

School of Health and Rehabilitation Sciences

**EMERGENCY
MEDICINE**www.shrs.pitt.edu/CMS/Departments/EM.asp

In the past, paramedics have functioned in the prehospital environment, providing emergency care to those with life-threatening illness or injury. Today, the field of prehospital emergency medicine is expanding to include aspects of patient care outside of emergency management.

The University of Pittsburgh's undergraduate program in emergency medicine is a joint effort between the School of Health and Rehabilitation Sciences and the Center for Emergency Medicine. Students are provided with a strong foundation in clinical experiences, educational expertise, and administrative leadership. This program is designed to meet the growing need for advanced skill levels required in the emergency medical services (EMS) profession and to prepare students for the technical, clinical, and administrative challenges of a career in EMS and other related fields of emergency medicine. Those who will benefit from this program include anyone interested in becoming a paramedic and pursuing a career in EMS or related areas of emergency medicine. Currently certified paramedics who are interested in taking on additional responsibilities in administration and management, along with EMS professionals who are interested in improving clinical teaching skills, will benefit from this program of instruction. Current certified paramedics can be awarded up to 40 credits.

Due to the ever-changing healthcare industry and the integral part EMS has played in public safety, EMS will be more than a medical response in an emergency. It will play a vital role in improving the general health of the population in the community it serves. The demand also is growing for EMS professionals to have expertise in business, management, teaching, and clinical techniques. The emergency medicine program will give its students the edge in every aspect of the field.

Pre-Professional Preparation in the School of Arts and Sciences

Students are admitted into the program after successful completion of a minimum of 60 college credits in the School of Arts and Sciences (assuming the student has a cumulative and prerequisite quality point average of 2.5 and obtained nothing lower than a C- in prerequisite courses), including the following prerequisite courses:

Algebra/Advanced Mathematics/Statistics/Computer Science (4-credit minimum)
EMT with lab (4 credits)
Oral and Written Communication (6-credit minimum)
Humanities/Social Sciences (6-credit minimum)
Natural Sciences/Psychology (6-credit minimum)

Recommended courses, not required:

Computer Science/Statistics/Logic (3 credits)
Ethics (3 credits)
General Chemistry with lab (4 credits)
Introduction to Nutrition (3 credits)
Introduction to Biology/Microbiology (3 credits)
Life Span Development (3 credits)
Psychology (3 credits)
Anatomy and Physiology



Upper-Level Curriculum

The upper-level courses consist of 64 credits (for a total of 124 credits for the major), including the following courses:

Junior Year, Fall Term

Paramedic Science 1 (3 credits)

This course is designed to introduce the student to topics in emergency medicine related to their profession. Topics include the well-being of the paramedic, the roles and responsibilities of a paramedic, airway management for EMS, and trauma care.

Paramedic Science 2 (3 credits)

This course is designed to introduce the paramedic student to the process of patient assessment. Topics include history taking, techniques of physical examination, and EMS assessment techniques.

Anatomy and Physiology (3 credits)

This course is designed to review the body systems with the paramedic student and help apply them to emergency care provided by the paramedic. Topics include the circulatory system, the nervous system, and the skeletal system.

Cardio Respiratory (3 credits)

This course covers the specific pathophysiology, assessment, and management of the respiratory and cardiac systems.

Paramedic Science Lab 1 (1 credit)

This lab is designed to develop psychomotor skills and correlation of didactic materials outside of a clinical setting.

Clinical 1 (3 credits)

This includes field and clinical rotations at various institutions in the Pittsburgh area to develop psychomotor skill and correlation of didactic materials.

Junior Year, Spring Term

Paramedic Science 3 (3 credits)

This course covers specific pathophysiology assessment and management techniques for common medical conditions encountered in the field. Topics include neurology, behavioral emergencies, endocrine emergencies, toxicology, infections and communicable diseases, and the challenged patient.

Paramedic Science 4 (3 credits)

This course covers topics relating to ob/gyn, and pediatrics and is a continuation of the Paramedic Science 3 course. Topics include neonatal, what makes children different, pediatric medical emergencies, airway skills with hands-on sessions, and child abuse/trauma.

Paramedic Science 5 (3 credits)

This course covers the necessary lectures for BTLs and ACLS certification as well as legal issues, research in EMS, and injury prevention.

EMS Operations (3 credits)

This course is designed to expose the students to various field operations and procedures. Topics include rescue techniques and operation, hazardous materials awareness, and crime scene awareness.

