

# MEDICINE – M.D.

## Curriculum

The curriculum in medicine consists of four academic years. The foundational basic and clinical sciences are integrated throughout medical school, with an emphasis on the basic sciences in the first half, and the clinical sciences in the second half of the curriculum. Organ system blocks are used to integrate the traditional basic science disciplines and other important topics into a single course covering each system, with six blocks taught sequentially in year one, and four blocks in year two. The educational program makes use of a wide variety of pedagogical methods—including but not limited to traditional and interactive lectures; problem, team, and case-based learning; personalized computer-based instruction; quantitative laboratory experiences; patient-care experiences; and the use of simulation and standardized patients.

Students also begin to develop the skills and professional behaviors that are integral to the safe, competent, compassionate, ethical, and Christian practice of medicine—both now and in the future—through participation in two longitudinal courses, which extend throughout medical school. The Clinical Skills course is designed to sequentially develop skills in patient-care, communication, critical thinking, practice-based learning and improvement, professionalism, and whole-person care. Students will have opportunities to participate in both inpatient and outpatient care experiences throughout each year of medical school, in addition to the use of standardized patients and simulation experiences. The Christian Physician Formation course is taught in LIFE communities, where small groups of students are paired with clinical faculty. This course includes a religion component, which is co-taught by faculty from the School of Religion and clinical faculty, as well as topics including resilience, professionalism, social determinants of health, and lifestyle medicine. Students are provided with a faculty mentor through this course to guide them through their educational journey.

The third year of medical education is organized into two components. The primary care block consists of rotations in internal medicine, pediatrics, and family medicine, and includes a continuity clinic experience. Surgery, obstetrics and gynecology, and neurology/psychiatry are combined in the second component. During these rotations, students obtain a foundation for patient care in ambulatory and hospital-based settings through a process of self-directed learning, guided supervision, and teaching by house staff and faculty members in the clinical setting, along with the use of standardized patients and simulation experiences. Recurring experiences in whole-person care, medical ethics, radiology, lifestyle and preventive medicine, social determinants of health, and patient safety are integrated into these core rotations. Students have the opportunity to explore areas of interest during two elective experiences.

During advanced integration weeks, third and fourth-year students will have the opportunity to explore multiple topics. Students will attend plenary sessions led by visiting speakers each morning and participate in breakout groups in the afternoons. These sessions include topics on religion/spirituality, social determinants of health, cultural humility, resilience, and lifestyle medicine. Themes such as "Whole-Person Care" and "God and Human Suffering" will bring topics together to integrate learning. During the integration weeks, students will also have access to mentoring with regard to career planning, specialty choice, and the residency application process.

The fourth year of medical education requires students to integrate the knowledge and skills gained during the first three years, and apply it more autonomously to patient care. Students participate in supervised patient-care experiences in emergency medicine, intensive care medicine, preventive medicine and public health, a selective in either medicine or surgery, and a subintern-level experience in medicine, surgery, family medicine, or pediatrics. Students have ample opportunity to pursue individual interests during four months of elective rotations. To emphasize the importance of science in medical practice, up to a one-month elective must be completed in the basic science discipline of the student's choosing. Students have adequate flexible time to study for Step II (clinical knowledge and clinical skills) of the USMLE and successfully participate in the residency selection process.

## Departments

Anesthesiology (<http://llucatalog.llu.edu/medicine/professional/department-anesthesiology/>)

Basic Science (<http://llucatalog.llu.edu/medicine/professional/department-basic-science/>)

Cardiothoracic Surgery (<http://llucatalog.llu.edu/medicine/professional/department-cardiothoracic-surgery/>)

Dermatology (<http://llucatalog.llu.edu/medicine/professional/department-dermatology/>)

Emergency Medicine (<http://llucatalog.llu.edu/medicine/professional/department-emergency-medicine/>)

Family Medicine (<http://llucatalog.llu.edu/medicine/professional/department-family-medicine/>)

Gynecology and Obstetrics (<http://llucatalog.llu.edu/medicine/professional/department-gynecology-and-obstetrics/>)

Medical Education (<http://llucatalog.llu.edu/medicine/professional/department-medical-education/>)

Medicine (<http://llucatalog.llu.edu/medicine/professional/department-medicine/>)

Neurology (<http://llucatalog.llu.edu/medicine/professional/department-neurology/>)

Neurosurgery (<http://llucatalog.llu.edu/medicine/professional/department-neurosurgery/>)

Ophthalmology (<http://llucatalog.llu.edu/medicine/professional/department-ophthalmology/>)

