

Keck School of Medicine of USC MD Curriculum

The Keck School of Medicine awards the Doctor of Medicine to enrolled students who have satisfactorily completed the four-year curriculum of the school. This curriculum integrates instruction in all departments of the school: Department of Anesthesiology, Department of Biochemistry and Molecular Biology, Department of Dermatology, Department of Emergency Medicine, Department of Family Medicine, Department of Integrative Anatomical Sciences, Department of Medical Education, Department of Medicine, Department of Molecular Microbiology and Immunology, Department of Neurological Surgery, Department of Neurology, Department of Obstetrics and Gynecology, Department of Ophthalmology, Department of Orthopaedics, Department of Otolaryngology - Head and Neck Surgery, Department of Pathology, Department of Pediatrics, Department of Physiology and Biophysics, Department of Preventive Medicine, Department of Psychiatry and the Behavioral Sciences, Department of Radiation Oncology, Department of Radiology, Department of Stem Cell Biology and Regenerative Medicine, Department of Surgery, Department of Translational Genomics and Department of Urology.

The sections that follow provide a synopsis of the emphases and organization of this four-year curriculum.

Years I–II (two academic years)

The Year I/II curriculum is designed to enhance the students' understanding of the basic sciences and their relevance to clinical medicine. The methodologies used are designed to improve students' problem-solving and independent study skills. Curriculum themes are delivered in a case-centered format with the integration of small-group learning sessions and directed independent study. Each week of the academic year is limited to approximately 20 hours of lecture and small group sessions excluding time spent in Introduction to Clinical Medicine sessions. All systems and courses throughout the first two years are graded Pass/Fail. There is an eight-week summer break between Year I and II.

Systems:

The first semester of Year I is devoted to Foundations of Medical Sciences (FMS), a 19-week introductory series which provides students with the fundamental knowledge necessary for the integrated study of the basic and clinical sciences. FMS is divided into three sections: FMS I, II, and III providing a transition from an understanding of normal cellular structures and processes, to the organization of the human body and the general principles of disease. In addition, instruction of evidenced based medicine begins in FMS I and continues during FMS III to ensure that students are grounded in biostatistics and epidemiology to enable them to interpret the medical literature. Furthermore, lectures, self-study modules, and small group discussion sessions are delivered within Year I to provide students with an introduction to the methods of Clinical Translational Research and prepare them to carry out research as medical students. The overarching goal for these sections is to provide a foundation for comprehending the disease-specific content required to achieve the case-based objectives in subsequent organ systems. FMS is followed by systems focused in gastrointestinal/liver, neuroscience, reproduction, cardiovascular, renal, respiratory, skin, musculoskeletal, hematology and immunology, endocrinology and infectious diseases. The Integrated Cases Section (ICS) completes the second year of the Year I/II continuum and teaches a model of clinical reasoning through patient-centered problems that integrate the basic and clinical science content presented in the preceding systems. Students explore the multi-organ effects of disease processes and reinforce diagnostic reasoning skills. ICS also reinforces the appropriate use of medical information resources, effective self-directed learning skills, and interpersonal and group communication skills.

Introduction to Clinical Medicine

Introduction to Clinical Medicine (ICM) is a longitudinal clinical skills curriculum integrated with instruction in the systems, helping students learn and apply basic science knowledge in the clinical setting. ICM exemplifies the patient-centered orientation of the medical school curriculum. Students are introduced to patients and are involved in patient care activities beginning in the first few weeks of medical school. ICM emphasizes the systematic acquisition of clinical skills and students gain competency in interviewing, history taking, physical examination, elementary clinical problem solving and medical record keeping.

A group of six students spend from four to eight hours each week with an instructor from the clinical faculty who remains with the same group for one to two years. This format facilitates student-faculty interaction and communication.

Additional learning experiences occur through workshops and focused experiences. ICM workshops provide standardized instruction in history taking and physical examination, as well as integrated instruction in areas that cross disciplines. Through focused experiences, students are encouraged to explore a variety of practice environments as well as community-based health and social services. For example, students may visit outpatient clinical settings, a geriatrics long term care facility, a hospice care facility or a homeless services organization.

Four ICM groups are combined together (24 students total) in Year I for the professionalism and practice of medicine component of the course. These students form a learning community in which students participate in a core curriculum guided by two clinical faculty members. Coursework is designed to help students gain skills and competence in the areas of communication, the social and community context of health care, ethical judgment, self-awareness and reflection, self-care and personal growth, professionalism, cultural competence, and lifelong learning. The course emphasizes interactive small-group learning experiences which may include community leaders, faculty-mentored small-group discussions, student presentations and student-led sessions.

