

SCHOOL OF MEDICINE

Dean's welcome



At Loma Linda University School of Medicine, we believe skilled and compassionate physicians heal more than a patient's disease; they mend the mind, body, and spirit of a patient in need. This tenet has been at the core of our mission for more than 100 years, and we strive to educate physicians, researchers, and medical professionals who are committed to whole-person care.

In addition to our medical school program, we offer a broad spectrum of graduate education opportunities, including combined degree programs, postgraduate residencies and fellowships, and continuing medical education for physicians beyond their formal academic years.

Our faculty members have pioneered transplantation, epigenetics, and translational research—among other fields—bringing together clinicians, researchers, and bright young students. Their promise to develop lifelong learners has led our graduates to advance medical care around the world.

In the School of Medicine, you will be immersed in the ever-changing field of medicine and will be entrusted with the gift of improving the lives of others. We welcome your curiosity.

Tamara Thomas, M.D.
Dean, School of Medicine

School foundations

History

In 1909, the School of Medicine opened its doors as the College of Medical Evangelists, and in 1910, Seventh-day Adventist pioneer Ellen G. White declared “The medical school at Loma Linda is to be of the highest order.” Thus began an endeavor that has lasted for more than a century: to educate physicians dedicated to Christian service.

Between 1913 and the mid-1960s, medical student education was split between the Loma Linda University campus and White Memorial Medical Center in Los Angeles. But in 1967, Loma Linda University Medical Center opened its doors, making way for consolidation of the four years of medical school in Loma Linda.

In 2017, the 11,000th student received her medical degree from the School of Medicine. No other university on the West Coast has graduated more physicians than Loma Linda University, and our graduates have travelled around the world offering care to others and fulfilling the University’s motto, “to make man whole.”

*“So they set out and went from village to village,
preaching the gospel and healing people everywhere.”*

Luke 9:6

Mission

Loma Linda University School of Medicine is dedicated to continuing the teaching and healing ministry of Jesus Christ.

Preparing the graduate

Our overriding purpose is to foster the formation of Christian health professionals and scholars, equipping graduates to impact their patients, communities, and society through the provision of collaborative whole-person care and scholarship. This is accomplished by:

Education

Creating an environment in which medical students, graduate students, and residents will develop the competencies that equip Christian health professionals and scholars with adaptive expertise to respond to a changing world.

Research

Promoting a creative, collaborative, and supportive environment for inquiry and discovery of new routes to wholeness through basic, translational, and clinical research.

Service

Cultivating an inclusive environment that embraces diversity, and promotes a desire to engage and learn from local and global communities through service to patients, systems, and society.

Developing the whole person

Affirming our Christian view of wholeness, we recognize that patient needs go beyond the healing of the body, and student development involves more than the training of the mind, and we promote physical, intellectual, emotional, social, and spiritual growth in faculty, staff, and students “to make man whole.”

Reaching the world

We collaborate with the world community to promote innovative global education, research, and patient care through the provision of opportunities for faculty, residents, scholars, and students to participate

in mutually beneficial professional interaction and enrichment with the global community.

Doctor of Medicine degree/Oral and Maxillofacial Surgery Program requirements

The Doctor of Medicine degree/Oral and Maxillofacial Surgery Program (M.D./OMS) is designed to provide an opportunity for qualified dentists to obtain the Doctor of Medicine degree in a customized, three-year period. Clinical surgical health-care delivery is emphasized. The program content conforms to the standards of the Commission on Accreditation and is designed to prepare the oral surgeon for certification by the American Board of Oral and Maxillofacial Surgery. Oral and maxillofacial surgery residents begin their residency program on the OMS service. They subsequently start the medical school portion of their education in the second half of their first year. Residents then complete the remainder of the first year, along with the second and third years of the medical school curriculum. The final year of the medical school curriculum consists of required clerkships in acute care, emergency medicine, a subinternship in ENT, and eight weeks of electives in Oral and Maxillofacial related specialties. The graduate then enters a one-year transitional internship in November of their fourth year, followed by two years of oral and maxillofacial surgery residency.

Graduate combined degrees programs

Loma Linda University is committed to fostering the investigative skills of its medical students. Those interested in pursuing careers in academic medicine and medical research may wish to enroll in *one of the combined degree programs*.

