

## PHYSICIAN (M.D.)

### ACADEMIC AND CAREER INFORMATION

#### NATURE OF THE WORK, EARNINGS, AND OCCUPATIONAL OUTLOOK

Physicians are dedicated to serving the health care needs of society through diagnosing and treating illness, injury, and disease. Anesthesiologists, pathologists, radiologists, surgeons, and emergency physicians, spend the majority of their time working in hospitals or surgical outpatient centers. About one third of physicians in the U.S. work in primary care, acting as the first health professional consulted by patients. Most primary care physicians provide comprehensive health care to patients and families and tend to see the same patients over a long period of time. When necessary, primary care physicians refer patients to medical specialists and surgeons for further expertise. Most physicians work in small offices, clinics or in group medical practices where they see patients. Physicians often work long, irregular hours, and rotate shifts for emergency calls, as well as travel between the office and hospital to care for patients.

Though earnings vary according to number of years in practice, type of practice, geographical location, and specialty, the total median annual income of physicians was \$187,200 (Occupational Outlook Handbook, 2016). The salary can also range from \$150,000 - \$300,000 depending on the specialty and area of practice. With recent changes in the health care system, there are fewer individual practices, and more physicians joining medical groups or networks. As employees of these medical groups, more physicians are drawing a set salary, so earnings potential may be more limited than in the past when most physicians worked for themselves. Employment of physicians and surgeons will grow faster than average (14%) for all occupations through 2024, as a result of current doctors set to retire, continued expansion of the health care industries, and an aging population. Job prospects should be good for physicians looking to practice in rural and low-income areas, which are often underserved (OOH, 2014).

#### MEDICAL SCHOOL EDUCATION (4 DEMANDING YEARS)

There are 145 accredited **allopathic** medical schools in the U.S. and 17 accredited Canadian medical schools that award the degree of Medical Doctor (M.D.). Medical school usually requires 4 academic years. Studies begin with 2 years of classroom instruction in the basic sciences. The normal structure and function of human systems are taught through gross anatomy, cell biology, biochemistry, medical genetics, behavioral science, physiology, and neuroscience. Subsequently, the education focus shifts to abnormalities of structure and function, disease, and general therapeutic principles through exposure to microbiology, immunology, pathology, and pharmacology. The following two years involve a series of clinical rotations throughout inpatient and outpatient settings where students work with patients under the supervision of attending physicians and medical residents. During the clinical years, students also have an opportunity to take elective rotations. During the last year of medical school, students make decisions about medical specialty and apply for internship or residency programs in their desired area of expertise (The Official Guide to Medical School Admissions, 2014).

#### RESIDENCY AND FELLOWSHIP TRAINING (3-8 YEARS)

Following medical school, graduates begin their medical residency, which is paid, on-the-job training in a specialty. The training required varies from 3 to 8 years or more depending on the specialty selected. Family Practice, Emergency

Medicine, Pediatrics, and Internal Medicine require 3 years. Training in Obstetrics and Gynecology, Pathology, Anesthesiology, Dermatology, Neurology, Nuclear Medicine, Ophthalmology, Physical Medicine, Psychiatry, Radiology and Radiation Oncology requires 4 years. The *surgical specialties* including General, Neurological, Orthopedic Otolaryngology, and Urology each require 5 years of residency. Most specialties also offer advanced training in a subspecialty usually requiring an additional 1 to 3 years of fellowship following residency.

## PRE-MEDICAL PREPARATION

Due to the competitive nature of the medical school application process and rigorous training required, students should carefully consider their motivation, preparation, and commitment for a career in medicine. In 2016 a total of 53,042 applicants applied to medical school and 21,030 applicants were offered admissions to at least one school. The fall 2016 entering class had a mean science **GPA of 3.64**, a mean non-science **GPA of 3.78** and **TOTAL GPA of 3.70**. MCAT score was 508.7.

**No particular major is required or preferred for medical school admissions**, thus students are advised to select a major they find interesting and in which they can excel. Students should also consider a major that may lead them to an alternate career, should they decide not to pursue a medical education. Whichever major a student declares, their course of study must incorporate the required pre-medical requirements (please also keep in-mind CSULB's Timely Graduation Policy and see an Academic Advisor if you have questions). Many students who select a natural science major find a great deal of overlap between their major requirements and those required for medical school. Regardless of the major choice, medical schools prefer that students have a well-rounded liberal arts education.

## COURSE REQUIREMENTS

**CSULB Courses which fulfill admission requirements for the [UC Riverside School of Medicine](#):**

*Students maintain responsibility for verifying course selection with individual programs.*

Coursework	CSULB Courses
One year of English	ENGL 100 OR ASAM 100 OR AFRS 100 OR CHLS 104 AND ENGL 102 OR 300, CWL 315
One year of Mathematics (to include calculus and statistics)	MATH 119A OR 122 AND STATS 108 OR BIOL 260, other statistic courses may be applicable
One year of General Chemistry with lab	CHEM 111A & 111B
One year of Organic Chemistry with lab	CHEM 220A & 220B + 320L (Chemistry/ Biochemistry majors) OR 220A w/223A & 220B w/223B (Biology & Other majors)
One year of General Biology with lab	BIOL 211, 212 & 213
One year of General Physics with lab	PHYS 100A & 100B OR 151 & 152
Biochemistry	Recommended: CHEM 441A OR 448
Spanish	Recommended
Humanities	Recommended

## ADDITIONAL RESOURCES

- [Medical School Admissions Requirements \(MSAR\)](#)
- [Medical College Admission Test \(MCAT\)](#)
- [American Medical College Application Service \(AMCAS\)](#)

For more information about Allopathic Medicine, visit [www.aamc.org/students](http://www.aamc.org/students) and see your HPAO advisor for further information on the application process, application assistance, and a list of upcoming workshops and events