DEPARTMENT OF SPORTS MEDICINE

College of Health Sciences

Overview
216 Sturzebecker Health Sciences Center
West Chester University
West Chester, PA 19383
610-436-3293
Department of Sports Medicine (http://www.wcupa.edu/sportsMed/)
Dr. Morrison (kmorrison@wcupa.edu), Chairperson
Dr. Curtis (ncurtis@wcupa.edu), Graduate Coordinator / Program Director - M.S. in Athletic Training, Entry-Level
Dr. Cattano (ncattano@wcupa.edu), Graduate Coordinator - M.S. in Athletic Training - Post-Professional Concentration
Dr. Baker (abaker@wcupa.edu), Graduate Coordinator / Program Director - M.S. in Physician Assistant Studies

Programs of Study

M.S. in Athletic Training
The Master of Science in Athletic Training program is designed to prepare students to become certified athletic trainers. Athletic trainers are healthcare professionals who function as members of the sports medicine team working in collaboration with physicians. Athletic trainers may be employed in high schools, colleges or universities, rehabilitation clinics, professional sports, hospitals, physician offices, industry, and other healthcare settings. They are involved in the prevention, emergency care, diagnosis, treatment, and rehabilitation of acute and chronic medical conditions.

Our program is designed for students with minimal knowledge and experience in athletic training. Upon completion of this Commission on Accreditation of Athletic Training Education (CAATE)-accredited program, students will be eligible to sit for the Board of Certification, Inc. (BOC) examination. Upon successful completion of this examination students will be BOC-certified athletic trainers (ATC). Most states use the results from the BOC examination to determine eligibility to practice athletic training.

This two-year program is only for students who have completed a bachelor's degree (in any major) and have met the admission requirements for the professional phase of the M.S. in Athletic Training program. This program is intended for college graduates who have completed their bachelor's degree and who may want to change careers, athletes who didn't have time during their undergraduate years to major in athletic training, and international students who want a career in athletic training.

M.S. in Physician Assistant Studies
The Master of Science in Physician Assistant Studies at West Chester University will educate physician assistants who can think critically and collaborate with others to address the needs of individual patients and the healthcare community with the highest levels of academic, clinical, and cultural competence. This is a full-time, 26-month graduate day program in a face-to-face format; however, the clinical phase will require nights and weekend hours as well.

Physician assistants practice in all fields of medicine. They work in offices, urgent care centers, emergency departments, and hospitals to perform history and physical examinations, order and interpret diagnostic tests, prescribe medications, educate and counsel patients, and perform surgical procedures. PA's provide excellent care to their patients. They practice in all 50 states and have an increasing presence in the healthcare systems of other countries.

The physician assistant program follows a medical model and is divided into a didactic phase and a clinical phase. The didactic phase of the program is 4 semesters of foundational sciences, clinically-oriented courses, small-group active learning sessions, hands-on labs, and healthcare observations. The clinical phase includes 40 weeks of clinical rotations in various clinical settings, including family medicine, emergency medicine, surgery, hospital medicine, behavioral health, reproductive health, pediatrics, and an elective. Clinical rotations are offered in the Philadelphia region as well as across the US. Courses are taught by full-time faculty, adjunct faculty, clinical preceptors, and guest lecturers who are experts in their field.

This program is a developing program and will be applying for accreditation-provisional status with the ARC-PA in August of 2020. Failure of the program to achieve accreditation-provisional status will prohibit West Chester University from enrolling students into the July 2021 cohort.

Program highlights:
• Access to new facilities and simulation labs
• Clinically practicing faculty
• Early clinical exposure
• Access to Philadelphia-area clinical sites
• Partnerships with local community organizations

Programs

Master's Programs
• M.S. in Athletic Training (http://catalog.wcupa.edu/graduate/health-sciences/sports-medicine/athletic-training-ms/)
• M.S. in Athletic Training - Post-Professional Concentration (http://catalog.wcupa.edu/graduate/health-sciences/sports-medicine/athletic-training-ms-post-professional-concentration/)
• M.S. in Physician Assistant Studies (http://catalog.wcupa.edu/graduate/health-sciences/sports-medicine/physician-assistant-studies-ms/)

Accelerated Bachelor's to Master's
• B.S. in Sports Medicine Studies to M.S. in Athletic Training (http://catalog.wcupa.edu/undergraduate/health-sciences/sports-medicine/sports-medicine-studies-bs/)

Admissions

All applicants to one of West Chester University's graduate programs will be held to the graduate admissions requirements (http://catalog.wcupa.edu/general-information/admissions-enrollment/graduate-admissions/). When applicable, additional requirements for admission into specific department program(s) may be listed below.