Combined degrees (M.D./M.S. or M.D./Ph.D.)—SM/GS

The M.D./Ph.D. combined degree program is available through the School of Medicine. It includes many of the features of the Medical Scientist Program. Students in the combined degree program complete the first two years of the standard medical curriculum. This is followed by three or more years of graduate coursework and research to qualify for a Ph.D. degree, or at least one year for an M.S. degree, before commencing the final two years of the medical school curriculum—the clinical training—for the Doctor of Medicine degree. Majors are offered in anatomy; cancer, developmental and regenerative biology; infection, immunity, and inflammation; and neuroscience, systems biology, and bioengineering.

For the M.D./M.S. and M.D./Ph.D. combined degree programs, the prerequisites and Graduate Record Examination requirements are similar to those described for the Medical Scientist Program, except that biochemistry is not required.

Medical Scientist Program (M.D./Ph.D.)

Students interested in pursuing careers in academic medicine and medical research may wish to enroll in the Medical Scientist Program.

Tuition assistance for the M.D. portion of the combined degrees program is not given to all students working toward both degrees. Assistance for the M.D. portion will be given only in cases where an applicant has received approval from the School of Medicine M.D./Ph.D. Admissions Committee prior to beginning the M.D. coursework. Assistance will be in the form of an institutional loan that will cover M.D. tuition and fees but will not include living expenses. The School of Medicine makes provision

for the loan to be forgiven when a recipient meets the terms described below and in the loan agreement.

Loans for the first two years of the M.D. curriculum may be canceled when a student completes an M.S. or Ph.D. degree within the time schedule described below and according to the terms of the loan agreement. Loans for the third and fourth years of the M.D. curriculum may be canceled when a student completes the Ph.D. degree within the time schedule described below and according to the terms described below and according to the terms of the loan agreement.

The Medical Scientist Program is designed to develop a student's independence and competence as an investigative scientist and clinician. It provides students with a broad educational base for the practice of medicine and medically related research. The program is administered by the School of Medicine in cooperation with the Faculty of Graduate Studies. (See Medical Scientist Program in the Combined Degree Programs after the general information for the School of Medicine.)

Residency programs

Loma Linda University is affiliated with a variety of accredited residency programs in two sponsoring institutions. The first is Loma Linda University Medical Center, and the second is Loma Linda-Inland Empire Consortium for Healthcare Education. All specialties and a variety of subspecialty programs are offered. Additional nonaccredited fellowships are available.

Graduate physicians wishing to apply for entrance into these programs should contact the director of the program.

Graduate dentists who seek residencies in dental anesthesia, endodontics, oral implantology, orthodontics, pediatric dentistry, periodontics, and prosthodontics should apply directly to the School of Dentistry.

Research centers

Basic science investigation is advanced, and patient treatment is enhanced through the ground-breaking research conducted in several centers housed within the School of Medicine.

Center for Health Disparities and Molecular Medicine

The mission of the Center for Health Disparities and Molecular Medicine (CHDMM) is to eliminate health disparities through research, education, and community engagement. Faculty members at the CHDMM use modern molecular genetics and cell biology approaches, community based participatory research, and precision medicine to investigate the causes of health disparities, how they are developed, and promising strategies to address them. Current research efforts at the center examine the influence of the augmented state of cellular oxidative stress and inflammatory pathways on cell death and survival as it pertains to cancer, diabetes, and neurological health disparities. The goal is to define novel molecular determinants and biomarkers associated with these health disparities, leading to the development of innovative clinical and community interventions aimed at eliminating or reducing them. The educational mission of the center is to train a diverse group of graduate students, medical students, and postdoctoral scientists to develop an inclusive biomedical workforce. Further, through partnering with community-based organizations, the CHDMM aims to develop healthy and whole communities through the implementation of evidence based prevention initiatives and programs.

Center for Perinatal Biology

The primary research focus of the Center for Perinatal Biology is investigation of molecular and epigenetic mechanisms of fetal development and programming of health and disease later in life. The majority of the funding to support this research is derived from competitive grants awarded by the National Institutes of Health (NIH). Additional funding is provided by the National Science Foundation and other agencies. The biomedical scientists in this internationally renowned research center also teach basic science courses in the School of Medicine and graduate courses in their disciplines. The graduate courses include physiology/pharmacology, gynecology/obstetrics, pathology/human anatomy, biochemistry/microbiology, and pediatrics.

The center is an ideal environment for graduate students, postdoctoral fellows, and beginning investigators who spend from two-to-four years in research and training in fields related to developmental biology and physiology. Visiting scholars from other universities also work in the center during sabbaticals or other interims.

