MEDICINE — M.D.

Curriculum

The curriculum in medicine consists of four academic years. The first two academic years are oriented to the sciences basic to the practice of medicine. Exposure to patient care is integrated within these two years. The remaining two academic years consist of clinically-oriented core instruction and twenty weeks of clinical electives.

THE FIRST YEAR of medical education will begin to establish a foundation in the sciences basic to the practice of medicine—with emphasis on the principles and mechanisms of normal development, structure, and function—including the normal changes of aging and the behavioral considerations that influence normal development. Course content will be organized around individual organ systems whenever possible. The first year will also begin to develop the skills, values, attitudes, and professional behaviors that are integral to the safe, competent, compassionate, ethical, and Christian practice of medicine—both now and in the future. The educational program will make use of a wide variety of pedagogical methods—including but not limited to traditional lecture, small group, problem-based and case-based learning, personalized computer-based instruction, quantitative laboratory experiences, and patient-care experiences.

THE SECOND YEAR of medical education will continue to establish a foundation in the sciences basic to the practice of medicine—with emphasis on the principles and mechanisms of abnormal structure and function, principles of therapy, and behavioral considerations that affect disease treatment and prevention. Course content will be organized according to individual organ systems whenever possible. The second year will continue to develop the skills, values, attitudes, and behaviors that are integral to the safe, competent, compassionate, ethical, and Christian practice of medicine—both now and in the future. The educational program will make use of a wide variety of pedagogical methods, including but not limited to traditional lecture, small group, problem-based, and case-based learning; personalized computer-based instruction; quantitative laboratory experiences; and longitudinal patient-care experiences.

THE THIRD YEAR of medical education will establish a body of knowledge, skills, values, attitudes, and behaviors in seven core clinical science disciplines to build a foundation for patient care in ambulatory and hospital-based settings. Students will obtain this foundation through a process of self-directed learning, independent study, and guided supervision and teaching by house staff and faculty. Students will have ample opportunity to learn the value of honor, shared responsibility, and accountability by directly participating in patient-care activities as junior colleagues on the health-care team.

The didactic program will emphasize: a) understanding the pathophysiology of disease, b) establishing diagnoses through interpretation of physical examination and diagnostic data, and c) applying management principles to patients with acute and chronic conditions. Recurring experiences in whole person care, medical ethics, laboratory medicine, radiology, health maintenance, and disease prevention will be integrated into the seven core disciplines. Students will have the opportunity to explore an area of interest during an elective experience for the purpose of beginning the process of choosing a career in medicine.

THE FOURTH YEAR of medical education will require students to integrate the entirety of their medical knowledge, skills, values, and attitudes gained during the first three years and apply it more autonomously to patient care. Students will participate in supervised patient-care experiences in emergency medicine, intensive care medicine, and preventive medicine and public health; and a subintern-level experience in medicine, surgery, family medicine, or pediatrics. Although repetitive clinical duties during the fourth year are a necessary part of preparing students for the rigors of postgraduate training, students will still have ample opportunity to pursue individual interests during a minimum twenty weeks of elective rotations. To reestablish the importance of science in medical practice, up to one month of elective must be in the basic science discipline of the student’s choosing. Students will have adequate vacation time to study for Step II 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)

Cardiovascular and Thoracic Surgery (http://llucatalog.llu.edu/medicine/professional/department-cardiovascular-and-thoracic-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)

Orthopaedic 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 program admissions committees of the University intend that an applicant to any of the schools is qualified for the proposed curriculum and is capable of profiting from the educational experience offered by this University. The admissions committees of the school accomplish this by examining evidence of scholastic competence, moral and ethical standards, life experience, and significant qualities of character and personality.

The study of medicine

Preparing for a career in medicine, students should quest for a broad understanding in the major areas of knowledge—the natural sciences, the behavioral sciences, and the humanities—which assists them in the process of learning throughout their life.

In selecting students, the Admissions Committee of the School of Medicine looks for applicants who are best suited to fulfill the mission of the school and to successfully practice medicine. The school desires students 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 students in the School of Medicine demonstrate excellent interpersonal skills and show evidence of sensitivity to the needs of humanity.

The Admissions Committee of the School of Medicine puts forth considerable effort to ensure that an applicant is qualified for medical school. The applicant’s credentials are reviewed to assess scholastic performance. The committee also looks for prerequisite qualities of character and personality, potential for self-direction and the use of discriminating judgment, and dedication to the ideal of service to society.