Admission Requirements for the M.S. in Athletic Training

For admission consideration to the M.S. in Athletic Training, students must have the following:
1. Bachelor's degree in any discipline
2. Completion of an application in the Athletic Training Centralized Application System (ATCAS). The completion of this application replaces the completion of a WCU Graduate School application.
3. Transcript verification that the following prerequisite coursework has been completed at the college level with a grade of 2.00 or higher:
   • Human Physiology (3-4 credits with lab). When anatomy and physiology are taken as a combined course, two semesters are necessary to meet this requirement.
   • Chemistry (3-4 credits)
   • Physics (3-4 credits)
   • Statistics (3-4 credits). One course to include descriptive statistics, correlation, and introduction to inferential statistics or research design
• Exercise Physiology (3-4 credits)
• Kinesiology or Biomechanics
• Biology (3-4 credits)
• Psychology

4. Transcript verification that the following prerequisite coursework has been completed at the college level with a grade of 3.00 or higher:
• Human Anatomy (3-4 credits with lab). When anatomy and physiology are taken as a combined course, the semester in which the course is centered on structural anatomy will be considered for this requirement. Student will submit course descriptions if necessary. Students who do not obtain a grade of 3.0 or higher in Human Anatomy may be admitted as a provisional admit. Provisional admits will be required to pass an online comprehensive anatomy exam (minimum grade of 83%), and if this criteria is not met, they must enroll in SMD 500, Human Cadaver Anatomy Lecture.

5. Verification of current CPR for the professional rescuer certification.

Admission Requirements for the M.S. in Physician Assistant Studies

Admission Requirements
Prospective students must do the following:
1. Apply through the Centralized Applications Service for Physician Assistants (CASPA) prior to the published deadline
2. Complete required prerequisite courses as per the guidelines listed below
3. Have obtained a 3.0 cumulative and 3.0 science GPA at time of admission
4. Complete TOEFL as per institutional requirements for international graduate students
5. Complete an interview and be selected by the Admissions Committee
6. Complete a baccalaureate degree from a regionally accredited college or university or equivalent on a NACES evaluation
7. Send official transcripts to the institution
8. Successfully complete a criminal background check, child abuse clearance, and urine drug screen
9. Complete a physical examination and show proof of immunity for vaccine-preventable disease as per the CDC Guidelines for Healthcare Providers
10. Attest to ability to meet technical standards (in development)

Prerequisite Course Stipulations
1. Courses must be taken at a regionally accredited institution of higher education or be included on a NACES evaluation.
2. A minimum grade of C or better must be earned in prerequisite courses.
3. An applicant may have prerequisites in progress at the time of application; however, all outstanding prerequisites must be successfully completed prior to enrollment. In order to fairly evaluate a candidate, it is recommended that no more than two prerequisites be outstanding at the time of interview.
4. AP credit that was accepted by the student’s undergraduate institution can satisfy prerequisites including general biology, general chemistry, psychology, statistics, and English composition courses.
5. Courses must be current, within 10 years, or a waiver granted for sustained work in the field or higher level study within the last 10 years.
6. No advanced placement in the program will be granted for prior coursework or healthcare experience.

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<th>Code</th>
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<td>Required Prerequisite Courses/Experiences</td>
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<td>Ethics/Humanities</td>
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<td>English Composition or Writing Intensive Course</td>
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<td>Psychology (Developmental and Abnormal preferred)</td>
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<td>Microbiology</td>
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<td>Upper level Biology (Genetics preferred)</td>
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<td>Statistics</td>
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<td>Medical Terminology (May be certificate)</td>
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<td>PA Shadowing (4 hours)</td>
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Graduation Requirements for the M.S. in Physician Assistant Studies

Graduation Requirements
1. Students will have completed all coursework with no outstanding grades below a C-.
2. Students will have maintained a cumulative GPA above 3.0.
3. Students will have successfully presented a Master's Project.
4. Students will have met all financial obligations to the institution.

Students will have applied and been approved for graduation by the institution.

1 The Master’s Project is a component of the three master’s courses scheduled across the second year, PAS 611, PAS 621, and PAS 631, and will be student-developed, subject to program approval. Projects may include such activities as preparation of a written case report based on a case that students saw in clinical practice; preparing a clinical practice guideline for submission for publication; presenting a topic at a local or regional conference; developing a novel approach to teaching a topic to patients, families, or other healthcare students; developing and executing a community outreach program; preparing and participating in a medical mission trip; working in interprofessional groups to identify and propose solutions for a current health issue; or identifying and executing a tangible advocacy or outreach strategy. Regardless of project type, all students will participate in a formal presentation of their work at the conclusion of PAS 631.

The Master’s Project will address the following Physician Assistant Studies program outcomes/competencies. Program graduates will be able to competently:
1. Apply a core fund of medical knowledge, critical-thinking skills, and clinical skills needed to provide care to patients.
2. Utilize clinical reasoning skills to diagnose and treat patients of all ages.
3. Communicate with patients, families, other healthcare team members, and the public in a clear, empathetic, culturally-sensitive way.
4. Apply relevant medical literature to patient encounters to provide evidence-based care.
5. Assess, evaluate, and improve their patient-care practices.
6. Contribute to the advancement of the profession through leadership, advocacy, research, or education.

Evaluation will include proposal review; presentation; and self-reflections.
Academic Standing Policy for the M.S. in Physician Assistant Studies

Good Academic Standing
Students will be in good academic standing if they meet all of the following academic criteria:
1. They pass all didactic and clinical courses with a grade of C- or better.
2. They earn a cumulative GPA of 3.0 or better.