ICM Electives

In Year II, students select from a variety of ICM electives. Examples of ICM electives include advanced ethics, medicine and the mind, spirituality and medicine, medical arts and humanities, global health, complementary and alternative medicine, medicine's intersection with technology, service learning, and the future of health care.

Year III–IV (two academic years)

Years III and IV are designed as a continuum of two calendar years. Students rotate throughout the Year III/IV continuum in cohort groups of approximately 28 students on required clinical clerkships and selective/elective experiences. When on required clinical clerkships (family medicine, internal medicine, obstetrics and gynecology, neurology, pediatrics, psychiatry and surgery), students are immersed in clinical settings and learn while providing direct care to patients as integral members of interprofessional health care teams.

Transition to Clinical Practice

Transition to Clinical Practice is a one-week course at the beginning of Year III designed to prepare students for the transition from predominantly classroom-based instruction in Years I/II to learning while on clinical clerkships. The course provides learning experiences in cultural sensitivity, teamwork, patient safety and quality, and personal resilience and well-being. Students are also afforded the opportunity to acquire skills in basic radiology, EKG interpretation, the presenting and documenting of clinical encounters, the use of aseptic technique, managing airways, and in achieving compliance with different types of isolation requirements. The

course culminates in students donning a white coat and a group recitation of the Hippocratic Oath to reinforce the commitment to professional principles as they transition to their new roles as student physicians on health care teams.

Required Clerkships

There are nine required clerkships in the Year III/IV continuum. All required clerkships provide comparable experiences across clinical sites and core didactic curricula.

Family Medicine 6 weeks

The Family Medicine Clerkship provides students with individualized opportunities for medical students to explore the breadth of family medicine and understand the role of a family physician. Students will care for patients across the full spectrum of ages within the context of an ongoing personal patient-physician relationship focused on integrated care. This clerkship offers students a close, collegial relationship with their preceptors as they address preventive care, acute and chronic illness, and mental health in the outpatient setting. In addition to outpatient clinic, students may participate in home visits, hospital rounds, nursing home rounds, obstetrical deliveries, volunteer clinics, or sporting events to ensure experiences that cover the breadth of family medicine practice.

General Surgery 6 weeks

The Surgery Clerkship provides students with experiences in caring for patients with common general surgery diagnoses and traumatic injuries. These patients range in age from infants to geriatric patients. The students are integral members of an inpatient team consisting of a faculty attending, a fellow, a senior resident, several junior residents, one to two interns and three to four 3rd year students. All student activities revolve around perioperative care. Students participate in the operating room and are active in doing surgical consults, seeing patients in the clinic, and rounding daily with their inpatient teams.

Internal Medicine 6 weeks

The Internal Medicine Clerkship provides students with a comprehensive experience in hospital medicine. The clerkship exposes students to a diverse patient population with a wide range of medical conditions and students become familiar with the role that hospitalists play in providing inpatient care. While a member of the medical team students gain experience managing complicated medical conditions, interacting with consulting services, and developing specific disposition plans for individual patient needs.

Obstetrics and Gynecology 6 weeks

The Obstetrics and Gynecology Clerkship provides students the opportunity to interact with women in all stages of life, from adolescence through and beyond menopause. Students experience a variety of obstetrical and gynecological conditions in both outpatient and inpatient settings. Students gain an understanding of the primary care mission within obstetrics and gynecology in the outpatient segment, and the inpatient experience provides an exposure to the dynamic aspects of birth, obstetric and gynecologic surgeries and emergencies.

Pediatrics 6 weeks

The Pediatric Clerkship addresses issues unique to newborns, infants, children, and adolescents by focusing on the health and well-being of the developing human, emphasizing growth and development, principles of health supervision, and recognition and treatment of common health problems. Additionally, the clerkship emphasizes the importance of the interaction of family, community, and society on the complete health of the

patient. The role of the pediatrician in prevention of disease and injury, and the importance of collaboration between the pediatrician, other health professions, and the family is emphasized.

Psychiatry 6 weeks

The Psychiatry Clerkship provides students with experiences engaging in the care of patients in a number of different treatment settings, including inpatient wards, the psychiatric emergency room, outpatient clinics, and hospital-based consultation services. Students are exposed to pathology ranging from uncomplicated depression and anxiety disorders to severely decompensated psychotic disorders. Students learn in detail about the BioPsychoSocial model and a holistic approach to treatment of mental illness, including the use of both psychotherapy and psychopharmacology, and the importance of individualized social interventions. The integration of psychiatry into the broader field of medicine is emphasized, as is the use of bioethical concepts in the treatment of all patients.

