. Job prospects for graduates of the M.M.S. program are excellent.

**Non-Matriculated Student Policy:** Non-matriculated students may enroll in some courses with permission from the course instructor and approval from the Office of Graduate Studies at the Lewis Katz School of Medicine.

**Financing Opportunities:** Limited financial support is available for M.M.S. students.

## Admission Requirements and Deadlines

### Application Deadline:

*Summer I:* January 15

All applicants to the M.M.S. program must apply via the Centralized Application Service for Physician Assistants (CASPA). The system can be accessed at <https://caspa.liaisoncas.com/>. A supplemental application is also required to be submitted directly to Temple University at <http://www.temple.edu/apply/common/appcheck.asp>. Submission of the supplemental application generates the applicant's TUID number. The CASPA application will not be considered without the assigned TUID.

All applications must be submitted, completed, and verified by CASPA no later than January 15. As this is a self-managed process, applicants are expected to monitor the status, including submission and receipt, of all application materials through the CASPA applicant portal. As CASPA processing may take up to six weeks, **we strongly recommend that all application materials be received by CASPA by December 1.**

Applications are processed throughout the year as they are received. Thus, it is in the applicant's best interest to apply early to this highly competitive degree program. Deadline extensions for incomplete applications are not available.

**Letters of Reference:**

*Number Required: 3*

*From Whom:* Letters of recommendation are to be submitted electronically at <https://caspa.liaisoncas.com/>. They should include one letter each from:

- a professor with whom the applicant has completed science coursework;
- a physician, physician assistant (preferred, but not required), or nurse practitioner; and
- an individual of the applicant's choosing, but one who possesses a personal, supervisory knowledge of the applicant.

**Coursework Required for Admission Consideration:** Prerequisite coursework, with the required number of credits, includes:

- General Biology I and II (with lab): 8
- General Chemistry I and II (with lab): 8
- Organic Chemistry (with lab): 4
- Biochemistry: 3
- Human Anatomy\*: 4
- Human Physiology\*: 3
- Medical Terminology: 2
- Psychology: 3
- Statistics: 2
- Two or more of the following: Cell Biology, Genetics, Immunology, Microbiology, Molecular Biology: 6

\* Combined Human Anatomy/Physiology may substitute with a total of 8 required credits.

All science and math prerequisite coursework must be completed within 10 years prior to June enrollment. All prerequisite coursework must be completed prior to enrollment with a grade of at least a "C" or 2.0 on a 4.0 scale.

To identify coursework that fulfills the program's prerequisite requirements, applicants are required to complete the "Program Materials: Prerequisites" section of the CASPA application.

**Bachelor's Degree in Discipline/Related Discipline:** A baccalaureate degree from a regionally accredited college or university in the United States or Canada is required.

**Statement of Goals:** Approximately 500 to 1,000 words include your interest in Temple's Physician Assistant graduate program; your research interests and past experiences; your future career goals; and your academic and research achievements.

**Standardized Test Scores:**

GRE or MCAT: Required.

Scores must be reported for a test taken within three years of matriculation. Applicants with GRE scores must contact ETS to request release of GRE scores through CASPA. The relevant code for the Physician Assistant program is 1746. MCAT scores are automatically transmitted to CASPA when the applicant's AMCAS ID number is provided.

**Interview:** Candidates must have strong interpersonal skills, including the ability to listen and be culturally sensitive to another's point of view. The PA Program Admissions Committee gives strong consideration to students who:

- have demonstrated exceptional service to others (e.g., military/police/fire service, Peace Corps, Teach for America);
- are educationally/environmentally disadvantaged; or
- hail from groups underrepresented in medicine.

Applicants are notified of their selection for interview by email. In addition to two personal interviews, the interview day includes a Clinical Skills Center Activity (MMI) and a brief essay at the time of interview.

**Resume:** Current resume or CV required.

**Citizenship:** Due to limitations on U.S. government-subsidized financing for medical education, Temple University only considers applications from U.S. citizens or non-citizens who have permanent resident or refugee/asylee status with the U.S. Immigration and Naturalization Service (INS). Applicants with permanent resident or refugee/asylee status need to provide a copy of official INS documentation when completing the CASPA application.

**Healthcare/Patient Contact Experience:** To be considered for an interview, 400 hours of clearly documented volunteer or paid direct hands-on patient contact experience or witnessing care firsthand are required. These hours are strongly recommended to include a minimum of 100 hours working with or shadowing an M.D., D.O., and/or Physician Assistant and 200 hours of relevant healthcare experience.

**Community/Volunteer Service:** Applicants are recommended to have a minimum 50 hours of community service activities, not including those performed in high school. All types of community service and volunteer activities are considered.

**Clearances:** Upon acceptance, students must complete a Child Abuse History Clearance and a Criminal Background Check. Any academic infraction, license infraction, felony, or misdemeanor after the date of the original CASPA application submission must be reported to the M.M.S. program within 10 business days of the occurrence.