Probation
Students will be placed on academic probation if they meet any of the following criteria:
1. They earn a cumulative GPA of less than 3.0.
2. They fail to pass a single clinical year course with a grade of C- or better or have failed a final preceptor evaluation.

Dismissal
Students will be dismissed from the program if they meet any of the following criteria:
1. They fail to elevate their cumulative GPA above 3.0 after a probationary semester.
2. They fail to meet criteria for good academic standing in 3 semesters (these semesters do not have to be consecutive).
3. They fail a single didactic course or more than one clinical year course.

Policies
All graduate students are held to the academic policies and procedures (http://catalog.wcupa.edu/graduate/academic-policies-procedures/) outlined in the graduate catalog. Students are encouraged to review departmental handbooks for program tips, suggested course sequences, and explanations of procedures. When applicable, additional policies for specific department programs may be listed below.

Faculty

Professors
Amy E. Baker (abaker@wcupa.edu) (2020)
Graduate Coordinator, Sports Medicine
B.S., M.S., Thomas Jefferson University

Paul D Bradford (pbradford@wcupa.edu) (2020)
B.A., Villanova University; M.Ed., University of Notre Dame; M.S., Arcadia University

Sandra Fowkes-Godek (sfowkes-godek@wcupa.edu) (1991)
B.S., Pennsylvania State University; M.S., University of Colorado; Ph.D., Temple University

Alison Gardiner-Shires (agardiner@wcupa.edu) (2008)
B.S., Salisbury University; M.S., California University of Pennsylvania; Ph.D., University of South Carolina

Carolyn Consuelo Jimenez (cjimenez@wcupa.edu) (1994)
B.A., Colorado College; M.S., University of Arizona; Ph.D., Temple University

Katherine Morrison (kmorrison@wcupa.edu) (2007)
Chairperson, Sports Medicine
B.S., West Chester University; M.S., James Madison University; Ph.D., University of Delaware

Associate Professors
Jennifer L Anderson (janderson4@wcupa.edu) (2020)
B.S., West Chester University; M.S., Philadelphia University

Nicole Cattano (ncattano@wcupa.edu) (2007)
Graduate Coordinator, Sports Medicine
B.S., University of North Carolina at Greensboro; M.P.H., West Chester University; Ph.D., Temple University

Neil Curtis (ncurtis@wcupa.edu) (1993)
Graduate Coordinator, Sports Medicine
B.S., Boston University; M.S., University of Arizona; Ed.M., Ed.D., Columbia University

Lindsey Keenan (lkeenan@wcupa.edu) (2016)
B.S., Lock Haven University; M.S., East Stroudsburg University; M.S., East Stroudsburg University; Ph.D., Temple University

Assistant Professor
Daniel Baer (dbaer@wcupa.edu) (2016)
B.S., West Chester University; M.S., University of Pittsburgh

Instructor
John Smith (jsmith5@wcupa.edu) (2017)
B.S., Pennsylvania State University; M.S., West Virginia University

Courses

PAS

PAS 502. Legal and Ethical Practice. 2 Credits.
This lecture and group discussion course will challenge physician assistant students to identify and apply principles of academic integrity, intellectual honesty, professional conduct, and legal and ethical practice. This course will use lecture, small group discussions, and cases to understand the implications of decision-making in academic settings and professional practice.
Pre / Co requisites: PAS 502 requires a corequisite of PAS 503.
Typically offered in Summer.

PAS 503. Healthcare and the Evolving Role of the PA. 1 Credit.
This lecture and seminar course will introduce students to the past, present, and future professional issues and policies relevant to clinical practice as a physician assistant. Students will begin to understand the members of the healthcare team, healthcare delivery systems, health policy, and opportunities and challenges of working in current and potential future healthcare systems. Students will be introduced to factors related to providing care to patients of diverse populations and will assess the impact of healthcare disparities on individual and population health.
Typically offered in Summer.

PAS 510. Patient Communication and Assessment. 4 Credits.
This lecture and group discussion course allows physician assistant students to develop the knowledge, communication skills, and techniques required to obtain and record a patient’s medical history and identify normal and abnormal history or physical examination findings. This course emphasizes the interpersonal and communication skills that promote the effective exchange of information and collaboration with patients, their families, and other health professionals.
Pre / Co requisites: PAS 510 requires prerequisites of SMD 500 and SMD 501, and a corequisite of PAS 511.
Typically offered in Fall.

PAS 511. Physical Diagnosis Lab. 2 Credits.
LAB (2), DIS (1)
This laboratory course allows physician assistant students to develop the skills necessary to use medical equipment with proper technique, to perform complete and problem-oriented physical examinations, to document patient encounters, and to deliver oral presentations through structured laboratory exercises, simulated patient experiences, and community experiences.
Pre / Co requisites: PAS 511 requires prerequisites of SMD 500 and SMD 501, and a corequisite of PAS 510.
Typically offered in Fall.
PAS 512. Physiology and Pharmacology. 3 Credits.
This lecture course will reintroduce normal physiologic process by system and the genetic and molecular mechanisms of disease. Physician assistant students will also be introduced to pharmacotherapeutic agents’ effects on biologic systems and the body’s response to these agents. Students will begin to identify metabolic processes, drug classes, and mechanisms of action of commonly utilized over-the-counter, prescription, and illicit drugs.
Pre / Co requisites: PAS 512 requires prerequisites of SMD 500 and SMD 501, and a corequisite of PAS 513.
Typically offered in Fall.