General entrance information

A minimum of 85 semester (128 quarter) units of credit from an accredited institution of higher education is required for acceptance by the School of Medicine. Preference is given, however, to college graduates. Credit must be presented for the following subjects:

<table>
<thead>
<tr>
<th>Semester/quarter hours</th>
<th>Required</th>
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<tbody>
<tr>
<td>General biology or zoology with laboratory—8/12</td>
<td>General or inorganic chemistry with laboratory—8/12</td>
</tr>
<tr>
<td>Organic chemistry with laboratory—8/12</td>
<td>Organic chemistry with laboratory—8/12</td>
</tr>
<tr>
<td>Physics with laboratory—8/12</td>
<td>Physics with laboratory—8/12</td>
</tr>
<tr>
<td>Biochemistry-3/3</td>
<td>Biochemistry-3/3</td>
</tr>
<tr>
<td>English as required for baccalaureate degree</td>
<td>English as required for baccalaureate degree</td>
</tr>
<tr>
<td>Religion as required by the college attended</td>
<td>Religion as required by the college attended</td>
</tr>
<tr>
<td>Science credits earned in professional schools (e.g., allied health professions, business, dentistry, nursing or pharmacy) do not fulfill requirements for admission to medicine. CLEP and Pass/Fail, and online performances are not acceptable for the required courses.</td>
<td></td>
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</tbody>
</table>

Required

Keyboard and computer skills.

Medical College Admission Test (MCAT). Scores older than three years will not be considered.

Recommended

Introductory course in basic statistics

Introductory course in psychology

Introductory course in sociology

Provide evidence of experience with direct involvement in providing healthcare, thus informing the applicant’s decision to pursue medicine as a career.

Application procedure and acceptance

It is important to know the specifics of the application process and to begin the application process well in advance of the date of anticipated (or desired) entrance to medical school.

Where to write

The School of Medicine is a member of the American Medical College Application Service (AMCAS). Applications must be submitted through AMCAS. Their application is available on the Web at <aamc.org/students/applying/amcas (https://www.aamc.org/students/applying/amcas)>.

AMCAS deadline

Application should be made directly to AMCAS between June 1 and November 1 for entry in August of the following year.

Fees

The AMCAS fee is required each time an application is submitted. An additional fee to the School of Medicine is required with each supplementary application.

Procedure

The application procedure is as follows:

1. The applicant submits a formal application through the AMCAS Website, with fee and requested transcripts. The applicant’s verified data are forwarded to the School of Medicine by AMCAS.
2. When the application is received from AMCAS, Loma Linda University School of Medicine requests the applicant to complete an online supplementary application.
3. After the supplementary application and letters of reference have been submitted and reviewed, the applicant may be invited for an interview.
4. The information submitted by the applicant through AMCAS, the supplementary application, the letters of reference, and the interview reports are then evaluated by the Admissions Committee of the School of Medicine. This committee determines whether an applicant is accepted or rejected. All applicants are notified of the final decision of the Admissions Committee regarding their application. Acceptance notices are sent to regular applicants beginning December of the year preceding admission to the School of Medicine, continuing until the class is filled.

5. The accepted applicant responds online to his/her offer of admissions as a student, and accepts the technical standards.

6. In summary, the Admissions Office requires the following:
   • Verified AMCAS application.
   • Loma Linda University School of Medicine supplementary application and $85 application fee.
   • Appraisal of the applicant’s character, ability, and suitability for a medical career by persons knowledgeable about the applicant’s past performance.
   • A preprofessional recommendation packet, if available, from the applicant’s undergraduate college/university.
   • Applicant’s availability for interviews, should an offer for an interview be extended.

Pre-entrance health requirement and health coverage
Exposure to patients takes place during year one 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 quarter, 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 students’ account. The pre-entrance requirements may be found at <http://home.llu.edu/campus-and-spiritual-life/student-health/new-students/>. 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 will be required to have flu shots on an annual basis in order to meet the requirements of clinical sites where students will be working. These will be given by the Student Health Center at the beginning of each flu season.

In addition, students are expected to have routine dental and medical care and elective surgery attended to before registering for medical school.

