



Physician (M.D. or D.O.)

Career Description

- Two types of programs—allopathic medicine (M.D.) and osteopathic medicine (D.O.) are available to become a Physician. The credentials, training, jobs, and available specialties are the same for both.
- Allopathic and Osteopathic Physicians use a biological approach to healing. Physicians diagnose, treat, and work to prevent human illness and injury.
- They perform examinations, analyze medical histories, order and interpret diagnostic tests and develop treatment plans.
- Allopathic and Osteopathic Physicians are very similar in their approach to working with patients and the differences between them are more historical than current practice.
- The osteopathic approach is patient oriented and uses a somewhat more holistic approach than allopathic medicine. Osteopathic medicine also incorporates a treatment modality—Osteopathic Manipulative Medicine (OMM)—which is a form of musculo-skeletal manipulation that is used both for diagnosis and treatment.
- MDs and DOs practice in all the same specialties. Work is in progress to combine the two types of residencies.

- Purdue University is one of the locations for the Indiana University School of Medicine. Marian University houses the osteopathic medical school in the state.

Becoming a Physician

- Students should complete a bachelor's degree in a field of their choice along with the prerequisite courses below.
- Medical school is a four year program followed by on the job training (residency) which will last 3-8 years. Subspecialization is accomplished through fellowships which can last several more years.
- MDs and DOs are licensed by the state after passing an examination.
- Physicians must also pass board exams for certification in specialty areas.

Prerequisite Courses

- While each medical school determines the courses it will require, the required courses are relatively standard and similar to the list below.
- All required courses must have a minimum grade of C.
- Other than Biochemistry, which is one semester and does not require a lab, the science requirements are typically 8-10 credit hours with two of those hours being lab.

Common Prerequisite Courses (pre-reqs determined by each medical school but similar to this list)

Requirements	Purdue Equivalents (specific courses may vary by major)
General Biology with lab	BIOL 11000-11100 OR BIOL 13100 & 23100 & 23200 OR BIOL 23000 & upper level biology including 2 hours of lab
Anatomy & Physiology (recommended for the MCAT)	BIOL 20300-20400 OR BIOL 30100-30200
General Chemistry with lab	CHM 11500-11600 OR 12500-12600 OR 12300-12400 OR 136 OR 12901 (<i>CHM 11500 credit exam recommended along with CHM 12901</i>)
Organic Chemistry with lab	CHM 25500-25600 OR 26100-26200 OR 26500-26600 OR MCMP 20400-20500
Biochemistry	CHM 33300 OR 33900 OR 53300 OR BCHM 30700 OR 56100 OR MCMP 20800
Physics with lab	PHYS 22000-22100 OR PHYS 23300-23400 OR PHYS 17200-27200 OR PHYS 17200 & 24100 OR PHYS 21800-21900
English (if required usually need 2 semesters)	ENGL 10600 OR ENGL 10800 AND another English course with strong writing component (either writing or literature)
Psychology (1 semester)	PSY 12000
Sociology (1 semester)	SOC 10000 or higher level sociology course (Anthropology is also acceptable)
Statistics (recommended)	A course in statistics is highly recommended
Pre-Med Planning Seminar (optional)	BIOL 39600-0 credit 10 week class covering how to apply to medical school and other health professions programs

Job Outlook

- The government projects shortages of doctors in the next 30 years.
- Primary Care Physicians are especially in demand.
- While income varies by specialty, location, and hours worked, the median income for all MDs and DOs is about \$187,200.
- According to the Bureau of Labor Statistics, job growth in medicine is expected to grow 14% by 2024.

Applying

- Medical programs are very competitive. Schools look for well-rounded students with interesting experiences.
- Competitive applicants have:
 - Strong academic performance including a grade point average (GPA) of about 3.6
 - High scores on the MCAT
 - Leadership, teamwork, and communication skills
 - Undergraduate research experience
 - Volunteer and shadowing experiences
 - Strong positive letters of recommendation (mostly from faculty)
- Students apply for MD programs through an online application system called AMCAS.
- DO programs use an application system called AACOMAS.
- Students applying to MD and/or DO programs in Texas need to use TMSAS.

More Information

Information on MD Programs

[Medical School Admission Requirements](https://www.aamc.org/students/applying/requirements/msar/) (MSAR) available online for an annual fee at <https://www.aamc.org/students/applying/requirements/msar/>

Information on DO Programs

[Osteopathic Medical College Information Book](http://www.aacom.org/news-and-events/publications/cib) available free online at <http://www.aacom.org/news-and-events/publications/cib>

General Information

[American Association of Medical Colleges](http://www.aamc.org) <http://www.aamc.org> (includes info on AMCAS, MCAT, MSAR)

[American Medical Association](http://www.ama-assn.org/ama) <http://www.ama-assn.org/ama>

[American Association of Colleges of Osteopathic Med.](http://www.aacom.org) <http://www.aacom.org>

[American Osteopathic Association](http://www.osteopathic.org/) <http://www.osteopathic.org/>

[TMSAS](http://www.utsystem.edu/tmsas) (for applications in Texas) <http://www.utsystem.edu/tmsas>

Programs in Indiana

[Indiana University School of Medicine](http://medicine.iu.edu) <http://medicine.iu.edu>

[Marian University College of Osteopathic Med](https://www.marian.edu/osteopathic-medical-school) <https://www.marian.edu/osteopathic-medical-school>

Additional Information

For additional information about Medical School or interest in health professions, contact Pre-Professional Advising by email preprofessional@purdue.edu or telephone 765-496-2690.

Information for this career guide came from the above websites, those of individual schools, the [Bureau of Labor Statistics](http://www.bls.gov/ooh/healthcare/physicians-and-surgeons.htm) <http://www.bls.gov/ooh/healthcare/physicians-and-surgeons.htm>, and [Explore Health Careers](http://www.explorehealthcareers.org) <http://www.explorehealthcareers.org>.