Neurosurgery Center for Research, Training, and Education

The Neurosurgery Center for Research, Training, and Education has as its primary focus the improvement of patient care by conducting translational research. Its goals are met by the research and development of new biologically and technologically advanced diagnostic procedures, minimally invasive surgical techniques, and innovative hemostatic instrumentation. The center functions in collaboration with many well-known institutions, such as George Mason University, UCLA, and North Carolina State University.

The center has been the recipient of a five-year NIH competitive grant to determine the role of iron perturbations in metabolism in the pathogenesis of Alzheimer's disease, as well as grants for proteomic study of schizophrenia. The center's multidisciplinary work involves collaborations among faculty members within the biochemistry, radiology, cell and molecular biology, radiobiology, psychiatry, geriatric medicine, and biostatistics disciplines. The center is also interested in the development of new hemostatic agents that involve the control of hemorrhage. To this end, it has developed new procoagulants and surgical devices in collaboration with industry. The center works in close collaboration with industrial resources for both testing and development of new surgical instrumentation. The director of the center holds numerous international and United States patents on surgical instruments and other devices.

Neuroscience Research Center

The major goal of the Center for Neuroscience Research is to conduct translational studies of major neurological disorders, in particular, brain hemorrhages seen in neurosurgery and neurology. These instances of brain hemorrhage include subarachnoid hemorrhage, intracerebral hemorrhage, hemorrhage after ischemic stroke, neonatal brain hemorrhage, and traumatic brain injury caused by brain hemorrhage. A longitudinal combined approach is encouraged, which includes animal models, experimental treatment, neuroimaging, neurological functional evaluations, and neural and cerebral vascular biological studies, to explore the mechanisms and potential treatment options. The Center is funded by a NIH program project grant, as well as additional federal grant support to individual Center members.

Center for Genomics

The mission of the Center for Genomics is to provide state-of-the-art genomic (e.g., next-generation sequencing), epigenomic, and bioinformatic tools to: 1) better understand the molecular mechanisms of human disease and health disparities from a genome-wide and systems biology approach; 2) identify novel biomarkers of and novel therapeutic targets for human disease while providing single-nucleotide resolution genomic and epigenomic data for precision medicine; and 3) define the health and lifestyle profile of the Loma Linda Blue Zone population at genomic and epigenomic levels. The educational mission of the Center is to teach and train graduate students, medical students, and postdoctoral scientists on systems biology involving genomics, epigenomics, transcriptomics, and bioinformatics in the Loma Linda University School of Medicine.

General regulations

Students of the university are responsible for informing themselves of and satisfactorily meeting all regulations pertinent to registration, matriculation, and graduation. Section III gives the general setting for the programs of each school and outlines the subject and unit requirements for admission to individual professional programs. It is important to review specific program requirements in the context of the general requirements applicable to all programs.

Student life

The information on student life and student policies contained in this CATALOG is brief. The Loma Linda University *Student Handbook* more comprehensively addresses university and school expectations, regulations, and policies. All students are expected to inform themselves of the contents of the Student Handbook (<http://www.llu.edu/student-handbook/>), including Sections which contain policies that apply to all LLU students in all of the schools that make up Loma Linda University and to abide by its policies. Additional information regarding policies specific to the School of Medicine are provided by the school at the orientation for each of the academic programs. Students who have questions about the *Student Handbook* should contact the associate dean for student affairs over their program. Students in the School of Medicine's M.D and MMS programs are expected to familiarize themselves with the *Student Handbook*, as well as additional policies posted on Canvas and to abide by those policies. Students in the School of Medicine's Integrated Biomedical Graduate Studies Program are expected to familiarize themselves with the document *Student Guidelines, Policies and Procedures, Integrated Biomedical Graduate Studies* and to abide by those policies. Students in programs associated with the School of Medicine's Earth and Biological Sciences Graduate *Student Handbook* and to abide by those policies. Students in the Pathologists' Assistant Program are expected to familiarize themselves with the document *Student Handbook Pathologists' Assistant Program* and to abide by those policies.

Awards

Bernard D. Briggs Award

The Bernard D. Briggs Award is presented to an outstanding medical student entering the field of anesthesiology who exhibits the dedication, enthusiasm, and commitment of the visionary physician and distinguished mentor for whom it is named.