PAS 513. Medical Pathophysiology and Clinical Microbiology. 4 Credits.
This lecture and case-based course will allow physician assistant students to determine the impact of infectious, autoimmune, and pathologic etiologies on body function. Lectures and cases will focus on the pathogenesis and natural history of common diseases by system and will correlate pathophysiology with clinical presentation.
Pre / Co requisites: PAS 513 requires prerequisites of SMD 500 and SMD 501, and a corequisite of PAS 512.
Typically offered in Fall.

PAS 514. Introduction to Diagnostics. 2 Credits.
LEC (1), LAB (2)
This lecture, small group discussion, and laboratory course will allow physician assistant students to identify common diagnostic studies, interpret basic electrocardiograms, and evaluate basic medical imaging.
Pre / Co requisites: PAS 514 requires prerequisites of SMD 500 and SMD 501, and a corequisite of PAS 512.
Typically offered in Fall.

PAS 515. Professional Issues and Healthcare Policy. 2 Credits.
This lecture and seminar course will introduce students to the professional issues and policies relevant to clinical practice as a physician assistant. Lectures on the healthcare system, the public health system, patient advocacy, health policy, medical reimbursement, documentation of care, coding, and billing will be supplemented with experiences with clinical providers in order for students to more fully understand the opportunities and challenges of working in current and potential future healthcare systems.
Pre / Co requisites: PAS 515 requires a prerequisite of PAS 503.
Typically offered in Fall.

PAS 520. Clinical Medicine for the Lifespan I. 6 Credits.
This lecture and seminar course will allow physician assistant students to articulate a comprehensive understanding of pathophysiology, clinical presentation, diagnosis, and management of common acute and chronic diseases encountered in primary care settings for patients across the lifespan. Additionally, students will be able to identify differential diagnoses and appropriate workup for commonly encountered chief complaints in clinical practice.
Pre / Co requisites: PAS 520 requires prerequisites of SMD 500, PAS 512, and PAS 513; and corequisites of PAS 520, PAS 521, PAS 522, and PAS 524.
Typically offered in Spring.

PAS 521. Pharmacotherapeutics. 4 Credits.
This lecture and case study seminar course will allow physician assistant students to apply the principles of pharmacology, including the absorption, bioavailability, distribution, metabolism, excretion, classification, and mechanism of action of commonly prescribed medications and illicit drugs. Additionally, this course will allow students to select common over-the-counter and prescription drugs for appropriate use in clinical practice, based on clinical indications, contraindications, dosing, side effects, and monitoring of commonly used medications.
Pre / Co requisites: PAS 521 requires a prerequisite of PAS 512; and corequisites of PAS 520, PAS 522, and PAS 524.
Typically offered in Spring.

PAS 522. Emergent and Surgical Medicine. 4 Credits.
This lecture and case-based course will allow physician assistant students to articulate a comprehensive understanding of pathophysiology, clinical presentation, diagnosis, and management of common acute and emergent presentations of diseases for patients across the lifespan. Students will also identify surgical vs. nonsurgical presentation and management of diseases commonly encountered. Additionally, students will be able to identify differential diagnoses and appropriate workup for commonly encountered chief complaints in clinical practice.
Pre / Co requisites: PAS 522 requires prerequisites of PAS 510, PAS 512, PAS 513, and PAS 514; and corequisites of PAS 520, PAS 521, and PAS 524.
Typically offered in Spring.

PAS 523. Clinical Reasoning and Evidence-Based Practice. 2 Credits.
This small group integrative seminar course will allow physician assistant students to develop clinical reasoning and problem-solving abilities. Students will utilize clinical case studies, role-playing, and standardized patient encounters to guide, develop, and refine directed history and physical examination, clinical reasoning, case presentation, and patient counseling skills. Application of evidence-based medicine principles to clinical scenarios will be integral as part of patient management.
Pre / Co requisites: PAS 523 requires prerequisites of PAS 510, PAS 512, and PAS 513; and corequisites of PAS 520, PAS 521, PAS 522, and PAS 524.
Typically offered in Spring.

PAS 524. Diagnostics Seminar. 2 Credits.
LEC (1), LAB (2)
This lecture and case-based course will allow physician assistant students to select and interpret commonly ordered diagnostic studies. Students will also prescribe the most appropriate screening and diagnostic modalities for common disease processes.
Pre / Co requisites: PAS 524 requires a prerequisite of PAS 514; and corequisites of PAS 520 and PAS 523.
Typically offered in Spring.

PAS 525. Interprofessional Practice Seminar. 2 Credits.
This integrative seminar course will allow students to synthesize history-taking and physical diagnosis skills with the medical, diagnostic, and pharmacologic knowledge gained throughout the didactic phase of the physician assistant program in order to apply it to simulated patient presentations. Working individually, in small peer groups, and in interprofessional teams, students will interact with patient simulators and standardized patients to manage patients or brainstorm solutions to current medical issues.
Pre / Co requisites: PAS 525 requires prerequisites of PAS 502, PAS 503, PAS 510, and PAS 513; and corequisites of PAS 520 and PAS 523.
Typically offered in Spring.