## Program Requirements

### General Program Requirements:

*Number of Credits Required to Earn the Degree:* 117, divided into a preclinical curriculum of 69 credits over 14 months and a clinical curriculum of 48 credits over 12 months

### Required Courses:

Year 1		Credit Hours
<b>Summer I</b>		
PA 8101	Physician Assistant Practice I	1
PA 8102	Patient Assessment I	1
PA 8103	Human Gross Anatomy	5
PA 8104	Introduction to Scientific Inquiry	1
PA 8105	Foundations of Medical Sciences I	4
PA 8106	Introduction to Epidemiology and Biostatistics	2
Term Credit Hours		14
<b>Fall</b>		
PA 8201	Physician Assistant Practice II	1
PA 8202	Patient Assessment II	1
PA 8203	Foundations of Medical Sciences II	4
PA 8204	Fundamentals of Hematology	3
PA 8205	Fundamentals of Cardiology	4
PA 8206	Fundamentals of Pulmonology	4
PA 8305	Fundamentals of Ears/Eyes/Nose/Throat (EENT)	2
PA 8308	Fundamentals of Dermatology	2
Term Credit Hours		21
<b>Spring</b>		
PA 8207	Fundamentals of Gastroenterology	3
PA 8301	Physician Assistant Practice III	1
PA 8302	Patient Assessment III	1
PA 8303	Fundamentals of Nephrology	2
PA 8304	Fundamentals of Endocrinology	3
PA 8306	Fundamentals of Neurology	2
PA 8307	Fundamentals of Rheumatology and Orthopedics	3
PA 8309	Essentials of Psychiatry	2
PA 8403	Bioethics	2
Term Credit Hours		19
<b>Year 2</b>		
<b>Summer</b>		
PA 8401	Physician Assistant Practice IV	1
PA 8402	Patient Assessment IV	1
PA 8404	Essentials of Men's and Women's Health	4
PA 8405	Essentials Across the Lifespan	4

PA 8406	Essentials of Surgery and Emergency Medicine	4
PA 9991	Scholarly Clinical Research I	1
Term Credit Hours		15
Total Credit Hours:		69

Code	Title	Credit Hours
<b>Year 2 Fall and Spring / Year 3 Summer <sup>1</sup></b>		
	Behavioral Medicine Clerkship	5
	Emergency Medicine Clerkship	5
	Family Medicine Clerkship	5
	General Surgery Clerkship	5
	Internal Medicine Clerkship	5
	Obstetrics/Gynecology Clerkship	5
	Pediatrics Clerkship	5
	Elective I Clerkship	5
	Elective II Clerkship	5
	Scholarly Clinical Research II	1
	Comprehensive Review	2
Total Credit Hours		48

Code	Title	Credit Hours
<b>Total Credit Hours of Preclinical Coursework:</b>		69
<b>Total Credit Hours of Clinical Clerkship, Research, and Review:</b>		48
Total Credit Hours		117

<sup>1</sup> Students spend the last 12 months of the program rotating through clerkships in seven assigned medical disciplines and two elective rotations at Temple University Hospital System locations. Students are under the direct supervision of a physician or physician assistant, although they interact with numerous other healthcare providers, including residents, interns, medical students, nurses, and others. Students are expected to work the preceptor's work schedule, which may include nights/weekends.

### Culminating Events:

#### Technical Standards:

The technical standards for the Lewis Katz School of Medicine at Temple University Physician Assistant Program have been established to ensure that students have the ability to demonstrate academic mastery and competence when performing clinical skills and the ability to communicate clinical information. These technical standards are intended to ensure that each student has the academic and physical ability to acquire competencies, as defined by the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA), the American Academy of Physician Assistants (AAPA), the National Commission on Certification of Physician Assistants (NCCPA), and the Physician Assistant Education Association (PAEA). The technical standards are consistent with the technical standards set forth by the Accreditation Council for Graduate Medical Education (ACGME).

The candidate for successful completion of the Physician Assistant Program must be able to perform the following skills:

1. Observation: Observe demonstrations and experiments in the basic sciences, including but not limited to physiologic and pharmacologic demonstrations, microbiologic cultures, and microscopic studies of microorganisms and tissues in normal and pathologic states; observe a patient accurately at a distance and close at hand, necessitating the functional use of vision, which is enhanced by the functional use of the sense of smell.
2. Communication: Speak to, hear, and observe patients in order to elicit both verbal and nonverbal information; communicate effectively and sensitively with and about patients; communicate effectively and efficiently in oral and written form with the patient, the patient's family, and all members of the healthcare team, including referral sources such as agencies and other physicians. Speech, reading, and writing are essential.
3. Motor: Exhibit sufficient motor function to carry out basic laboratory techniques and to elicit information from patients by palpation, auscultation, percussion, and other diagnostic maneuvers; perform anatomical dissections and use a microscope; perform basic laboratory tests (e.g., urinalysis, gram stain, preparation of a blood smear), diagnostic procedures (e.g., proctoscopy, paracentesis); perform/read EKGs and read X-rays; execute motor movements reasonably required to provide general care and emergency treatment to patients (e.g., cardiopulmonary resuscitation, administration of intravenous medication, application of pressure to stop bleeding, opening obstructed airways, suturing simple wounds, and performing simple, general gynecologic procedures). Coordination of both gross and fine muscular movements, equilibrium, and functional use of the senses of touch and vision are essential.

4. Intellectual, i.e., Conceptual, Integrative, and Quantitative Abilities: Possess abilities to measure, calculate, reason, analyze, and synthesize, which are required when engaging in problem solving, the critical skill demanded of physician assistants; comprehend three-dimensional relationships and understand the spatial relationships of structures.
5. Behavioral and Social Attributes: Possess the physical and emotional health required for full utilization of intellectual abilities, exercise of good judgment, prompt completion of all responsibilities attendant to the diagnosis and care of patients, and development of mature, sensitive, and effective relationships with patients; adapt to changing environments, display flexibility, and learn to function in the face of uncertainties inherent in the clinical problems of many patients. Compassion, integrity, concern for others, interpersonal skills, interest, and motivation are all personal qualities assessed during the admission and education process.

The faculty of Temple University's Physician Assistant Program recognizes its responsibility to present candidates for the Physician Assistant degree who have the knowledge, attitudes, and skills to function in a broad variety of clinical situations and to render a broad spectrum of patient care.

