

Academic Departments *Faculty keep the curriculum current and innovative.*



Anatomy

www.siumed.edu/anatomy/

Eight full-time faculty in the Department of Anatomy in Carbondale teach practical and clinical anatomy of the human body for the first year medical students. Teaching activities include resource sessions and laboratories in gross anatomy and neuroanatomy as well as microscopic anatomy and embryology.

Departmental faculty also serve as small group tutors in the problem based learning curriculum. Departmental faculty are actively engaged in biomedical research that includes neuroanatomy, neurophysiology, brain injury and recovery, epilepsy, stroke, Alzheimer's disease, metabolic disorders that affect the brain, schizophrenia and evolutionary genetics.

Anesthesiology

www.siumed.edu/anesthesiology/

The Department of Anesthesiology in Springfield plays a major role in teaching medical students the clinical skills needed to support life when there is acute or chronic failure of circulatory, ventilatory or central nervous system function. The clinical faculty is composed of 20 anesthesiologists.

During clerkship, students work with faculty physicians in the operating rooms and treatment areas at Memorial Medical Center, a major regional medical center. How the disease process and the drugs used for treatment interact with anesthesia provides a constant source of teaching material.

Faculty stress the importance of pre-operative assessment and the value of a multi-disciplinary approach to patient evaluation before surgery when multi-system disease exists. Students are offered a two- to four-week elective to augment and intensify their clinical experience in anesthesiology.

Biochemistry and Molecular Biology

biochem.siuc.edu/

The Department of Biochemistry and Molecular Biology is located in Carbondale. The faculty teach graduate courses in biochemistry and provide biochemistry, cell biology and molecular biology instruction for the medical school.

Medical students study biochemical and molecular concepts related to the practice of medicine. These topics are integrated with other disciplines in a clinical setting. The biochemistry faculty serve as lecturers, tutors and resource faculty throughout the students' medical school education.

Areas of faculty research include molecular biology and biochemical and macromolecular interactions.

Family and Community Medicine

www.siumed.edu/fammed/

The Department of Family and Community Medicine is nationally recognized for producing family physicians. The faculty physicians deliver comprehensive care to the individual and the family, with emphasis on health promotion and disease prevention, and care of the acutely and chronically ill.

SIU's undergraduate program in family medicine emphasizes population health, preventive medicine and clinical epidemiology. The clinical rotations teach the essential functions of family medicine: first contact access, comprehensive care, continuous care and team care. Board-certified family physicians who practice in central and southern Illinois provide preceptorship sites for medical student training in the context of the patient-centered medical home. The students experience the day-to-day lives of family physicians and learn the importance of effective interdisciplinary and community oriented care.

Medical student training also occurs at the department's four residency programs in Carbondale, Decatur, Quincy and Springfield.

Information and Communication Sciences (Libraries)

www.siumed.edu/lib/

Three SIU facilities meet the informational needs of the School's students, faculty and staff. The library faculty comprise the Department of Information and Communication Sciences (ICS).

Materials pertaining to the study of the pre-clinical sciences and medicine are located within Morris Library in Carbondale. The School's Medical Resource Center (MRC) is located in Lindegren Hall on the Carbondale campus. Its collection consists of more than 16,000 print volumes, electronic information resources and models. The collection of the School's Medical Library in Springfield totals more than 154,000 print volumes, documents, electronic resources and media programs; more than 2,500 subscription periodicals; a 5,000-plus volume special collection in the history of medicine; and loanable equipment, such as laptops, netbooks and multimedia projectors. Students also have access to research databases and electronic resources, wireless networks, and individual, group and after-hours study spaces.



Internal Medicine

www.siumed.edu/medicine/

Faculty in the Department of Internal Medicine in Springfield teach students during all four years. The specialty provides primary care for adults and generalized care for hospitalized adults as well as subspecialty care in cardiology, dermatology, endocrinology, gastroenterology, geriatrics, infectious disease, medicine/psychiatry, nephrology, pulmonary medicine, intensive care, hematology/oncology and rheumatology.

The internal medicine faculty help students learn skills needed to evaluate and manage the medical needs of adolescents and adults, including preventive care and basic procedural skills. Students learn to apply basic biomedical principles in solving actual clinical problems and acquire the skills of interviewing, physical examination, clinical decision making and communicating with patients and other health care personnel.

Clinical experiences during the third-year clerkship include inpatient services, outpatient general medicine clinics and several weeks in selected subspecialty areas. Students may take a variety of electives in internal medicine and related subspecialties. Fourth-year students also may work with faculty on research projects.

Medical Education

www.siumed.edu/dme/academy/

The Department of Medical Education provides educational and research support to other medical school departments in addition to its own teaching and research functions. In Carbondale, its faculty provide classroom instruction, tutorial support and advisement to MEDPREP students.