All School of Medicine 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 quarter. For Student Health Plan benefit information, visit http://home.llu.edu/campus-and-spiritual-life/student-health/services-and-fees. The plan does not cover optical care and provides only limited dental care. For these reasons it may be to the student’s advantage to maintain a current personal policy if they have one. A student who does not have health insurance coverage for his/her spouse/children may purchase it through the University’s Department of Risk Management at the time of registration or during specified enrollment periods. Government regulations prohibit the use of student loan funds to provide medical insurance or services for a student’s spouse or children.

Students who wish to review a copy of the current student health plan or have further questions about the plan should call Risk Management at (909) 651-4010. Annual tuition also covers the cost of disability insurance. Details will be presented during orientation or upon request.

Early decision program
A highly qualified applicant to medical school may apply between June 1 and August 1 and be guaranteed a decision by October 1. During that period of time, the applicant may not apply to any other medical school; and if the applicant is accepted at Loma Linda University, s/he is committed to that decision. If the applicant is not accepted by October 1, s/he may apply to any school desired. An applicant not accepted by October 1 will be considered in the regular applicant pool. On the AMCAS application, the applicant indicates that s/he is an early decision applicant and agrees to comply with the constraints of that program.

Deadlines
• June 1 to November 1 (of the year preceding the year of matriculation to the School of Medicine) is the period for submission of application for the first year class.
• August 1 (of the year preceding the year of matriculation) is the deadline for submission of the supplementary application for the Early Decision Program.
• August 15 (of the year preceding the year of matriculation) is the deadline for submission of the supplementary application for the Early Decision Program.
• November 15 (of the year preceding the year of matriculation) is the deadline for receipt of the supplementary application for the regular applicant pool.
• May 15 (of the year of admission) is the date beyond which the acceptance deposit of $100 is not refundable.

Transfer
Applicants may be considered for transfer into Loma Linda University School of Medicine depending on space availability and if the applicant meets the criteria for transfer.

Criteria for Transfer:
1. Enrolled student in good standing at an accredited United States allopathic medical school.
2. Successful completion of the first two years of medical school with immediate continuation into the third year.
3. Endorsement from the Office of the Dean at the medical school attended.
4. Contingent on successful completion of USMLE Step 1.
5. Evidence of compelling circumstances.

Loma Linda University School of Medicine technical standards
Loma Linda University School of Medicine candidates for the M.D. degree must have abilities and skills of five varieties, including: observation; communication; motor; intellectual (conceptual, integrative, and quantitative); behavioral and social. 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: 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 do basic laboratory tests (urinalysis, CBC, etc.); carry out diagnostic procedures (proctoscopy, paracentesis, etc.); 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 health-care 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 wellbeing 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 the medical education and clinical practice settings.

Program requirements

First Year
ANAT 529 Gross Anatomy and Embryology 10.5

MDCJ 519 Doctoring 17
MDCJ 527 Cell Structure and Function 8.5
BCHM 518 Fundamentals of Human Biochemistry 2.5
MDCJ 520 Basis of Medical Genetics 2
MDCJ 528 Evidence-Based Medicine and Information Sciences 3.5
MDCJ 538 Medical Neuroscience 3.5
PHSL 526 Medical Physiology 7.5
RELE 704 Medicine and Ethics 2
RELT 701 Orientation to Religion and Medicine 2
Select two of the following: 4
RELR 725 Wholeness for Physicians 4
RELR 749 Marriage and Family Wholeness 2
RELT 706 Adventist Beliefs and Life 2
RELT 707 Medicine, Humanity, and God 2
RELT 767 Apostle of Hope: The Life, Letters, and Legacy of Paul 2

Second Year
MDCJ 530 Pathophysiology and Applied Physical Diagnosis 11
MDCJ 539 Diseases of Neuroscience 4
MDCJ 521 Applications of Clinical Genetics 2
MICR 547 Medical Microbiology 4.5
PATH 517 Human Systemic Pathology 9.5
PHRM 515 Medical Pharmacology 6
PRVM 517 Lifestyle and Preventive Medicine 4
PSYT 526 Psychopathology 4.5
RELT 775 Art and Science of Whole Person Care 2
Select one of the following: 2
RELR 749 Marriage and Family Wholeness (If not taken 1st year) 2
RELT 716 God and Human Suffering 2
RELT 734 Anthropology of Mission 2