## Contacts

### Program Web Address:

<https://medicine.temple.edu/education/physician-assistant-program/about-program>

### Department Information:

Physician Assistant Program Office of Admissions  
Lewis Katz School of Medicine at Temple University  
3500 N. Broad Street, MERB 124  
Philadelphia, PA 19140  
pa-admissions@temple.edu  
215-707-3656  
Fax: 215-707-6932

### Submission Address for Application Materials:

<https://caspa.liasoncas.com/>

### Department Contacts:

#### *Admissions:*

Christine Connolly, A.S.  
Program Administrator  
christine.connolly@temple.edu  
215-707-8207

#### *Program Director:*

Christine F. Mount, M.S., PA-C  
Assistant Professor, Surgery  
christine.mount@temple.edu  
215-707-4849

## Courses

### **PA 8101. Physician Assistant Practice I. 1 Credit Hour.**

This is a Physician Assistant one-credit lecture/seminar. Physician Assistant Practice I is the first of a four-course series that explores the social, regulatory, ethical and professional aspects of becoming a physician assistant. This first course will review the societal aspects of the profession that include the history of the physician assistant profession, how PAs fit into the U.S. healthcare system, professionalism, the PA-physician supervisor relationship and PA scope of practice. Students will be introduced to the concepts of effective communication skills with patients and other healthcare providers. Students will also learn about patient motivators to incorporate healthy behaviors and how various stakeholders to good health influence patients and healthcare providers in health promotion and disease prevention.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8102. Patient Assessment I. 1 Credit Hour.**

This is a Physician Assistant one-credit lecture/seminar. Patient Assessment I is the first of a four-part progressive sequence of learning that introduces the critical skills and concepts of physical examination and history taking that are necessary for the practice as Physician Assistants in contemporary society. Students will learn interview and examination techniques along with appropriate counseling and patient education skills. This course consists of an integrated series of lectures, small-group discussions, simulated patient encounters, and clinical correlation exercises. The course provides instruction in fundamental clinical skills that include: taking a patient history, performing a physical examination of a normal adult, and basic case presentation. Professionalism and the student's emerging role as a healthcare provider are addressed throughout the course. Activities are integrated with the science curriculum whenever possible.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8103. Human Gross Anatomy. 5 Credit Hours.**

This is a Physician Assistant five credit course with focus on the study of functional and applied human anatomy. Each topic will utilize lecture and lab experiences, which include human cadaver specimens. When appropriate, clinical and surgical correlations are made from a diagnostic as well as an operative point of view. Instruction is primarily in lecture and laboratory format. Textbooks, atlases, computer software programs, and other visual aids are available for study. Applied learning based on clinically relevant cases will be emphasized.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8104. Introduction to Scientific Inquiry. 1 Credit Hour.**

This is a Physician Assistant one-credit course offered during Summer Session I. This course is the first course in the preparation of the student for the capstone project that will cumulate at the end of their clerkship year through the Scholarly Clinical Research Courses I and II. It will focus on introducing students to hypothesis directed research approaches that leads to new findings that ultimately impact on the care of patients. Library staff will provide instruction on the use of the library resources available to support research. In addition, students will be introduced to the reading, presentation, interpretation and critique of published manuscripts dealing with current important issues in clinical medicine. Each topic will utilize lecture and class discussion. Students will also be expected to make class presentations of clinically relevant manuscripts. The Introduction to Scientific Inquiry course will be coordinated with the Introduction to Epidemiology and Biostatistics course, which will be running simultaneously.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8105. Foundations of Medical Sciences I. 4 Credit Hours.**

This is a Physician Assistant four-credit course offered during Summer Session I. It will focus on reviewing and extending basic fundamental knowledge in medical sciences in the areas of biochemistry, nutrition, molecular biology, genetics, and cell and organ physiology. Mastery of this information is necessary to progress to the organ systems clinical medicine fundamentals courses, which will follow, in subsequent semesters. Each topic will utilize lecture, problem solving, and workshop experiences followed by an examination. Textbooks, PowerPoint presentations prepared by faculty, problem sets prepared by faculty and other visual aids are available for study. Applied learning based on clinically relevant cases will be emphasized.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8106. Introduction to Epidemiology and Biostatistics. 2 Credit Hours.**

This is a Physician Assistant two-credit course offered during Summer Session I. It will focus on providing an introduction to epidemiology and biostatistics. Concepts will be presented in lecture and reinforced with homework problem sets and workshops. Homework problems and workshops will be designed around clinically important research topics. Topics include measures of disease frequency, probability, overview of the epidemiologic study designs, sample size, hypothesis testing, tests of significance (p-values, confidence intervals, chi-square tests), measures of data quality and bias, multivariate models, survival analysis, and causality. Emphasis will be placed on students being able to apply information taught to the interpretation and critique of clinically relevant research manuscripts.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8201. Physician Assistant Practice II. 1 Credit Hour.**

This is a Physician Assistant one-credit lecture/seminar course. The Physician Assistant Practice (II) course is the second of a four-course series that explores the social, regulatory, ethical and professional aspects of a physician assistant. This second course will focus on regulatory issues that impact the practice of the physician assistant including the political process, drivers of public health, health policy development, health care financial systems and the contributions of the physician assistant regarding these issues.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8202. Patient Assessment II. 1 Credit Hour.**

This is a Physician Assistant one-credit lecture/seminar. Patient Assessment II is the second of a four-part progressive sequence of learning that introduces the critical skills and concepts of physical examination and history taking that are necessary for the practice as Physician Assistants in contemporary society. Students will continue to learn interview and examination techniques along with appropriate counseling and patient education skills. Patient Assessment II is designed to build upon the skills acquired in Patient Assessment I. Patient Assessment II is taught throughout the first fall semester of the PA program. This course consists of an integrated series of lectures, small-group discussions, simulated patient encounters, and clinical correlation exercises. The course provides instruction in fundamental clinical skills that include: taking a patient's focused medical history, performing a focused physical examination, and case presentation. The focused history taking and physician exam will include the normal neurological and mental status examination, the cardiology, pulmonary and hematology focused examinations. Professionalism and the student's emerging role as a healthcare provider are addressed throughout the course. Activities are integrated with the science curriculum whenever possible.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8203. Foundations of Medical Sciences II. 4 Credit Hours.**