In Springfield, the department assists faculty in the design, implementation and evaluation of instructional programs. Faculty members conduct research in cognitive science, instructional theory and practices, clinical expertise and evaluation of competency. The department provides faculty support for the Professional Development Laboratory, a nationally recognized, self-contained learning and evaluation environment used for the improvement of professional education.

The Academy for Scholarship in Education is based in the department. This is a collaborative effort by faculty to improve the curriculum, engage in medical education research and reward excellence in education and teaching innovations.

The department houses the editorial office for *Teaching and Learning in Medicine*, an international journal published quarterly and indexed in Index Medicus/MEDLINE.

Medical Humanities

www.siumed.edu/medhum/

The Department of Medical Humanities in Springfield offers a curriculum designed to provide students with critical dialog about health, health care and the human condition. The full-time faculty offer expertise in law, ethics, cultural competence, communication, health policy, population health, literature, religion and medical history. More than 30 cross-appointed and adjunct faculty teach in such areas as government and public policy, jurisprudence and sociology.

Medical humanities topics include a comprehensive examination of the physician-patient relationship, the physician's role in an evolving health care system and physician participation in the administration of justice. Other humanities learning experiences, including visiting lectures and the Doctoring Streamer, are integrated throughout the four years. A diverse array of electives is offered during the third and fourth years. The department also sponsors a six-year M.D.-J.D. dual-degree program with SIU School of Law.

The department manages the Pearson Museum, which collects, preserves, displays and interprets the history of medicine, pharmacy and health care.

Neurology

www.siumed.edu/neuro/

The specialty of neurology deals with all medical illnesses of the nervous system and skeletal muscles. The Department of Neurology in Springfield has 11 full-time physician faculty members, two doctoral faculty, seven full-time cross-appointed faculty and six part-time faculty.

Neurology faculty collaborate with the basic science faculty in the first and second years and teach the neurological examination in the second year. They conduct a neurology clerkship in the fourth year and offer several clinical and research electives.

The department has research and tertiary care programs in stroke, epilepsy, dementia, neurorehabilitation, neuromuscular disease, multiple sclerosis, movement disorders and childhood neurological diseases. Faculty make up the stroke teams at St. John's Hospital and Memorial Medical Center.

The department has several research laboratories, a state-supported Alzheimer's disease center, a National Institutes of Health funded Parkinson Disease and Movement Disorders Clinic and the National Pediatric Myoclonus Center.

Medical Microbiology, Immunology and Cell Biology

www.siumed.edu/mmi/

The Department of Medical Microbiology, Immunology and Cell Biology in Springfield consists of 12 faculty and five cross-appointed scientists. Many of the members of the faculty are also on the staff of the Simmons Cancer Institute at SIU and provide research experiences in cancer related projects. The department is located in a state-of-the-art research facility with laboratories and support space as well as an enhanced biosafety level 3 containment facility.

The department faculty participate in all four years of the undergraduate medical curriculum and offer several elective experiences in diverse areas of medical microbiology, immunology and cell biology. The electives provide supplemental experiences in the basic science of diagnostic and research procedures in medically-oriented areas. The department offers a master's and doctorate in molecular biology, microbiology and cell biology. The faculty also train medical students and postdoctoral fellows in research.

Department faculty members are active in independent and collaborative research projects that are both basic and/or translational. The faculty's research projects are supported by grants from local and national agencies as well as internal sources.





Obstetrics and Gynecology

www.siumed.edu/ob/

The Department of Obstetrics and Gynecology in Springfield specializes in the diagnosis and treatment of diseases in women of all ages and represents the subspecialty areas of maternal-fetal medicine, gynecologic oncology, reproductive endocrinology and urogynecology as well as general obstetrics and gynecology. The department faculty consist of 18 full-time academic physicians and two research faculty, who all work closely with medical students.

During the third-year clerkship, students participate in diverse clinical encounters both in ambulatory and inpatient settings to improve clinical skills and knowledge. Didactic seminars and teaching rounds are held daily with the academic faculty and residents.

Various electives are available in general obstetrics and gynecology as well as the subspecialties.

Pathology

The faculty of the Department of Pathology in Springfield consists of physicians from both Memorial Medical Center and St. John's Hospital. Comprehensive clinical testing, examination of surgical and cytology specimens, and medical and forensic autopsies are performed by these physicians. Most faculty research consists of collaborative projects with clinicians.

The department's basic approach to its major teaching for medical students is independent study based on patient problems and supported by organized learning resources and faculty assistance. Faculty contact occurs through interactive tutor groups with second-year students and multi-disciplinary conferences with faculty from other departments.

The hospitals' pathology departments provide considerable front-line elective learning activities for third- and fourth-year students. Students also are encouraged to follow patient cases into the laboratory, including the clinical and surgical pathology laboratories and the autopsy room, and to discuss them with faculty.

Pediatrics

www.siumed.edu/peds/

The Department of Pediatrics in Springfield has designed a curriculum to provide students with a core knowledge of medical problems affecting infants, children and adolescents.