Paramedic Science Lab 2 (1 credit)

This practical skills lab is designed to help the student with critical decision-making skills using assessment-based management and case scenarios. Students will function as EMS crews responding to various scenarios representative of prehospital responses.

Paramedic Science Lab 3 (1 credit)

A continuation of Paramedic Science Lab 2, this course will have students continuing to develop critical decision-making skills while responding to scenarios representative of prehospital responses as EMS crews.

Clinical 2 (4 credits)

This includes field and clinical rotations at various institutions in the Pittsburgh area to develop psychomotor skills and correlation of didactic materials.

Senior Year, Fall Term (13–15 credits)

EM 1140 Critical Care Clinical (1–3 credits)

This course will allow students to explore concepts discussed in Clinical Care Paramedic 1 and Clinical Care Paramedic 2.

EM 1157 Issues in Healthcare Education (3 credits)

This survey course is designed to teach the principles of adult education, classroom management skills, selection of teaching aids, and development of lesson plans. Students will function as teaching assistants in EMS education programs.

EM 1158 Finance and Accounting for EMS (3 credits)

This course is designed to present basic concepts in finance and accounting. Information specific to the needs of EMS will be presented throughout the program.

EM 1162 Legal Issues in Health Care (3 credits)

This course of instruction will focus on the various legal aspects that impact the day-to-day activities of EMS and emergency medicine.

EM 1170 Critical Care Paramedic 1 (3 credits)

This course is designed for the experienced prehospital provider or nurse. The objective of the course is to offer formal training in the concepts and essential skills required for the treatment of critical care transportation patients. Topics covered include surgical airway control, ventilators skills, intra-aortic balloon pumps, and aeromedical physiology. Students should have an ALS certification for more than two years with current certification in ACLS, trauma life support, PALS, and BLS healthcare provider.

Senior Year, Spring Term (13 credits)

EM 1150 Professional Issues in EMS (3 credits)

This course will present to all emergency medicine students issues confronting the EMS industry today. Discussion and assignments will be designed to require students to investigate critical issues that affect healthcare delivery, quality of service, cost of health care, manpower utilization, and the effects of various federal and state legislation on healthcare delivery.

EM 1156 Research in EMS (2 credits)

This course provides an overview of research design and introduces EMS professionals to this important topic.

EM 1161 EMS Management (3 credits)

This course will assist in providing information and insight into the management of EMS systems.

EM 1163 Issues in EMS (2 credits)

This course examines current issues relating to the policies, procedures, and future of EMS. Among the topics considered are medical errors, interaction with other healthcare fields, and potential roles for the EMS provider in nontraditional settings. This course is designed to encourage students to critically evaluate literature and formulate well-reasoned opinion through group discussion and writing.

EM 1171 Critical Care Paramedic 2 (3 credits)

This course is a continuation of the concepts covered in Critical Care Paramedic 1.

For more information about the emergency medicine Bachelor of Science degree, contact:

University of Pittsburgh
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4020 Forbes Tower
Pittsburgh, PA 15260
412-383-6558
E-mail: admissions@shrs.pitt.edu
www.shrs.pitt.edu/CMS/Departments/EM.asp

or

University of Pittsburgh
Center for Emergency Medicine
Emergency Medicine Program
230 McKee Place, Suite 500
Pittsburgh, PA 15213
412-647-4667
E-mail: stoywa@upmc.edu
www.centerem.org

For more information about other majors at the University of Pittsburgh, contact:

University of Pittsburgh
Office of Admissions and Financial Aid
Alumni Hall, 4227 Fifth Avenue
Pittsburgh, PA 15260-6601
412-624-7488
E-mail: oafa@pitt.edu
www.pitt.edu/~oafa

Special Programs

Emergency Medicine Student Association

This association exists to enhance the professional development of its members through leadership opportunities and participation in academic, social, and service activities related to emergency medicine.

Internships

Having an internship can be one of the most enlightening and productive aspects of your undergraduate education. It not only gives you a closer look at working in a particular field but also can help you gain a competitive edge, make contacts in the marketplace, and earn credits toward your degree. Pittsburgh is an exciting place for internship opportunities: internationally known as a renowned center for health care and groundbreaking medical research; home to many corporate headquarters, including H.J. Heinz, Fisher Scientific, PPG Industries, Alcoa, and Mellon Financial Corporation; and a city with a wealth of cultural and entertainment activities, including three professional sports teams and the Carnegie system of museums. Internships are not limited to Pittsburgh, however. Every year, students complete internships in cities such as Philadelphia, Pa.; Washington, D.C.; New York, N.Y.; and their own hometowns.