Orthopedic Surgery (<http://llucatalog.llu.edu/medicine/professional/department-orthopaedic-surgery/>)

Otolaryngology and Head and Neck Surgery (<http://llucatalog.llu.edu/medicine/professional/department-otolaryngology-and-head-and-neck-surgery/>)

Pathology and Human Anatomy (<http://llucatalog.llu.edu/medicine/professional/department-pathology-and-human-anatomy/>)

Pediatrics (<http://llucatalog.llu.edu/medicine/professional/department-pediatrics/>)

Physical Medicine and Rehabilitation (<http://llucatalog.llu.edu/medicine/professional/department-physical-medicine-and-rehabilitation/>)

Plastic and Reconstructive Surgery (<http://llucatalog.llu.edu/medicine/professional/department-plastic-and-reconstructive-surgery/>)

Preventive Medicine (<http://llucatalog.llu.edu/medicine/professional/department-preventive-medicine/>)

Psychiatry (<http://llucatalog.llu.edu/medicine/professional/department-psychiatry/>)

Radiation Medicine (<http://llucatalog.llu.edu/medicine/professional/department-radiation-medicine/>)

Radiology (<http://llucatalog.llu.edu/medicine/professional/department-radiology/>)

Surgery (<http://llucatalog.llu.edu/medicine/professional/department-surgery/>)

Urology (<http://llucatalog.llu.edu/medicine/professional/department-urology/>)

## Admissions

### The Study of Medicine

To prepare for a career in medicine, applicants should pursue a broad understanding in the major areas of knowledge—the natural sciences, the behavioral sciences, and the humanities—which will assist them in learning throughout their lives.

The School of Medicine Admissions Committee selects applicants who are best suited to fulfill the mission of the school and to successfully practice medicine. The committee selects applicants who demonstrate the ability to learn independently, to think critically, and to articulate clearly—both orally and in written form—their ideas and opinions. It is important that applicants to the School of Medicine demonstrate excellent interpersonal skills and show evidence of sensitivity to the needs of humanity.

The Admissions Committee puts forth considerable effort to ensure that an applicant is qualified for medical school. The applicant's academic record and MCAT scores are reviewed to assess the applicant's ability to handle the academic rigors of the medical curriculum. The committee also looks for prerequisite qualities of character and personality, potential for self-direction, good judgment, integrity, and dedication to the ideal of service to humanity.

### Selection Criteria

Applicants are selected based on a holistic review of the academic record, MCAT scores, medical and service experiences, mission fit, recommendations, interpersonal and intrapersonal competencies, and personal interviews. The Admissions Committee seeks individuals who have demonstrated a serious personal commitment to the practice of medicine and have altruistic goals and ideals.

The School of Medicine is owned and operated by the Seventh-day Adventist Church; therefore, preference for admission is given to qualified members of the Church. However, it is a firm policy of the Admissions Committee to admit applicants from other faiths who have demonstrated a commitment to Christian principles and are best suited to meet the

educational goals of the School. No candidate is accepted on the basis of religious affiliation alone.

### Required

Required courses must be completed at an accredited institution of higher education in the United States or Canada. The following courses are required for consideration:

General biology (excludes microbiology, anatomy and physiology), one year sequence with lab

General or inorganic chemistry, one year sequence with lab

Organic chemistry, one year sequence with lab

General physics, one year sequence with lab

Biochemistry, one academic term; lab recommended

CLEP and pass/fail performances are not acceptable for the required courses. Additionally, science credits earned in professional schools (e.g., allied health professions, business, dentistry, nursing, or pharmacy) do not fulfill requirements for admission to medicine. Advanced Placement (AP) credits for the required science courses generally are not accepted.

### Medical College Admission Test (MCAT)

Applicants must complete the MCAT prior to consideration by the Admissions Committee. The MCAT is based on knowledge gained from required science courses. The test must be taken no later than September of the year prior to matriculation. MCAT scores older than three years from the date of matriculation are not considered.

### Health-care experience

Applicants are required to obtain physician shadowing experience and direct patient care exposure to better inform their decision for a career in medicine.

### Technical Standards

Applicants must meet the Admission and Graduation Standards with or without reasonable accommodations.

Loma Linda University School of Medicine candidates for the M.D. degree must have abilities and skills of five varieties, including: observation; communication; motor function; intellectual-conceptual, integrative, and quantitative abilities; and behavioral and social attributes. Technological compensation can be made for some handicaps in certain areas, but a candidate should be able to perform in a reasonably independent manner without the use of a surrogate.