Neurology 4 weeks

The Neurology Clerkship provides students with experiences interacting with patients of different ages that have damage to the nervous system of varying types and degrees. Many neurological disorders are insidious in onset with gradual deterioration over time. Students learn to appreciate that neurologic diseases may impair physical functioning and/or can alter the core of what defines individuals as a person, i.e., cognition, memory, and personality. Students learn how to evaluate and treat these patients and their families. Furthermore, because many patients are followed for extended periods of time, students learn how neurologic disease affect, and may restrict, one's lifestyle choices, family interactions, work, school, living situations, and levels of activity.

Internal Medicine Sub-internship 4 weeks

The Internal Medicine Sub-Internship enables Year IV students to work directly with attending physicians and residents in the provision of patient care in an inpatient, sub-internship experience. Students are integral members and contributors to the patient care team and assume a more advanced level of responsibility under the supervision of the resident and attending physician.

Surgical Subspecialty 4 or 6 weeks

The Surgical Subspecialty clerkship experience is either 4 or 6 weeks depending on the year of training in which the student participates. During Year III, students are assigned to two sub-specialties for three weeks each. Students taking this clerkship during year IV are assigned to one surgical sub-specialty for four weeks. Possible services include: Anesthesiology, Breast/Soft Tissue/Endocrine, Burn Surgery, Cardiothoracic Surgery, Hepatobiliary Transplant, Neurosurgery, Orthopedic Trauma Surgery, Orthopedic Hand Surgery, Ophthalmology, Otolaryngology, Pediatric Surgery, Plastic Surgery, Spine Surgery, Urology, and Vascular Surgery.

Intersessions I and II

Intersessions I and II are one-week-long sessions delivered early in Year III (Intersession I) and late in Year III (Intersession II) which enable students to pause, reflect and consolidate the many and varied clinical/educational experiences in which they participate during Year III. The sessions provide experiences in advanced clinical skills, professional development, evidence-based medicine, patient safety and quality, health policy, ethical decision-making, the business of medicine and the residency application process.

Selective Clerkships

Students are required to complete 16 weeks of selective clerkships chosen from a list of four-week clerkships. Selective clerkships are always exactly four continuous weeks and are under the direction of USC faculty members at USC affiliated hospitals and encompass virtually all specialty and subspecialty areas. Students are required to take one critical care or acute care (emergency medicine) selective, a medicine or pediatric subspecialty rotation, and two additional selectives from the above designations or other specialties.

Elective Clerkships

The elective period consists of 16 weeks, during which students may complete research and a combination of approved rotations at KSOM, other medical schools, or other medical centers in the U.S. or abroad.

Track Mentor Program

The KSOM Year III Track Mentor Program capitalizes on the KSOM structure of student cohorts to promote the continued development of professional attributes and a positive learning environment. Each Year III student cohort group meets with their assigned mentor (who has no involvement in the evaluation process) six to seven times during the academic year. The mentors facilitate discussions on topics such as professional development; ethical, professional, and cultural challenges; student health and wellbeing; and collaboration and team development.

Required Scholarly Project

The Required Scholarly Project (RSP) is a longitudinal learning and experiential process that spans all four years of medical school during which all KSOM students complete a scholarly project. The objective of the RSP is to engage medical students in hypothesis-driven research in order to develop skills and attitudes of critical thinking around evidence-based medicine and research. Students identify a project mentor and are given a timeline and milestones to complete. Most students complete the bulk of their "hands on" research during the summer between Years I and II and throughout Year II. All Year II students present at the Annual Spring Medical Student Research Forum. All students submit an abstract and have a poster presentation while a subset deliver platform talks. During Year III/IV, students are required to submit a final scholarly product. To fulfill this requirement, students submit a written report of their research findings, a manuscript draft, or a publication.

Humanities, Ethics, Arts, and Law (HEAL) Curriculum

This four-year curricular thread is integrated into a variety of courses throughout medical school including ICM, required clerkships and Intersessions. The curriculum begins in Year I with collaborative discourse about ethical problems to help students learn to identify, analyze, and resolve clinical ethical problems. The program then focuses on ethical discernment and action in simulated settings and the study of the human dimensions of medicine. Year III includes ethics education by clinical role models as an integral part of the core clerkships. During Intersessions, the program includes a series of sessions that focus on the humanities, arts, contemporary health care and systems issues, and the physician-in-society.

Fifth-year Research Option and Dean's Scholars

USC offers students the opportunity to take a full year of research experience with either a Keck School of Medicine faculty mentor or an approved faculty mentor at another institution. This program is open to any student in good academic standing who has completed his or her first year of medical school. Students interested in the option identify a faculty preceptor and present a description of the proposed research program and funds available in support of the program to the director of the fifth-year research option. A stipend,

comparable to that received by a graduate student at the postgraduate level, is available for selected dean's research scholars pursuing this option.