PAS 530. Clinical Medicine for the Lifespan II. 6 Credits.
This lecture course will allow physician assistant students to articulate a comprehensive understanding of pathophysiology, clinical presentation, diagnosis, and management of common acute and chronic diseases encountered in primary care settings for patients across the lifespan. Additionally, given a chief complaint, the students will be able to identify the differential diagnosis and appropriate workup in clinical practice. The course includes modules in ophthalmology, oral health, dermatology, infectious disease, hematology/oncology, endocrinology, nephrology, genitourinary, and reproduction.
Pre / Co requisites: PAS 530 requires a prerequisite of PAS 520.
Typically offered in Summer.

PAS 531. Health Promotion and Patient Safety. 2 Credits.
LEC (1), DIS (1)
This lecture and group discussion course will allow physician assistant students to gain a fundamental understanding of the social determinants of health, inclusivity, patient advocacy, patient safety, quality improvement, and the impact of each on clinical practice. Through lecture, group discussion, directed assignments, and simulated patient encounters, this course will provide students with practical approaches to provide basic counseling and patient education skills that are patient centered, culturally sensitive, and focused on helping patients and families mitigate modifiable risk factors for disease and maintain patient safety.
Pre / Co requisites: PAS 531 requires a prerequisite of PAS 515.
Typically offered in Summer.
PAS 532. Applied Behavioral Health. 2 Credits.
This lecture course will allow physician assistant students to articulate a comprehensive understanding of pathophysiology, clinical presentation, diagnosis, and management of acute and chronic behavioral health and psychiatric issues encountered for patients across the lifespan. This course will also focus on end-of-life issues, human sexuality, normal and abnormal development across the lifespan, patient response to stress, illness and injury, substance use disorders, violence identification and prevention, and provider wellness. This course will provide students with practical approaches to provide basic counseling and patient education skills that are patient centered, culturally sensitive, and focused on helping patients and families.
Typically offered in Summer.

PAS 533. Clinical Skills Lab. 1 Credit.
This laboratory course will allow physician assistant students to practice common clinical skills and procedures based on current professional practice.
Typically offered in Summer.

PAS 540. Current and Emerging Issues in Healthcare. 2 Credits.
This small group discussion and research course will allow physician assistant students to identify current or future issues in healthcare or health education. Students will work individually or in groups to research the scope of the problem and propose potential solutions.
Pre / Co requisites: PAS 540 requires prerequisites of SMD 505 and PAS 515.
Typically offered in Summer.

PAS 541. Clinical Practice Seminar. 3 Credits.
LEC (2), LAB (2)
This seminar course will allow physician assistant students to reinforce the medical knowledge, clinical and technical skills, clinical reasoning and problem-solving abilities, interpersonal skills, and professional behaviors necessary to enter supervised clinical practice experiences.
Pre / Co requisites: PAS 541 requires a prerequisite of PAS 530.
Typically offered in Summer.

PAS 610. Internal Medicine Clinical Experience. 4 Credits.
This supervised clinical education experience will allow physician assistant students to assess and medically manage adult patients in a hospital setting. Through supervised patient contact, students will gain experience in performing history and physical examinations, documenting patient encounters, and management of acute and chronic illnesses commonly encountered in hospitalized patients. Additionally, students will provide basic counseling and patient education skills that are patient centered, culturally sensitive, and focused on helping patients and families.
Pre / Co requisites: PAS 610 requires a prerequisite of PAS 541.
Typically offered in Fall, Spring, Summer, Winter.

PAS 611. Master's Experience: Develop. 1 Credit.
LEC (.5), DIS (.5)
This course, which takes place throughout the entire clinical year, is the capstone experience for physician assistant students. Students will work individually or in small groups to develop a culminating project with the direction of a faculty advisor which will integrate the knowledge acquired throughout the curriculum. This course will focus on identifying a project and defining the scope of work. Additionally, students must participate in lecture and seminar experiences throughout the clinical year. Students must continue to progress towards obtaining and documenting acquisition of program competencies. The course also includes a multi-faceted summative evaluation/assessment procedure consisting of: a comprehensive written examination that encompasses topics drawn from the entire PA program curriculum; a series of Objective Structured Clinical Examinations (OSCE) using standardized patients where students must demonstrate the ability to elicit a medical history, perform a physical examination, order appropriate diagnostic studies, formulate a diagnosis, develop a management plan, render patient education and document the findings for acute, emergent, chronic, and preventative patient care.
Pre / Co requisites: PAS 611 requires a prerequisite of PAS 621.
Typically offered in Fall, Spring, Summer, Winter.

PAS 620. Surgery Clinical Experience. 4 Credits.
This supervised clinical experience will allow physician assistant students to evaluate and manage patients presenting with conditions requiring surgical management. Students will participate in operating room procedures and techniques and will work collaboratively with the surgical team. Students are exposed to all aspects of the surgical process, including pre-operative, intra-operative, and post-operative patient care.
Pre / Co requisites: PAS 620 requires a prerequisite of PAS 541.
Typically offered in Fall, Spring, Summer, Winter.