This is a Physician Assistant four-credit course offered during Fall Session I. It will focus on reviewing and extending basic fundamental knowledge in medical sciences in the areas of immunology, microbiology, and pharmacology. Mastery of this information is necessary to progress to the organ systems clinical medicine fundamentals courses, which will follow later in this semester and subsequent semesters. Each area of study will utilize lecture, problem solving, and workshop experiences followed by an examination. Textbooks, PowerPoint presentations prepared by faculty, problem sets prepared by faculty and other visual aids are available for study. Applied learning based on clinically relevant cases will be emphasized.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8204. Fundamentals of Hematology. 3 Credit Hours.**

This is a Physician Assistant, three-credit course. Fundamentals of Hematology is a course that provides the physiology and pathophysiology, diagnostic evaluation and initial therapeutic approach of hematological diseases. It is one of the integrated system blocks that are taught by basic-science faculty from the Departments of Physiology and Pharmacology as well as physician assistants and physician faculty from the Departments of Internal Medicine and Cardiology. This course is an integrated series of lectures, small-group discussions, simulated patient encounters, and clinical correlation exercises using high-fidelity patient mannequins. The course provides instruction in clinical application of hematological basic science principals, focused physical examination techniques (in conjunction with Patient Assessment II), the initial use of diagnostic tests in the evaluation of hematological disease, the initial therapeutic approach to a variety of hematological diseases and the communication skills necessary for providing patient education on hematological diseases.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8205. Fundamentals of Cardiology. 4 Credit Hours.**

This Physician Assistant four-credit course, Fundamentals of Cardiology is a fall semester course that provides the physiology and pathophysiology, diagnostic evaluation and initial therapeutic approach of cardiovascular diseases. This course is an integrated series of lectures, small-group discussions, simulated patient encounters, and clinical correlation exercises using high-fidelity patient mannequins. The course provides instruction in clinical application of cardiovascular basic science principles, focused cardiovascular physical examination techniques (in conjunction with Patient Assessment II), the initial use of diagnostic tests in the evaluation of cardiovascular disease, the initial therapeutic approach to a variety of cardiovascular diseases and the communication skills necessary for providing patient education on cardiovascular diseases.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8206. Fundamentals of Pulmonology. 4 Credit Hours.**

This Physician Assistant four-credit course, Fundamentals of Pulmonology, is a fall semester course that provides the physiology and pathophysiology, diagnostic evaluation and initial therapeutic approach of pulmonary diseases. It is the second of the integrated system courses that is taught by basic-science faculty from the Departments of Physiology and Pharmacology as well as physician assistants and physician faculty from the Departments of Internal Medicine, Surgery and Radiology. This course is an integrated series of lectures, small-group discussions, simulated patient encounters, and clinical correlation exercises using high-fidelity patient mannequins. The course provides instruction in clinical application of the pulmonary system's basic science principles, focused pulmonary physical examination techniques (in conjunction with Patient Assessment II), the initial use of diagnostic tests in the evaluation of respiratory disease, the initial therapeutic approach to a variety of respiratory diseases and the communication skills necessary for providing patient education on pulmonary/respiratory diseases.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8207. Fundamentals of Gastroenterology. 3 Credit Hours.**

This Physician Assistant three-credit course, Fundamentals of Gastroenterology, is a course that provides the physiology and pathophysiology, diagnostic evaluation and initial therapeutic approach of Gastroenterology diseases. It is one of the integrated system courses that are taught by basic-science faculty from the Departments of Physiology and Pharmacology as well as physician assistants and physician faculty from the Department of Medicine/Gastroenterology. This course is an integrated series of lectures, small-group discussions, simulated patient encounters, and clinical correlation exercises. The course provides instruction in clinical application of Gastroenterology basic science principles, focused Gastroenterology physical examination techniques (in conjunction with Patient Assessment III), the initial use of diagnostic tests in the evaluation of Gastroenterology disease, the therapeutic approach to a variety of Gastroenterology diseases and the communication skills necessary for providing patient education on Gastroenterology diseases.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.



**PA 8301. Physician Assistant Practice III. 1 Credit Hour.**

This is a Physician Assistant one-credit lecture/seminar course. The Physician Assistant Practice (III) is the third of a four-course series that explores the social, regulatory, ethical and professional aspects of physician assistant practice. This third course will focus on the ethical aspects of the profession that serve to enhance care and to protect patients and healthcare workers.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8302. Patient Assessment III. 1 Credit Hour.**

This is a Physician Assistant one-credit lecture/seminar course. Patient Assessment III is the third of a four-part progressive sequence of learning that introduces the critical skills and concepts of physical examination and history taking that are necessary for the practice as Physician Assistants in contemporary society. Students will continue to learn interview and examination techniques along with appropriate counseling and patient education skills. Patient Assessment is designed to build upon the skills acquired in Patient Assessment I and II. This course consists of an integrated series of lectures, small-group discussions, simulated patient encounters, and clinical correlation exercises. The course provides instruction in fundamental clinical skills that include: taking a patient's focused medical history, performing a focused physical examination, and case presentation. The medical history taking and physician exam will focus on the skin exam, EENT, abdominal, musculoskeletal and neurological examinations and the findings associated with diseases and disorders of these corresponding systems. Professionalism and the student's emerging role as a healthcare provider are addressed throughout the course. Activities are integrated with the science curriculum whenever possible.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8303. Fundamentals of Nephrology. 2 Credit Hours.**

