

### What is a Physician?

A physician, medical practitioner, medical doctor, or simply doctor, is a professional who practices medicine, which is concerned with promoting, maintaining or restoring health through the study, diagnosis, prognosis and treatment of disease, injury, and other physical and mental impairments.

<b>Programs and Professions in General Medicine</b>			
<b>What certification can the student get in the general medical field?</b>			
<b>9th</b>	<b>10th</b>	<b>11th</b>	<b>12th</b>
<ul style="list-style-type: none"> <li>● Introduce students to physician information</li> </ul>	<ul style="list-style-type: none"> <li>● Types of local schools to obtain certificate/degree at</li> </ul>	<ul style="list-style-type: none"> <li>● Job opportunities</li> </ul>	<ul style="list-style-type: none"> <li>● Job responsibilities</li> <li>● Job statistics               <ul style="list-style-type: none"> <li>○ Pay</li> <li>○ Growth</li> </ul> </li> <li>● License Renewal</li> <li>● Continuing Education</li> </ul>

- **Ninth Grade**

- **General Medicine Introduction**

- There are many different levels of professionals available in the general medicine field. You can start off as a medical assistant then build your way up. The other two levels within the general medicine field that are covered in this framework are Physician Assistant and a Physician (a doctor). Each one of these levels all take different amounts of time to obtain and have very different job opportunities that one can expand on with different responsibilities.

- **Tenth Grade**

- **What types of schools can the student attend?**

- Depending on the type of career one chooses within the medical field, it will depend on where you can go to school. If you are looking at getting a Medical Assistant certification, you can attend a technical school that is also known as “vocational schools”. These vocational schools offer targeted and shorter instruction and at a lower tuition and cost that can lead to one obtaining a certification or even an associate, depending on where the students decide to attend. There are many schools within the state of Texas that offer dual enrollment credits to students while in high schools that can earn the credits of a medical assistant certification.
- Community College
  - A community often offers short term certifications where a student can obtain a certification or a two year degree, known as an

associate degree. An associate degree can then be transferred later into a four year degree from a university.

- College
  - A university is a four year (or more) that offers many different degrees through multiple “colleges” that are located on the same campus. Typically a university may have a “College of Education” or a “College of Health Sciences”.
- University
  - A university is a four year institution. Universities usually offer graduate programs (Master’s or Doctorates) and professional certifications. Typically, universities have stricter admission requirements that include grades, placements tests and admission tests like the SAT and ACT.
- **Eleventh Grade**
  - **Where can a Physician work?**
    - Physicians and surgeons work in both clinical and nonclinical settings. Clinical settings include physicians' offices and hospitals; nonclinical settings include government agencies, nonprofit organizations, and insurance companies.
      - <https://www.bls.gov/ooh/healthcare/physicians-and-surgeons.htm>
- **Twelfth Grade**
  - **What are the job responsibilities of a Physician?**
    - diagnose and treat injuries or illnesses and address health maintenance
    - examine patients
    - take medical histories
    - prescribe medications
    - order, perform, and interpret diagnostic tests
    - counsel patients on diet, hygiene, and preventive healthcare
    - operate on patients to treat injuries, such as broken bones; diseases, such as cancerous tumors and deformities, such as cleft palates
      - <https://www.bls.gov/ooh/healthcare/physicians-and-surgeons.htm#tab-2>
  - **What is the expected job growth and pay of a Physician?**
    - According to the Bureau of Labor Statistics, the job outlook for the Physician Assistant field is projected to grow at the rate of 3% over the next decade.
      - <https://www.bls.gov/ooh/healthcare/physicians-and-surgeons.htm#tab-1>
    - According to the Bureau of Labor Statistics, the hourly pay for physician assistants is \$100, and the annual salary is \$208,000.
      - <https://www.bls.gov/ooh/healthcare/physicians-and-surgeons.htm#tab-1>

- **How often does a Physician need to renew their license? And do they need to take any Continuing Education courses?**
  - A PA should renew their license every two years.
    - <https://www.tmb.state.tx.us/page/renewals-physicians#:~:text=To%20maintain%20an%20active%20license.advance%20of%20the%20expiration%20date.>
  - Texas physicians must complete 48 credits of continuing medical education every 24 months to maintain a Texas medical license. The credits may be earned in formal and informal CME activities of which two credits in formal CME must be designated for ethics and/or professional responsibility content.
    - <https://www.texmed.org/CMERequirements/>

<b>Academic Pathway</b>			
<b>What coursework should be taken to become a Physician?</b>			
<b>9th</b>	<b>10th</b>	<b>11th</b>	<b>12th</b>
<ul style="list-style-type: none"> <li>● Dual Enrollment</li> <li>● GPA Relevancy</li> </ul>	<ul style="list-style-type: none"> <li>● Relevant Coursework</li> </ul>	<ul style="list-style-type: none"> <li>● Dual Enrollment vs. AP Classes and Exams</li> <li>● Coursework Transferability</li> </ul>	<ul style="list-style-type: none"> <li>● Required GPA</li> </ul>