Robert F. Chinnock Award

The Robert F. Chinnock Award is presented annually to a student who has demonstrated outstanding performance in clinical and academic pediatrics.

Daniel D. Comstock Award

The Daniel D. Comstock Award is given annually to the senior student with the most distinguished performance in internal medicine. Selection is based on scholarship, interest in science, skill, devotion to patient care, and personal attributes of dependability and integrity—as demonstrated by the physician, Daniel D. Comstock, for whom the award is named.

Distinguished Student in Radiology Award

The Distinguished Student in Radiology Award is given to the student who is devoted to the field of radiology as evidenced by their distinguished service, exceptional performance, and commitment to pursuing radiology as a career.

Donald E. Griggs Award

The Donald E. Griggs Award is presented annually to a senior student selected for meritorious scholarship and service—the highest grade in the clinical rotations of medicine—reflecting those qualities demonstrated by the physician and teacher for whom the award is named.

David B. Hinshaw, Sr., Award

The David B. Hinshaw, Sr., Award is presented annually to a senior student who has demonstrated outstanding qualities of leadership and scholarship and who is entering a categorical surgery residency program with the intention of pursuing a career in general surgery.

Guy M. Hunt Award

The Guy M. Hunt Award is presented annually by the Department of Neurology to a senior student who combines outstanding academic achievement and the spirit of gentle caring that was exemplified by Dr. Hunt.

Harold J. Hoxie Award

The Harold J. Hoxie Award is presented by the Department of Medicine to a senior medical student whose meritorious scholarship, exceptional performance in medicine with emphasis in research, and service reflect those qualities demonstrated by the physician and teacher for whom the award is named.

Benjamin Kovitz Award

The Benjamin Kovitz Award is presented to a senior medical student who has demonstrated qualities of leadership and scholarship in the field of psychiatry.

Walter P. Ordelheide Award

The Walter P. Ordelheide Award is given annually by the Department of Family Medicine to a senior student who has demonstrated outstanding scholarship and leadership, and who has fostered the promotion and advancement of family medicine.

President's Award

The President's Award, established in 1960, is presented annually in recognition of superior scholastic attainment and active participation in the student community, within the framework of Christian commitment. One recipient is selected from each school.

Society for Academic Emergency Medicine Award

The Society for Academic Emergency Medicine Award is presented to the senior medical student who has demonstrated excellence in the specialty of emergency medicine.

Department of Ophthalmology – Ernest Zane Award

The Department of Ophthalmology – Ernest Zane Award is given to a graduating senior who is recognized as an outstanding student pursuing a specialty in ophthalmology and demonstrating a commitment to mission service or a deep interest in continuing the teaching and healing ministry of Jesus Christ.

Varner J. Johns, Jr., Award

The Varner J. Johns, Jr., Award is given to a graduating senior who is recognized as an outstanding student with the potential of becoming a future faculty member in the Department of Medicine.

Alumni Association--Herber Award

The School of Medicine Alumni Association Award is given annually to students who demonstrate outstanding leadership in furthering the mission of Loma Linda University School of Medicine.

Wil Alexander Whole Person Care Award

The Wil Alexander Whole Person Care Award recognizes a senior medical student who, during the clinical years, has demonstrated to their peers and colleagues a growing excellence in the physical, mental, emotional, spiritual, and relational care of their patients as part of the art of medical practice.

Class of 1990 Heart for Service Award

Established and funded by the class of 1990, the Heart for Service Award is given to senior medical students who exemplify the character of Christ and demonstrate a commitment to service, either at home or abroad.

Alpha Omega Alpha Honor Society

Fourth-year students are recommended for membership in the national honor medical society, Alpha Omega Alpha. Membership is determined based on scholastic, professional, and personal performance. The School of Medicine was granted a charter for establishing the Epsilon Chapter on April 1, 1957.

Gold Humanism Honor Society

Recognizes students, residents, and faculty who are exemplars of compassionate patient care and who serve as role models, mentors, and leaders in medicine.

Roger W. Barnes Award

The Roger W. Barnes Award is presented to a senior student who has demonstrated to an unusual degree the qualities of compassion, kindness, and humility—as exhibited by the physician and teacher for whom the award is named.

Harold F. Ziprick Award

The Harold F. Ziprick Award is presented annually by the Department of Gynecology and Obstetrics to a senior student in recognition of overall academic achievement and clinical performance in gynecology and obstetrics, as demonstrated by the physician and teacher for whom the award is named.