This Physician Assistant two-credit course, Fundamentals of Nephrology is a Spring I semester course that provides the physiology and pathophysiology, diagnostic evaluation and initial therapeutic approach of renal diseases. It is one of the integrated system courses that are taught by basic-science faculty from the Departments of Physiology and Pharmacology as well as physician assistants and physician faculty from the Departments of Medicine/Nephrology. By the end of the Fundamentals of Nephrology course, the physician assistant student will: Evaluate Nephrology diseases that are commonly found in primary care medicine in relation to the etiology, epidemiology and pathophysiology for patients presenting with Nephrology diseases and disorders; Recognize the signs and symptoms commonly linked with specific Nephrology diseases and formulate a comprehensive differential diagnosis; Select the appropriate diagnostic testing and procedures used in the evaluation and management of Nephrology disease; Classify the diagnostic test and procedure results as they relate to disease of the Nephrology system; Choose the most appropriate pharmacologic and non-pharmacologic treatment and management options for the Nephrology disorders studied; Assess a clinical situation as a basis for referral to a Nephrology specialist; Decide on the necessary examination and procedures required for the diagnosis and management of kidney disorders.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8304. Fundamentals of Endocrinology. 3 Credit Hours.**

This is a Physician Assistant three-credit course. Fundamentals of Endocrinology is a Spring I semester course that provides the physiology and pathophysiology, diagnostic evaluation and initial therapeutic approach of Endocrinologic diseases. It is one of the integrated system courses that are taught by basic-science faculty from the Departments of Physiology and Pharmacology as well as physician assistants and physician faculty from the Departments of Medicine/Division of Endocrinology. This course is an integrated series of lectures, small-group discussions, simulated patient encounters, and clinical correlation exercises. The course provides instruction in clinical application of Endocrinology basic science principles, focused physical examination techniques (in conjunction with Patient Assessment III), the initial use of diagnostic tests in the evaluation of Endocrinology disease, the therapeutic approach to a variety of Endocrinology disorders and the communication skills necessary for providing patient education on Endocrinology diseases.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8305. Fundamentals of Ears/Eyes/Nose/Throat (EENT). 2 Credit Hours.**

This is a Physician Assistant two-credit course. Fundamentals of Ears/Eyes/Nose/Throat (EENT) is a Spring I semester course that provides the physiology and pathophysiology, diagnostic evaluation and initial therapeutic approach of EENT diseases. It is one of the integrated system courses that are taught by basic-science faculty from the Departments of Physiology and Pharmacology as well as physician assistants and physician faculty from the Departments of Internal Medicine/Ophthalmology and otolaryngology.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8306. Fundamentals of Neurology. 2 Credit Hours.**

This Physician Assistant two-credit course, Fundamentals of Neurology is a Spring I semester course that provides the physiology and pathophysiology, diagnostic evaluation and initial therapeutic approach of neurological diseases. It is one of the integrated system courses that are taught by basic-science faculty from the Departments of Physiology and Pharmacology as well as physician assistants and physician faculty from the Departments of Internal Medicine and the Department of Neurology. This course is an integrated series of lectures, small-group discussions, simulated patient encounters, and clinical correlation exercises. The course provides instruction in clinical application of Neurological basic science principles, focused Neurological physical examination techniques (in conjunction with Patient Assessment III), the initial use of diagnostic tests in the evaluation of Neurological disease, the therapeutic approach to a variety of Neurological diseases and the communication skills necessary for providing patient education on Neurological diseases and disorders.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8307. Fundamentals of Rheumatology and Orthopedics. 3 Credit Hours.**

This is a Physician Assistant, three-credit course. Fundamentals of Rheumatology and Orthopedics is a Spring I semester course that provides the physiology and pathophysiology, diagnostic evaluation and initial therapeutic approach of renal diseases. It is one of the integrated system courses that are taught by basic-science faculty from the Departments of Physiology and Pharmacology as well as physician assistants and physician faculty from the Departments of Medicine/Rheumatology and the Department of Orthopedic Surgery. This course is an integrated series of lectures, small-group discussions, simulated patient encounters, and clinical correlation exercises. The course provides instruction in clinical application of Rheumatology and Orthopedics basic science principles, focused Rheumatology and Orthopedics physical examination techniques (in conjunction with Patient Assessment III), the initial use of diagnostic tests in the evaluation of musculoskeletal disease, the therapeutic approach to a variety of Rheumatology and Orthopedics diseases and the communication skills necessary for providing patient education on musculoskeletal diseases and disorders.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8308. Fundamentals of Dermatology. 2 Credit Hours.**

This is a Physician Assistant, two-credit course. Fundamentals of Dermatology is a Spring I semester course that provides the physiology and pathophysiology, diagnostic evaluation and initial therapeutic approach of dermatological diseases. It is one of the integrated system courses that are taught by basic-science faculty from the Departments of Physiology and Pharmacology as well as physician assistants and physician faculty from the Departments of Internal Medicine and Dermatology. This course is an integrated series of lectures, small-group discussions, simulated patient encounters, and clinical correlation exercises. The course provides instruction in clinical application of dermatological basic science principles, focused dermatological physical examination techniques (in conjunction with Patient Assessment II), the initial use of diagnostic tests in the evaluation of dermatological disease, the therapeutic approach to a variety of dermatological disorders and the communication skills necessary for providing patient education on dermatological diseases.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8309. Essentials of Psychiatry. 2 Credit Hours.**