PAS 621. Master's Experience: Refine. 1 Credit.
LEC (.5), DIS (.5)
This course is the second part of the capstone experience for physician assistant students. Students will continue to work individually or in small groups on their culminating project with the direction of a faculty advisor. This course will focus on completion of the research necessary to formulate a first draft of a deliverable. Additionally, students must participate in lecture and seminar experiences throughout the clinical year. Students must continue to progress towards obtaining and documenting acquisition of program competencies.
Pre / Co requisites: PAS 621 requires a prerequisite of PAS 611.
Typically offered in Spring.

PAS 630. Pediatrics Clinical Experience. 4 Credits.
This supervised clinical experience will allow physician assistant students to educate, assess, and manage pediatric patients. Students will be exposed to the healthcare needs of infants, children, and adolescents in an inpatient and/or outpatient setting. Students will interact with both the pediatric patient and caregiver to manage common acute and chronic pediatric problems and provide preventative care as related to normal growth and development, immunization requirements, nutritional requirements, and anticipatory guidance.
Pre / Co requisites: PAS 630 requires a prerequisite of PAS 541.
Typically offered in Fall, Spring, Summer, Winter.

PAS 631. Master's Experience: Execute. 2 Credits.
LEC (1), DIS (1)
This course is the final part of the capstone experience for physician assistant students. Students will continue to work individually or in small groups on their culminating project with the direction of a faculty advisor. This course will focus on presentation of a deliverable as developed and refined throughout the clinical year. Students must continue documenting acquisition of program competencies. The course also includes a multi-faceted summative evaluation/assessment procedure consisting of: a comprehensive written examination that encompasses topics drawn from the entire PA program curriculum; a series of Objective Structured Clinical Examinations (OSCE) using standardized patients where students must demonstrate the ability to elicit a medical history, perform a physical examination, order appropriate diagnostic studies, formulate a diagnosis, develop a management plan, render patient education and document the findings for acute, emergent, chronic, and preventative patient care.
Pre / Co requisites: PAS 631 requires a prerequisite of PAS 621.
Typically offered in Summer.

PAS 640. Emergency Medicine Clinical Experience. 4 Credits.
This supervised clinical experience will allow physician assistant students to educate, assess, and manage patients presenting with urgent and emergent medical and surgical conditions. Students will function as part of an interdisciplinary team in the emergency department, working collaboratively with healthcare providers from all disciplines. Through supervised patient contact, the student will gain experience in performing directed history and physical examinations, documenting patient encounters, assessing and managing episodic illness, and performing common clinical skills.
Pre / Co requisites: PAS 640 requires a prerequisite of PAS 621.
Typically offered in Fall, Spring, Summer, Winter.

PAS 650. Women's Health and Prenatal Care Clinical Experience. 4 Credits.
This supervised clinical experience will allow physician assistant students to educate, assess, and manage patients presenting for gynecologic and pregnancy-related care for women throughout the reproductive lifespan. Through supervised patient contact in a hospital, clinic, and/or private practice setting, the student will gain experience in obtaining and documenting health history, performing the routine gynecologic examination, and common clinical skills. Students will interact with patients and partners to manage common acute and chronic gynecologic problems and provide preventative and prenatal care.
Pre / Co requisites: PAS 650 requires a prerequisite of PAS 541.
Typically offered in Fall, Spring, Summer, Winter.

PAS 660. Behavioral Health Clinical Experience. 4 Credits.
This supervised clinical experience will allow physician assistant students to educate, assess, and manage patients presenting for mental and behavioral health. Through supervised patient contact in an outpatient and/or inpatient behavioral health facility, the student will work collaboratively with the mental health team to evaluate and manage a range of chronic, acute, and emergent behavioral/mental health issues. The student will recognize the roles that socioeconomics, family health history, and social interactions play in the course of behavioral/mental health conditions; address barriers to treatment; and offer continued support through community resources.
Pre / Co requisites: PAS 660 requires a prerequisite of PAS 541.
Typically offered in Fall, Spring, Summer, Winter.
PAS 670. Family Medicine Clinical Experience. 4 Credits.
This supervised clinical experience will allow physician assistant students to educate, assess, and manage patients, providing for medical, emergency, and chronic conditions to an outpatient setting. Through supervised patient contact, the student will gain experience in performing history and physical examinations, measuring patients, managing the acute and chronic illnesses, and providing patient-centered health education. Pre / Co requisites: PAS 670 requires a prerequisite of PAS 541. Typically offered in Fall, Spring, Summer, Winter.

PAS 680. Elective Clinical Experience. 4 Credits.
This supervised clinical experience affords the physician assistant student an opportunity to increase their medical knowledge, clinical and technical skills, clinical reasoning and problem-solving abilities, interpersonal skills, and professional behaviors in an area of clinical interest. Pre / Co requisites: PAS 680 requires a prerequisite of PAS 541. Typically offered in Fall, Spring, Summer, Winter.

SMD
SMD 500. Human Cadaver Anatomy. 2 Credits.
This lecture course will allow students to develop an understanding of normal human anatomy and common variants. Lectures will cover the systematic and developmental anatomy of the human body. Medical and surgical case studies will be utilized to provide a clinical context to anatomical structures and functions. Pre / Co requisites: SMD 500 requires a corequisite of SMD 501. Distance education offering may be available. Typically offered in Fall, Spring & Summer.