A number of subspecialties are represented on the faculty including critical care medicine, neonatology, neurology, infectious diseases, nephrology, endocrinology, pulmonology, gastroenterology, cardiology, hematology/oncology, genetics, pediatric/clinical child psychology, behavioral/developmental and general pediatrics.

The St. John's Children's Hospital combines the faculty resources of the School of Medicine with the pediatric facilities and services of St. John's Hospital. It is accredited by the National Association of Children's Hospitals and Related Institutions.

Clerkship experiences include office, hospital and community clinical experiences in general pediatrics and related subspecialties. Clinical experiences in general and subspecialty pediatrics are complemented by conferences, seminars and teaching rounds.





Physiology

www.siumed.edu/physiology/

Physiology is the study of the mechanisms by which living organisms function in health and disease. The Department of Physiology in Carbondale consists of 15 faculty representing the academic areas of physiology, pharmacology, anatomy, and cell and molecular biology. Most of the faculty teach in the School of Medicine; all are involved in the department's programs for bachelor's, master's and doctoral degrees.

The faculty are responsible for presenting physiology and introductory pharmacology concepts throughout the four-year medical education program, particularly in areas related to neural, cardiovascular, renal, respiratory, gastrointestinal, reproductive and endocrine systems. Elective courses also are offered to fourth-year students.

Department faculty members are active in independent and collaborative research projects that are both basic and/or translational.

Pharmacology

www.siumed.edu/pharm/

The Department of Pharmacology in Springfield consists of nine full-time faculty members, six cross-appointed faculty and seven adjunct scientists.

The faculty participates in all four years of the undergraduate medical education program, especially in the second year. The focus of these educational experiences is the rational use of drugs and the mechanisms of drug actions and adverse drug effects. The teaching and learning experiences include case-based problem analysis in tutorial sessions, lectures and integrated multidisciplinary learning activities. Elective courses for medical students also are offered.

The faculty's research focuses on the interaction between drugs and biological systems and aims at controlling illnesses and preserving health. Areas of major interest include cellular, molecular and neuropharmacology. Collaboration between the pharmacology faculty and investigators from other departments and at other universities broadens the research spectrum. Opportunities for involvement of medical students in ongoing research programs are numerous.

The department's graduate program offers master's and doctoral degrees in pharmacology and neuroscience.

Psychiatry

www.siumed.edu/psych/

Psychiatry is concerned with the identification and treatment of behavioral and emotional disorders that result from the interaction of biological, psychological and social factors. They range from a normal stress reaction to a loss of contact with reality. The Department of Psychiatry in Springfield consists of 30 psychiatrists and other mental health professionals who teach clinical psychiatry.

The goal of undergraduate teaching in psychiatry is to provide basic experience and information on evaluation and treatment or referral of the major mental illnesses. Students experience a broad spectrum of patient interaction through department programs including adult and child psychiatry, rural psychiatry, Alzheimer's disease research and treatment, forensic psychiatry, hospital psychiatry, geriatric psychiatry, public psychiatry and developmental disabilities. Electives are available in inpatient and outpatient work, developmental disabilities, psychotherapy and research.

The department has a wide range of treatment facilities ranging from locations in Springfield to outlying rural areas in central and southern Illinois. These include inpatient settings and outpatient clinics as well as publicly funded hospitals and community mental health centers.



Surgery

www.siumed.edu/surgery/

The Department of Surgery in Springfield consists of ten divisions: emergency medicine, general surgery, neurosurgery, orthopaedics, otolaryngology, pediatric surgery, plastic surgery, thoracic and cardiovascular surgery, urology and vascular surgery.

Surgery faculty participate in all four years of the undergraduate medical education program. The clerkship experience allows students to evaluate and follow patients as they progress through diagnosis to treatment, including surgical intervention.

Functioning as members of the patient-care team, students learn pre- and post-operative evaluation and management and participate in surgical procedures that include patients from all surgical disciplines. Daily rounds and weekly case-based seminars with faculty give students an opportunity to discuss patient problems in detail.

Students enhance clinical skills with activities in the Surgical Skills Laboratory. Standardized patient experiences sharpen physical exam skills and patient-physician communication skills.

Radiology

www.siumed.edu/radiology/

Undergraduate instruction for medical students by the Department of Radiology begins on the Carbondale campus where the anatomy and physiology of radiology are taught, stressing normal variations.

The second-year curriculum was created specifically for the School of Medicine and consists of radiology cases selected to integrate with the learning issues of that week. The goal is to utilize imaging to integrate anatomy, physiology and pathology with the clinical practice of medicine and surgery. The curriculum is designed as a bridge between the first and second years and the medicine and surgery aspects learned in the third and fourth years.

Because of a high demand for radiology electives, more than 100 elective slots are offered in general radiology, community-based radiology and subspecialty radiology. Subspecialty electives include interventional, musculoskeletal, neuroradiology, women's health issues and nuclear medicine research.