This is a Physician Assistant two-credit lecture/seminar. Essentials of Psychiatry is a Spring I semester course that provides the physiology and pathophysiology, diagnostic evaluation and initial therapeutic approach of psychiatric diseases. It is one of the integrated system courses that are taught by basic-science faculty from the Departments of Physiology and Pharmacology as well as physician assistants and physician faculty from the Departments of Internal Medicine and the Department of Psychiatry. This course is an integrated series of lectures, small-group discussions, simulated patient encounters, and clinical correlation exercises. The course provides instruction in clinical application of psychiatric basic science principles, focused psychiatric physical examination techniques (in conjunction with Patient Assessment IV), the initial use of diagnostic tests in the evaluation of psychiatric disease, the therapeutic approach to a variety of psychiatric diseases and the communication skills necessary for providing patient education on psychiatric diseases and disorders.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8401. Physician Assistant Practice IV. 1 Credit Hour.**

This is a Physician Assistant one-credit lecture/seminar course. The Physician Assistant Practice (IV) course is the last of a four-course series that explores the social, regulatory, ethical and professional aspects of physician assistant practice. This fourth course will focus on the topics pertinent to employment and practice of a physician assistant including licensing and credentialing, medical coding bills, avoiding malpractice, healthcare financing and delivery systems along with career and leadership opportunities. Students will continue to work on their professional portfolios.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8402. Patient Assessment IV. 1 Credit Hour.**

Patient Assessment IV is the last course of a four-part progressive sequence of learning that introduces the critical skills and concepts of physical examination and history taking that are necessary for the practice as Physician Assistants in contemporary society. Students will continue to learn interview and examination techniques along with appropriate counseling and patient education skills. Patient Assessment is designed to build upon the skills acquired in Patient Assessment I - III. Overviews of clinical skills and patient management principles are presented in lectures, and rehearsed in small-group, hands-on settings in the Clinical Simulation Center. Simulated patients, physician assistant faculty, and high-fidelity patient mannequins are used throughout the course. Students participate in formative Practice Clinical Encounters, after which they review and critique their performance with their program faculty instructor.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8403. Bioethics. 2 Credit Hours.**

This is a Physician Assistant two-credit lecture/seminar. Bioethics is a Summer II semester course and consists of lecture and small group work. The course will focus on practical principles related to medical ethics and professionalism which includes topics related to professional conduct, cultural awareness and ethical problem solving using clinical scenarios. The overarching goal of this course is to provide students with the competences to interact professionally and ethically with patients, families and other health care providers, as well as to prepare them to engage in bioethics policy related discussions and decisions, whether at the level of the individual clinic, hospital, city, state, or federal government.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8404. Essentials of Men's and Women's Health. 4 Credit Hours.**

This is a Physician Assistant four-credit lecture/seminar. This Essentials of Men's and Women's Health course is a Summer II semester course that provides the physiology and pathophysiology, diagnostic evaluation and initial therapeutic approach of diseases affecting the female and male genital/urinary system. It is one of the integrated system courses that are taught by basic-science faculty from the Departments of Physiology and Pharmacology as well as physician assistants and physician faculty from the Departments of Internal Medicine, Obstetrics and Gynecology, Urology and Surgery. This course is an integrated series of lectures, small-group discussions, simulated patient encounters, and clinical correlation exercises using high-fidelity patient mannequins. The course provides instruction in clinical application of basic science principles, focused physical examination techniques (in conjunction with Patient Assessment IV), the initial use of diagnostic tests in the evaluation of disease affecting the female and male genitourinary system, the initial therapeutic approach to a variety of diseases and the communication skills necessary for providing patient education on these diseases.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8405. Essentials Across the Lifespan. 4 Credit Hours.**

This is a Physician Assistant four-credit lecture/seminar. This four-credit course, Essentials Across the Lifespan is a summer II semester course that provides the physiology and pathophysiology, diagnostic evaluation and initial therapeutic approach of common diseases and conditions affecting infants, children, adolescents and older adults. It is one of the integrated system courses that are taught by basic-science faculty from the Departments of Physiology and Pharmacology as well as physician assistants and physician faculty from the Departments of Pediatrics and Internal Medicine. This course is an integrated series of lectures, small-group discussions, simulated patient encounters, and clinical correlation exercises using high-fidelity patient mannequins. The course provides instruction in clinical application of basic science principles, focused physical examination techniques (in conjunction with Patient Assessment IV), the initial use of diagnostic tests, the initial therapeutic approach and the communication skills necessary for providing patient education of common outpatient diseases and conditions.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 8406. Essentials of Surgery and Emergency Medicine. 4 Credit Hours.**

This is a Physician Assistant four-credit lecture/seminar. Essentials of Surgery and Emergency Medicine is a summer II semester course that provides the physiology and pathophysiology, diagnostic evaluation and initial therapeutic approach of surgical/emergent disease and disorders. It is one of the integrated system courses that are taught by basic-science faculty from the Departments of Physiology and Pharmacology as well as physician assistants and physician faculty from the Departments of Surgery and Emergency Medicine. This course is an integrated series of lectures, small-group discussions, simulated patient encounters, and clinical correlation exercises. The course provides instruction in clinical application of Surgical and Emergency Medicine basic science principles, with focus on the Surgical and Emergency evaluation and treatment modalities. Physical examination techniques (in conjunction with Patient Assessment IV), the use of diagnostic tests in the evaluation of Surgical and Emergency disorders, the therapeutic approach to the spectrum of these disorders and the communication skills necessary for providing patient education will be given.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 9085. Family Medicine Clerkship. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in evaluating and treating common problems encountered in Family Medicine. Experience is provided at the level of a primary care physician assistant.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 9086. Elective Clerkship in Medicine Subspecialties. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in data gathering, evaluation and management of common problems encountered in the practice of a Medicine Subspecialty chosen by the student. These may include one of the following: Cardiology, Endocrinology, Gastroenterology, Hepatology, Hematology/Oncology, Hospital Medicine, Infectious Disease, Nephrology or Rheumatology. Students may participate in the management of patients in both the inpatient and outpatient setting under the supervision of physicians and physician assistants. Experience is provided at the level of a primary care physician assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:**