SMD 501. Human Cadaver Dissection. 4 Credits.
This laboratory course will allow students to identify normal human anatomical structures and common variants. Students will collaborate in small groups to perform regional human cadaver dissections and will utilize medical images and clinical cases to supplement and provide clinical context to anatomical structures and function. Pre / Co requisites: SMD 501 requires a corequisite of SMD 500. Typically offered in Fall, Spring & Summer.

SMD 502. Prevention & Care of Injury and Illness. 3 Credits.
This course builds upon students' existing knowledge of basic life support and first aid, providing an avenue for practice and discussion of advanced first aid techniques and management of sport-related medical emergencies. The course also takes an evidence-based approach to common athletic injuries, principles of injury prevention, and the application of taping and bracing techniques used in athletic training. Pre / Co requisites: SMD 502 requires current CPR for the professional rescuer certification. Distance education offering may be available. Typically offered in Summer.

SMD 505. Evidence Based Practice in Sports Medicine. 3 Credits.
The purpose of this course is to expose students to evidence based practice (EBP) and demonstrate the impact it has on clinical practice in the profession of athletic training and other allied health care professions. Students will be given all the necessary background information on EBP research design, tools to critically appraise, and will be equipped to perform an original EBP design or an analysis of consolidated EBP research. This course is designed to provide students with a greater understanding of how to prudently interpret research results as it pertains to influencing change in clinical practice. Pre / Co requisites: SMD 505 requires prerequisite MAT 121 or equivalent.

SMD 510. Therapeutic Agents. 3 Credits.
Therapeutic agents used in athletic training are presented with regards to physiological effects, physics, indications/contraindications as well as the evidence-based practice for appropriate agent selection. Pre / Co requisites: SMD 510 requires prerequisite or co-requisite of SMD 502. Typically offered in Spring.

SMD 511. Principles of Rehabilitation. 3 Credits.
Principles, objectives, indications, contraindications, and progression of various exercise programs used in the rehabilitation of orthopedic injuries are presented. Pre / Co requisites: SMD 511 requires co-requisite of SML 511. Typically offered in Fall.

SMD 512. Orthopedic Assessment 1. 3 Credits.
A comprehensive approach to the assessment and diagnosis of lower extremity and shoulder musculoskeletal injuries including the identification of risk factors, the role of clinical outcome measures, and appropriate referral decisions. Typically offered in Summer.

SMD 513. Orthopedic Assessment 2. 3 Credits.
A comprehensive approach to the assessment and diagnosis of the spine, thorax, upper extremity musculoskeletal and head injuries including the identification of risk factors, the role of clinical outcome measures, and appropriate referral decisions. Pre / Co requisites: SMD 513 requires prerequisite of SMD 512. Typically offered in Fall.

SMD 514. General Medical Conditions and Pharmacology in Athletic Training. 3 Credits.
A presentation of the pathology, pharmacology, and management strategies relevant to sports medicine. Emphasis will be on non-orthopaedic conditions commonly encountered in a physically active population. Typically offered in Spring.

SMD 515. Athletic Training Clinical Experience 1. 3 Credits.
Clinical experience is provided in sports medicine settings. The student will have the opportunity to implement athletic training knowledge, skills and abilities while developing clinical reasoning and critical thinking in the delivery of health care. Emphasis with equipment-intensive sports. Pre / Co requisites: SMD 515 requires prerequisites of SMD 502 and SMD 510. Typically offered in Fall.

SMD 516. Athletic Training Clinical Experience 2. 3 Credits.
Clinical experience is provided in sports medicine settings. The student will have the opportunity to implement athletic training knowledge, skills and abilities while developing clinical reasoning and critical thinking in the delivery of health care. Emphasis with adolescent and special populations. Pre / Co requisites: SMD 516 requires a prerequisite of SMD 515. Typically offered in Spring.

SMD 530. Organization and Administration of Athletic Training. 3 Credits.
An overview of administrative and organizational concepts that relate to health care entities that provides athletic training services. Focuses on issues in athletic training including facility design, fiscal management, insurance, medical, ethical and legal issues. Discusses current issues related to professional conduct and practice. Pre / Co requisites: SMD 530 requires prerequisite of SMD 515. Typically offered in Fall.

SMD 540. Athletic Training Practice Analysis. 3 Credits.
An in-depth study of selected topics as it relates to the practice analysis of athletic trainers. The course will examine current topics through the reading and critical analysis of literature related to athletic training using professional journals and practical experiences. Pre / Co requisites: SMD 540 requires prerequisites of SMD 514 and SMD 516. Distance education offering may be available. Typically offered in Fall & Spring.

SMD 582. Modern Principles Of Athletic Training. 3 Credits.
A course for the physical educator and/or coach. Injuries which occur in class, practice, and game situations; preventative taping and wrapping; immediate first aid procedures, professional relations within the medical profession. Typically offered in Fall.