**OBSERVATION:** The student must be able to observe demonstrations and experiments in the basic sciences, including but not limited to physiologic and pharmacologic demonstrations in animals, microbiologic cultures, and microscopic studies of microorganisms and tissues in normal and pathologic states. A student must be able to observe a patient accurately at a distance and close at hand. Observation necessitates the functional use of the senses of vision, touch, hearing, and somatic sensation. It is enhanced by the functional use of the sense of smell.

**COMMUNICATION:** A student must be able to speak, to hear, and to observe patients in order to elicit information; describe changes in mood, activity, and posture; and perceive nonverbal communications. A student must be able to communicate effectively and sensitively with

patients, colleagues, and other personnel. Communication includes not only speech but also reading and writing. The student must be able to communicate effectively and efficiently in oral and written form with all members of the health-care team.

**MOTOR FUNCTION:** Students should have sufficient motor function to elicit information from patients by palpation, auscultation, percussion, and other diagnostic maneuvers. A candidate should be able to conduct basic laboratory tests (urinalysis, CBC); carry out diagnostic procedures (proctoscopy, paracentesis); and read EKGs and X-rays. A candidate should be able to execute motor movements reasonably required to provide general care and emergency treatment of patients. Examples of emergency treatment reasonably required of physicians are cardiopulmonary resuscitation, the administration of intravenous medication, the application of pressure to stop bleeding, the opening of obstructed airways, the suturing of simple wounds, and the performance of simple obstetrical maneuvers. Such actions require coordination of both gross and fine muscular movements, equilibrium, and functional use of the senses of touch and vision.

**INTELLECTUAL, CONCEPTUAL, INTEGRATIVE AND QUANTITATIVE ABILITIES:** These abilities include measurement, calculation, reasoning, analysis, and synthesis. Problem solving, the critical skill demanded of physicians, requires all of these intellectual abilities. In addition, the candidate should be able to comprehend three-dimensional relationships and to understand the spatial relationships of structures.

**BEHAVIORAL AND SOCIAL ATTRIBUTES:** Medical students must possess the emotional health required for appropriate utilization of their intellectual abilities, the exercise of good judgment, and the timely completion of all responsibilities attendant to their academic work, team work, and patient care. They must demonstrate the ability to develop mature, sensitive and effective professional relationships with peers, faculty, staff, members of the healthcare team, and patients. Medical students must demonstrate empathy, and concern for others while respecting appropriate personal and professional boundaries. Medical students must demonstrate integrity as manifested by truthfulness, acceptance of responsibility for one's actions, accountability for mistakes, and the ability to place the well-being of the patient above their own when necessary. They must be able to tolerate demanding workloads and to function effectively under stress. They must be able to adapt to changing environments, to display flexibility and to learn to function in the face of uncertainties inherent in medical education and clinical practice settings.

## Application

Application to the School of Medicine must be submitted through the American Medical College Application Service (AMCAS). Invitations to submit a secondary application are sent to applicants. Letters of recommendation as specified are required and must be submitted to AMCAS

## Pre-entrance health requirement and health coverage

Medical students are exposed to patients beginning in the first year of medical education. Because of this, it is necessary for students to have immunizations against certain infectious diseases. In order to complete registration for the first academic term, students must give evidence in the form of physician records or college health service records that they have met immunization requirements. Students without proper verification will be required to receive immunizations, and the charges will be billed to the student's account. Pre-entrance requirements may be found online at Student Health Service. Students are also required to

have certain injections and immunizations repeated at various intervals during their enrollment, including an annual skin test for tuberculosis.

Medical students are required to have an influenza vaccination on an annual basis in order to meet the requirements of clinical sites where students will be working. These vaccinations will be administered by Student Health Service at the beginning of each flu season.

Incoming students are expected to have routine dental and medical care as well as elective surgery attended to prior to registration.

Medical students are provided with health coverage through the University's Department of Risk Management. The Student Health Plan remains in effect for students who are regularly enrolled, provided they register and pay tuition and fees on time each academic term. Student Health Plan benefit information may be found online at Student Health Service. The plan does not cover optical care and provides only limited dental care. A student who does not have health insurance coverage for their spouse/children may purchase coverage through the University's Department of Risk Management at the time of registration or during specified enrollment periods. The Student Health Plan is available online at Student Health Service. For further information, contact Risk Management at (909) 651-4010.

## Transfer

Loma Linda University School of Medicine accepts transfer applications if transfer positions are available. Opportunities for transfer are rare. If a transfer position should be available, applications are accepted only from students in good standing at LCME-accredited allopathic medical schools in the United States. Among the requirements for transfer consideration, students must have completed all preclinical coursework and passed USMLE Step 1.