(PA 8401|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8402|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8403|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8404|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8405|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8406|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 9991|Minimum Grade of C-|May not be taken concurrently)

**PA 9087. Elective Clerkship in Urology. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in data gathering, evaluation and management of common problems encountered in Urology. Students may participate in the management of the surgical patient during the pre-operative phase, assist during surgery and other procedures, and provide post-operative care management under the supervision of physicians and physician assistants. Experience is provided at the level of a primary care physician assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:**

(PA 8401|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8402|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8403|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8404|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8405|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8406|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 9991|Minimum Grade of C-|May not be taken concurrently)

**PA 9182. Independent Study. 1 to 6 Credit Hour.**

This is a Physician Assistant, variable credit Independent Study (1-6 credits) course. This course is designed to provide the student with an opportunity to gain or enhance knowledge and to explore an area of interest related to physician assistant research or the delivery and/or administration of health services.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may be repeated for additional credit.

**PA 9185. Internal Medicine Clerkship. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in evaluating and treating common problems encountered in Internal Medicine. Experience is provided at the level of a primary care physician assistant.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 9186. Elective Clerkship in Neurology. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in data gathering, evaluation and management of common problems encountered in the practice of Neurology. Students may participate in the management of Neurological patients both in the inpatient and outpatient setting under the supervision of physicians and physician assistants. Experience is provided at the level of a primary care physician assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:**

(PA 8401|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8402|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8403|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8404|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8405|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8406|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 9991|Minimum Grade of C-|May not be taken concurrently)

**PA 9285. Emergency Medicine Clerkship. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in evaluating and treating common problems encountered in Emergency Medicine. Experience is provided at the level of a primary care physician assistant.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 9286. Elective Clerkship in Neurosurgery. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in data gathering, evaluation and management of common problems encountered in Neurosurgery. Students may participate in the management of the neurosurgical patient during the pre-operative phase, assist during surgery and other procedures, and provide post-operative care management under the supervision of physicians and physician assistants. Experience is provided at the level of a primary care physician assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:**

(PA 8401|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8402|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8403|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8404|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8405|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8406|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 9991|Minimum Grade of C-|May not be taken concurrently)

**PA 9385. Obstetrics/Gynecology Clerkship. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in evaluating and treating common problems encountered in obstetrics and gynecology. Experience is provided at the level of a primary care physician assistant.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 9386. Elective Clerkship in Ophthalmology. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in data gathering, evaluation and management of common problems encountered in Ophthalmology. Students may participate in the management of the ophthalmological patient during the pre-operative phase, assist during surgery and other procedures, and provide post-operative care management under the supervision of physicians and physician assistants. Experience is provided at the level of a primary care physician assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:**

(PA 8401|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8402|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8403|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8404|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8405|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8406|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 9991|Minimum Grade of C-|May not be taken concurrently)

**PA 9485. Surgery Clerkship. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in data gathering, evaluating and managing common problems encountered in surgery. Students will participate in management of surgical patient during the pre-operative phase, assist during surgery and other procedures, and provide post-operative care management under the supervision of physicians and physician assistants. Experience is provided at the level of a primary care physician assistant.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 9486. Elective Clerkship in Orthopaedic Surgery and Sports Medicine. 5 Credit Hours.**

This is a 5-week elective clinical course designed to provide the physician assistant student with experience in data gathering, evaluation and management of common problems encountered in Orthopaedic Surgery and Sports Medicine. This rotation can be customized to the student's interests. Time can be spent on the different Orthopaedic Services including Trauma, Joints, Sports, Spine, and Hand Surgery. Competency in evaluating and managing patients with the following conditions will be expected: trauma, degenerative and inflammatory arthritis, sports injuries, spine deformity and degenerative conditions, hand injuries and arthritis conditions, musculoskeletal infections, and metastatic musculoskeletal disease. The student will accompany a staff member and residents in outpatient orthopaedic clinics. The student will assist in the operating room and hospital rounds. Emergency care of the injured patient will also be emphasized.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:**

(PA 8401|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8402|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8403|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8404|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8405|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8406|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 9991|Minimum Grade of C-|May not be taken concurrently)

**PA 9585. Behavioral Medicine Clerkship. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in evaluating and treating common problems encountered in Behavioral Medicine. Experience is provided at the level of a primary care physician assistant.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 9586. Elective Clerkship in Otolaryngology. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in data gathering, evaluation and management of common problems encountered in Otolaryngology. Students may participate in the management of the otolaryngology patient during the pre-operative phase, assist during surgery and other procedures, and provide post-operative care management under the supervision of physicians and physician assistants. Experience is provided at the level of a primary care physician assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:**

(PA 8401|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8402|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8403|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8404|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8405|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8406|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 9991|Minimum Grade of C-|May not be taken concurrently)

**PA 9685. Pediatric Medicine Clerkship. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in evaluating and treating common problems encountered in pediatrics. Experience is provided at the level of a primary care physician assistant.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 9686. Elective Clerkship in Physical Medicine and Rehabilitation. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in data gathering, evaluation and management of common problems encountered in the practice of Physical Medicine and Rehabilitation. Students may participate in the management of Physical Medicine and Rehabilitation patients both in the inpatient and outpatient setting under the supervision of physicians and physician assistants. Experience is provided at the level of a primary care physician assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:**

(PA 8401|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8402|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8403|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8404|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8405|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8406|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 9991|Minimum Grade of C-|May not be taken concurrently)

**PA 9785. Elective Clerkship I. 5 Credit Hours.**

This is one of two 5-week clinical elective courses designed to provide the physician assistant with exposure to likely areas of medical practice of interest to the student. Potential areas include but are not limited to the following: Cardiology, Pulmonology, Orthopedic Surgery, Trauma Surgery, Gastroenterology. The physician assistant student will be provided experience in evaluating and treating common problems encountered in the area of their chosen elective.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.