Third Year
1.5 units = 1 week of clinical clerkship
FMDN 701 Family Medicine Clerkship (4 weeks) 6
GYOB 701 Gynecology and Obstetrics Clerkship (6 weeks) 9
MEDN 701 Medicine Clerkship (10 weeks) 15
MNES 791 Third-year Elective (2 weeks) 3
NEUR 701 Neurology Clerkship (4 weeks) 6
PEDS 701 Pediatrics Clerkship (8 weeks) 12
PRVM 791 Applied Preventive Medicine 2
PSYT 701 Psychiatry Clerkship (6 weeks) 9
RADS 791 Integrated Clinical Radiology 2
RELE 714 Advanced Medical Ethics 2
SURG 701 Surgery Clerkship (10 weeks) 15

Fourth Year
Clinical clerkships
EMDN 821 Emergency Medicine Clerkship (2 weeks) 3
MDCJ 821 Preventive Medicine and Population Health (4 weeks) 6
Select one rotation (4 weeks): 6
MEDN 822 Medicine Intensive Care 6
Peds 822 Pediatrics Intensive Care 6
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>SURG 822</td>
<td>Surgery Intensive Care</td>
</tr>
<tr>
<td>FMDN 821</td>
<td>Family Medicine Subinternship</td>
</tr>
<tr>
<td>MEDN 821</td>
<td>Medicine Subinternship</td>
</tr>
<tr>
<td>Peds 821</td>
<td>Pediatrics Subinternship</td>
</tr>
<tr>
<td>SURG 821</td>
<td>Surgery Subinternship</td>
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</tbody>
</table>

Subinternship: Select one rotation (4 weeks)  6

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>FMDN 821</td>
<td>Family Medicine Subinternship</td>
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<tr>
<td>MEDN 821</td>
<td>Medicine Subinternship</td>
</tr>
<tr>
<td>Peds 821</td>
<td>Pediatrics Subinternship</td>
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<tr>
<td>SURG 821</td>
<td>Surgery Subinternship</td>
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</tbody>
</table>

Select 30 units (20 weeks) of the following:  30

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>ANAT 891</td>
<td>Anatomy Elective</td>
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<tr>
<td>ANES 891</td>
<td>Anesthesiology Elective</td>
</tr>
<tr>
<td>BCHM 891</td>
<td>Biochemistry Elective</td>
</tr>
<tr>
<td>DERM 891</td>
<td>Dermatology Elective</td>
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<tr>
<td>EMDN 891</td>
<td>Emergency Medicine Elective</td>
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<tr>
<td>FMDN 891</td>
<td>Family Medicine Elective (General Family Medicine)</td>
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<tr>
<td>GYOB 891</td>
<td>Gynecology and Obstetrics Elective</td>
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<tr>
<td>MDCJ 891</td>
<td>Whole Person Care</td>
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<tr>
<td>MEDN 891</td>
<td>Medicine Elective</td>
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<tr>
<td>NEUR 891</td>
<td>Neurology Elective</td>
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<tr>
<td>NEUS 891</td>
<td>Neurosurgery Elective</td>
</tr>
<tr>
<td>OPHM 891</td>
<td>Ophthalmology Elective</td>
</tr>
<tr>
<td>ORTH 891</td>
<td>Orthopaedic Surgery Elective</td>
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<tr>
<td>OTOL 891</td>
<td>Otolaryngology Elective</td>
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<tr>
<td>PATH 891</td>
<td>Pathology Elective</td>
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<tr>
<td>Peds 891</td>
<td>Pediatrics Elective</td>
</tr>
<tr>
<td>PHRM 891</td>
<td>Pharmacology Elective</td>
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<tr>
<td>PHS 891</td>
<td>Physiology Elective</td>
</tr>
<tr>
<td>PMRH 891</td>
<td>Physical Medicine and Rehabilitation Elective</td>
</tr>
<tr>
<td>PRVM 891</td>
<td>Preventive Medicine Elective</td>
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<tr>
<td>PSYT 891</td>
<td>Psychiatry Elective</td>
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<td>RADS 891</td>
<td>Radiology Elective</td>
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<tr>
<td>RDMN 891</td>
<td>Radiation Medicine Elective</td>
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<tr>
<td>SURG 891</td>
<td>Surgery Elective</td>
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<tr>
<td>UROL 891</td>
<td>Urology Elective</td>
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Total Units  244.5

**Normal time to complete the program**

4 years — full-time enrollment required