## Program requirements

### First Year

MCPF 510	Christian Physician Formation	4
MCSO 510	Clinical Skills Development	5.5
M CVS 510	Cardiovascular Block	9
MENR 510	Endocrine & Reproductive Block	9
MFDN 510	Foundations Block	17.5
MHMI 510	Hematology & Immunology Block	6.5
MMSK 510	Musculoskeletal and Skin Block	5
MPLM 510	Pulmonary Block	6
MSEL 510	First-Year Selective	2
RELR 704	Orientation to Christian Physician Formation	2
RELT 716	God and Human Suffering	2
Select two of the following: <sup>1</sup>		4
RELR 749	Marriage and Family Wholeness	
RELT 706	Adventist Beliefs and Life	
RELT 707	Medicine, Humanity, and God	
RELT 740	World Religions and Human Health	
RELT 767	Apostle of Hope: The Life, Letters, and Legacy of Paul	

### Second Year

MAIN 610	Application & Integration Block	9.5
MCPF 610	Christian Physician Formation	2
MCSO 610	Clinical Skills Development	3
MGIL 610	Gastrointestinal and Liver Block	5.5

MNHB 610	Neuroscience & Human Behavior Block	16
MREN 610	Renal and Urinary Block	7
MSEL 610	Second-Year Selective	2
RELE 708	Medicine and Ethics	1
RELR 775	Whole Person Care	2
Select one of the following: <sup>1</sup>		2
RELR 749	Marriage and Family Wholeness (If not taken 1st year)	
RELT 734	Foundations for International Health-Care Missions	
RELT 740	World Religions and Human Health (If not taken 1st year)	

**Third Year**

1.5 units = 1 week of clinical clerkship

FMDN 701	Family Medicine Clerkship (6 weeks)	9
GYOB 701	Gynecology and Obstetrics Clerkship (6 weeks)	9
MCPF 710	Christian Physician Formation	3
MEDN 701	Medicine Clerkship (8 weeks)	12
MNES 791	Third-year Elective (4 weeks) <sup>2</sup>	6
NEPS 710	Neurology/Psychiatry Clerkship (8 weeks)	12
PEDS 701	Pediatrics Clerkship (8 weeks)	12
RELE 714	Advanced Medical Ethics	2
SURG 701	Surgery Clerkship (8 weeks)	12

**Fourth Year**

Clinical clerkships

EMDN 821	Emergency Medicine Clerkship (2 weeks)	3
MDCJ 821	Preventive Medicine and Population Health (4 weeks) <sup>3</sup>	6

Select one rotation (4 weeks): 6

MEDN 822	Medicine Intensive Care	
PEDS 822	Pediatrics Intensive Care	
SURG 822	Surgery Intensive Care	

Subinternship: Select one rotation (4 weeks) 6

FMDN 821	Family Medicine Subinternship	
MEDN 821	Medicine Subinternship	
PEDS 821	Pediatrics Subinternship	
SURG 821	Surgery Subinternship	

Selective (4 weeks)

MEDN 891	Medicine Elective	6
or SURG 891	Surgery Elective	

Select 24 units (16 weeks) of the following: 24

ANAT 891	Anatomy Elective	
ANES 891	Anesthesiology Elective	
BCHM 891	Biochemistry Elective	
DERM 891	Dermatology Elective	
EMDN 891	Emergency Medicine Elective	
FMDN 891	Family Medicine Elective (General Family Medicine)	
GYOB 891	Gynecology and Obstetrics Elective	
MDCJ 891	Whole Person Care	
MEDN 891	Medicine Elective	
NEUR 891	Neurology Elective	
NEUS 891	Neurosurgery Elective	

OPHM 891	Ophthalmology Elective	
ORTH 891	Orthopaedic Surgery Elective	
OTOL 891	Otolaryngology Elective	
PATH 891	Pathology Elective	
PEDS 891	Pediatrics Elective	
PHRM 891	Pharmacology Elective	
PHSL 891	Physiology Elective	
PMRH 891	Physical Medicine and Rehabilitation Elective	
PRVM 891	Preventive Medicine Elective	
PSYT 891	Psychiatry Elective	
RADS 891	Radiology Elective	
RDMN 891	Radiation Medicine Elective	
SURG 891	Surgery Elective	
UROL 891	Urology Elective	

**Total Units** 250.5<sup>1</sup> Not limited to the courses listed.<sup>2</sup> Upon permission, students may complete this course as the first elective in the fourth year<sup>3</sup> Fulfills service learning requirement**Normal time to complete the program**

Four (4) years – full-time enrollment required