**PA 9786. Elective Clerkship in Radiology. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in data gathering, evaluation and management of common procedures encountered in the practice of Radiology. Students may be involved in the obtaining and interpreting of medical images obtained with x-rays, radioactive substances, magnetism or ultrasound in both the inpatient and outpatient setting under the supervision of physicians and physician assistants. Experience is provided at the level of a primary care physician assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:**

(PA 8401|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8402|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8403|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8404|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8405|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8406|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 9991|Minimum Grade of C-|May not be taken concurrently)

**PA 9885. Elective Clerkship II. 5 Credit Hours.**

This is one of two 5-week clinical elective courses designed to provide the physician assistant with exposure to likely areas of medical practice of interest to the student. Potential areas include but are not limited to the following: Cardiology, Pulmonology, Orthopedic Surgery, Trauma Surgery, Gastroenterology. The physician assistant student will be provided experience in evaluating and treating common problems encountered in the area of their chosen elective.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 9886. Elective Clerkship in Surgical Subspecialties. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in data gathering, evaluation and management of common problems encountered in the Surgical Subspecialty chosen by the student. These may include one of the following: Abdominal Organ Transplant, Cardiovascular Surgery, Colorectal Surgery, Minimally Invasive Surgery, Plastic and Reconstructive Surgery, Surgical Oncology, Trauma Surgery and Critical Care, or Vascular and Endovascular Surgery. Students may participate in the management of the surgical patient during the pre-operative phase, assist during surgery and other procedures, and provide post-operative care management under the supervision of physicians and physician assistants. Experience is provided at the level of a primary care physician assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:**

(PA 8401|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8402|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8403|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8404|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8405|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8406|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 9991|Minimum Grade of C-|May not be taken concurrently)

**PA 9985. Elective Clerkship in Dermatology. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in data gathering, evaluation and management of common problems encountered in Dermatology. Students may also participate in the management of the dermatologic patient during the pre-operative phase, assist during surgery and other procedures, and provide post-operative care management under the supervision of physicians and physician assistants. Experience is provided at the level of a primary care physician assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:**

(PA 8401|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8402|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8403|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8404|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8405|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8406|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 9991|Minimum Grade of C-|May not be taken concurrently)

**PA 9986. Elective Clerkship in Thoracic Medicine and Surgery. 5 Credit Hours.**

This is a 5-week clinical course designed to provide the physician assistant student with experience in data gathering, evaluation and management of common problems encountered in Thoracic Medicine and Surgery. Students may participate in the management of the thoracic medicine and surgery patient during the pre-operative phase, assist during surgery and other procedures, and provide post-operative care management in both the in-patient and out-patient setting under the supervision of physicians and physician assistants. Experience is provided at the level of a primary care physician assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**Repeatability:** This course may not be repeated for additional credits.

**Pre-requisites:**

(PA 8401|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8402|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8403|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8404|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8405|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 8406|Minimum Grade of C-|May not be taken concurrently)  
AND (PA 9991|Minimum Grade of C-|May not be taken concurrently)

**PA 9991. Scholarly Clinical Research I. 1 Credit Hour.**

This is a Physician Assistant one-credit course. Scholarly Clinical Research I is a summer II semester course and is the first of a two-part series. In the first part of the series, students will plan and develop the goals and background information for their capstone clinical research project that will culminate in the second part during the summer III semester. This course builds upon the concepts presented in the first semester's Introduction to Scientific Inquiry (PA 8104) course. Students will be expected based on their experiences in the first three semesters in the program to select a topic and a graduate faculty mentor for their capstone clinical research project at the beginning of the semester. Topics must be in 1 of 4 potential general areas: Basic Research, Community-Based Research, Evidence-Based Medicine Research or Translational Research. The topic of the project and the mentor must be approved by the course director. Working with the Program approved graduate faculty mentor, the students will develop the specific objective(s)/hypothesis of their project and research the background literature pertinent to the project. At the end of the semester, the students will submit a research paper providing this information in a publishable form. The student will be expected to continue the development and production of this proposal throughout the Fall II, Spring II and Summer III semesters.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may not be repeated for additional credits.

**PA 9993. Comprehensive Review. 2 Credit Hours.**

This two-credit review course employs lectures, small-group discussions, self-assessments, and a comprehensive written examination to measure clinical learning in preparation for graduation from the physician assistant program. In addition, this course will prepare students to challenge the National Commission on the Certification of Physician Assistants (NCCPA) Physician Assistant National Certifying Examination (PANCE) that all must pass to function as a physician assistant.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may be repeated for additional credit.

**PA 9995. Scholarly Clinical Research II. 1 Credit Hour.**

This one-credit course, Scholarly Clinical Research II, will be taken in the third summer of the PA Program and is the second of a two-part series focusing on scholarly research. This interactive course will build upon the concepts presented in the first semester's Introduction to Scientific Inquiry (PA 8104) and Scholarly Clinical Research I (PA 9991) courses. Working with their Program-approved graduate faculty mentor, the student will complete their capstone research during fall II, spring II, and summer III. At the conclusion of the course, the student will be required to complete the paper begun as part of Scholarly Clinical Research I by describing the results of their project and discussing them in the context of the available published literature. In addition, the students will prepare a poster for presentation of their capstone project at the specified PA Research Day.

**Field of Study Restrictions:** Must be enrolled in one of the following Majors: Physician Assistant.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Graduate.

**College Restrictions:** Must be enrolled in one of the following Colleges: Medicine, Lewis Katz School.

**Repeatability:** This course may be repeated for additional credit.

**Pre-requisites:**

(PA 8104|Minimum Grade of B-|May not be taken concurrently)

AND (PA 9991|Minimum Grade of B-|May not be taken concurrently)