SMD 592. Seminar in Sports Medicine. 3 Credits.
A seminar that will require students to review and research papers on specific and timely topics in sports medicine. Papers will be read prior to class, presented by students in class and then critically reviewed by the instructor and students. The suggested topics will be subject to change if additional topics are viewed by the instructors as being more current and important issues related to athletic training and sports medicine. Repeatable for Credit.

SMD 595. Orthopaedic Surgical Techniques. 3 Credits.
A course designed to enhance the sports medicine professionals knowledge and awareness of common orthopaedic surgical techniques. Tissue response to surgical incision and post-surgical rehabilitation considerations will be addressed.

SMD 616. Athletic Training Clinical Experience 3. 3 Credits.
Clinical experience is provided in sports medicine settings. The student will have the opportunity to implement athletic training knowledge, skills and abilities while developing clinical reasoning and critical thinking in the delivery of health care. Emphasis with non-traditional seasons or settings. Pre / Co requisites: SMD 616 requires prerequisite of SMD 516. Typically offered in Summer.
SMD 617. Athletic Training Clinical Experience 4. 4 Credits.
Clinical experience is provided in sports medicine settings. The student will have the opportunity to implement athletic training knowledges, skills and abilities while developing clinical reasoning and critical thinking in the delivery of health care and advanced clinical skills. Pre / Co requisites: SMD 617 requires prerequisite of SMD 616. Typically offered in Fall.

SMD 618. Athletic Training Clinical Experience 5. 4 Credits.
Clinical experience is provided in sports medicine settings. The student will have the opportunity to implement athletic training knowledges, skills and abilities while developing clinical reasoning and critical thinking in the delivery of health care and advanced clinical skills. Pre / Co requisites: SMD 618 requires prerequisite of SMD 617. Typically offered in Spring.

SMD 630. Research Methods and Biostatistics for Athletic Training. 3 Credits.
An overview of scientific methods, research designs, sampling, and survey techniques pertinent to study of the field of athletic training will be presented. Specifically, the course prepares you to read, understand, and evaluate research; retrieve research; and develop research-related skills for further graduate education. This course will also focus on the application of statistical methods to different athletic training related research designs, and data with different scales of measurement. Students will display and summarize data and also apply and interpret different statistical tests. Students will be able to complete all statistical tasks using SPSS. Methodology, data interpretation and professional write-up is emphasized. Typically offered in Fall.

SMD 640. Injury Risk and Prevention Strategies. 3 Credits.
The purpose of this course is to expose students to injury prevention programs and research, including topics such as concussion, overuse, upper and lower extremity, and heat injuries as well as the female athlete triad. Injury prevention research discussed relates to the athletic as well as other special populations, such as athletes with an injury history, military population, and females. Students will be equipped to clinically integrate injury prevention programs, including educating the athlete, coaches, and other allied health professionals. This course is designed to provide students with a greater understanding of how to select injury prevention programs as it pertains to influencing change in clinical practice. Typically offered in Summer.

SMD 654. Sport Physiology in Various Populations and Environments. 3 Credits.
This course will cover the advanced physiology of all major body systems during participation in sport and exercise with special attention to different populations such as body size, gender and age. The physiology of how the body reacts and adapts to exercise in different environmental conditions will be covered with special attention to different populations. Typically offered in Fall.

SMD 693. Selected Topics in Sports Medicine. 3 Credits.
A second year graduate course covering environmental topics, theory and practice of evidence-based sports medicine, educational and course assessment concerns for sports medicine professionals. Repeatable for Credit.

SMD 698. Research I. 3 Credits.
This course is intended to guide graduate students through the stages of writing their graduate theses OR research project. This course will involve: the selection of a topic and the conceptualization of the research project, the drafting of the first sections of the paper to include the literature review (proper writing style and format), selecting the appropriate research methods based on the type of hypotheses/research questions posed, and submission and approval of proposed project to research advisor and thesis committee (thesis only). Consent: Permission of the Department required to add. Typically offered in Fall.

SMD 699. Research II. 3 Credits.
This course is intended to guide graduate students through the final stages of the completion and writing of their graduate theses OR research project. Topics include: obtaining IRB approval (if necessary), data collection, data analysis, writing results, writing remaining sections (e.g. discussion, limitations, future directions), finalizing final manuscript OR report including references, oral defense with thesis committee (thesis only), and final formatting for publication if requested by research advisor. Pre / Co requisites: SMD 699 requires a prerequisite of SMD 698. Consent: Permission of the Department required to add. Typically offered in Spring.

SML 510. Therapeutic Agents Lab. 1 Credit.
Lab experiences for the application of therapeutic agents presented in SMD 510. Pre / Co requisites: SML 510 requires a prerequisite or co-requisite of SMD 510. Typically offered in Spring.

SML 511. Principles of Rehabilitation Lab. 2 Credits.
Lab experiences in the application of exercises presented in SMD 511. Pre / Co requisites: SML 511 requires a co-requisite of SMD 511. Typically offered in Fall.

SML 654. Sport Physiology in Various Populations and Environments Lab. 1 Credit.
This laboratory course will expose students to and involve them in activities related to the lecture course SMD 654, Sport Physiology in Various Populations and Environments. Pre / Co requisites: SML 654 requires a co-requisite of SMD 654. Typically offered in Fall.