Distinguished Student in Emergency Medicine Award

The Distinguished Student in Emergency Medicine Award is given by the department to a senior student who is devoted to emergency medicine and committed to pursuing it as a career.

3AM Award

The 3AM award is presented to the student who most embodies the work ethic, positive attitude, and spirit of collegiality that makes others grateful to be working next to them at all hours in the emergency department.

Dysinger Family Preventive Medicine Award

The Distinguished Student in Preventive Medicine Award is given to a senior student who has demonstrated exceptional performance in preventive medicine and is committed to pursuing it as a career.

Philip H. Reiswig Award

The Philip H. Reiswig Award is presented to a senior student entering the field of orthopaedic surgery who exhibits the dedication, enthusiasm, and commitment of the physician-leader for whom it is named.

Financial information

The Office of the Dean is the final authority in all financial matters and is charged with the interpretation of financial policies. Any exceptions to published policy regarding reduction or reimbursement of tuition must be approved by the dean. Any statement by individual faculty members, program directors, or department chairs regarding these matters is not binding on the school or the university unless approved by the dean.

Registration is not complete until tuition and fees on the required installment are paid. Therefore, the student should be prepared to make these payments during scheduled registration for each academic year. There may be adjustments in tuition and fees as economic conditions warrant.

General financial practices

The student is expected to arrange for financial resources to cover all expenses before the beginning of each school year. Previous accounts with other schools or this university must have been settled.

Veteran's benefits

A student eligible to receive veteran's benefits under the current enactment should contact the Office of University Records within the first week following registration.

Under Title 38 of the U.S. Code, Loma Linda University is approved for the training of veterans and other eligible persons. Information regarding eligibility for any of these programs may be obtained by calling 1-888/GIBILL1.

Application for benefits must be made directly to the VA and may be done via the Web. The Office of University Records serves as the certifying official for Loma Linda University. Students should contact the certifying official prior to their first enrollment certification. For more information, open links to the VA website at llu.edu/central/students/veterans.page (<http://www.llu.edu/central/students/veterans.page>).

Schedule of charges

Tuition, fees, and other cost-of-attendance items are located on the Find a Program (<https://llu.edu/academics/programs/>) webpage.

On- and off-campus student housing

Students may go to llu.edu/central/housing (<http://www.llu.edu/central/housing/>) for housing information and a housing application form.

Special charges 2022-2023

\$85	Supplemental application (nonrefundable), in addition to AMCAS fee
\$200	Late payment fee
cost	Health-care items not covered by health fee or insurance
cost	Library fine or loss, parking fine, property breakage or loss

cost	Health coverage for spouse and family
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\$25	Returned check fee
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Programs

- Anatomy—M.S., Ph.D (<http://llucatalog.llu.edu/medicine/pathology/>).
- Biology - M.S. (<http://llucatalog.llu.edu/medicine/biology/>), Ph.D. (<http://llucatalog.llu.edu/medicine/biology/>)
- Biomedical Sciences - M.M.S. (<http://llucatalog.llu.edu/medicine/biomedical-sci-mms/>)
- Cancer, Developmental and Regenerative Biology — M.S., Ph.D. (<http://llucatalog.llu.edu/medicine/cancer-dev-and-regen-biology/>)
- Earth Science - Ph.D. (<http://llucatalog.llu.edu/medicine/earth-science/>)
- Environmental Sciences - B.S. (<http://llucatalog.llu.edu/medicine/environmental-sciences/>)
- Geology - B.S. (<http://llucatalog.llu.edu/medicine/geology/bs/>), M.S. (<http://llucatalog.llu.edu/medicine/geology/ms/>)
- Infection, Immunity, and Inflammation — M.S., PhD. (<http://llucatalog.llu.edu/medicine/infection-immunity-and-inflammation/>)
- Medical Scientist—M.D. and Ph.D. (<http://llucatalog.llu.edu/medicine/medical-scientist/>)
- Medicine—M.D. (<http://llucatalog.llu.edu/medicine/medicine/>)
- Natural Sciences - M.S. (<http://llucatalog.llu.edu/medicine/natural-sciences/>)
- Neuroscience, Systems Biology, and Bioengineering — M.S., Ph.D. (<http://llucatalog.llu.edu/medicine/neurosci-syst-biol-bioeng/>)
- Pathologists' Assistant — M.H.S. (<http://llucatalog.llu.edu/medicine/pathology/path-assistant-mhs/>)