- **Ninth Grade**
  - **What is dual enrollment?**
    - The term dual enrollment refers to students being enrolled--concurrently--in two academic programs or institutions. The term is used in reference to high school students taking college courses while they are still enrolled in high school (i.e., *a dual enrollment student*), or to the programs that allow high school students to take college-level courses (i.e., *dual enrollment program*). For this reason, the term *early college* is a common synonym for dual enrollment.
    - The student needs to be aware that the grades they receive in any dual or concurrent enrollment courses will stay with them throughout their college career. These grades will be averaged into their overall GPA.
  - **Is high school coursework relevant to becoming a Physician Assistant?**
    - The student might not realize it, but preparing for the future starts while in high school (or even earlier). What the student learns in high school builds the foundation for their college education and career. If a student is considering becoming a physician assistant, they should take classes now that will prepare them for the program later.
  - **Does high school GPA matter?**
    - Your academic performance is of the utmost importance. Hiring managers often ask candidates how they performed in school. Attaining good

grades is a sign that you have the knowledge and passion that is necessary to succeed as a physician assistant

- <https://info.athenacareers.edu/blog/heres-how-to-stand-out-from-the-competition-as-a-medical-assistant>

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- **What are examples of courses to take in highschool to prepare for a physician assistant program?**
  - Biology
  - Chemistry
  - Anatomy & Physiology
  - Algebra
  - Psychology
  - Speech
  - Foreign Language
  - Health Courses
  - Safety and and First Aid
  - Introduction to Health Care

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- **What is the difference between AP and Dual Enrollment?**
  - Dual enrollment courses allow students to get early access to college courses while AP courses are a little different because they only result in college credit if a student earns a particular score on the AP exam that is taken at the end of the course. AP exams scores may not be accepted by the college that the student applies to as well, depending on where the student applies and if the college accepts that credit. This means that at the end of high school, if the student is a dual enrollment student, they will have a “college transcript” since they have taken college courses and can now enroll directly into a college and have those courses transferred to their college of choice. AP courses, on the other hand, result in AP scores that can be submitted to a college. The college can then decide if the score will amount to any college credit.
- **Will Dual Enrollment coursework transfer to all colleges and universities?**
  - Academic dual credit can be applied toward the core curriculum or to other specific degree program requirements of an academic associate degree or a baccalaureate degree. Students who want more information about the transferability of their dual credit courses should seek guidance from an advisor at the institution offering the dual credits (for example: most RGV high schools are partnered with South Texas College (STC), so a student can speak to someone at STC to get the accurate answers they are looking for.)
  - If the student has course credit from South Texas College, they may check if a course will transfer to a college or university in Texas at

[www.tccns.org](http://www.tccns.org). For information regarding transferability of courses to institutions outside of Texas, students should check with the institution receiving the credit.

- <https://southtexascollege.edu/dual/faqs.html>

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- **What GPA does a student need in order to apply?**

- In order to become a physician, the student must earn a minimum cumula

<b>Admissions</b>			
<b>What does the student need in order to apply to a Physician Program?</b>			
<b>9th</b>	<b>10th</b>	<b>11th</b>	<b>12th</b>
<ul style="list-style-type: none"> <li>• Introduce Physician (program)</li> </ul>	<ul style="list-style-type: none"> <li>• Program Description</li> </ul>	<ul style="list-style-type: none"> <li>• Admission Requirements</li> </ul>	<ul style="list-style-type: none"> <li>• CE Courses</li> <li>• License Renewal</li> </ul>

- **Ninth Grade**

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- <https://www.webmd.com/a-to-z-guides/what-is-physician>

- **Tenth Grade**

- **What is the Physician program at Baylor College of Medicine?**

- The Medical Scientist Training Program at Baylor College of Medicine is designed for highly motivated students. The successful applicant should have both an excellent scholastic record and sustained potential in research. Exposure to both laboratory bench work and clinical care in private practice, academic medicine or emergency room experience is also highly recommended. The combined degree program, while emphasizing continuity between clinical and basic sciences curricula, provides training that can lead to significant scientific contributions in academic and corporate research, clinical practice or a combination of both.

- <https://www.bcm.edu/education/school-of-medicine/m-d-program>

- **What is the Physician program at Texas A&M College of Medicine?**

- The Texas A&M College of Medicine offers a combined training program leading to both MD and PhD degrees. The purpose of this program is to

provide research training for highly motivated medical students planning careers in academic medicine.

- <https://medicine.tamu.edu/degrees/md-phd.html>

- **What is the Physician program at University of Houston College of Medicine?**

- UH College of Medicine's MD program provides students the unique opportunity to study medicine with a social-mission approach. With a focus on improving health in underserved populations, our curriculum provides a diverse range of clinical and classroom experiences rooted in improving patient outcomes.

- <https://www.uh.edu/medicine/education/>

- **Eleventh Grade**

- **What are the admission requirements for the Physician program at Baylor College of Medicine?**

- Math (3-4 semester hours) - Biostatistics (preferred), but any course with quantitative math. Examples: statistics, physics, calculus
- Expository Writing (3-4 semester hours)
- Humanities-Social/Behavioral Sciences (12 semester hours) Examples: psychology, sociology, anthropology, foreign languages, ethics, philosophy, theology, literature, art history
- Organic Chemistry (2 semesters; 6-8 semester hours) - lab is NOT required
- Biochemistry (3-4 semester hours)
- Advanced Biology (3-4 semester hours) - HIGHLY RECOMMENDED: genetics, cell/molecular biology
- RECOMMENDED: Spanish
- Complete MCAT
- Letter of Recommendation

- <https://www.bcm.edu/education/school-of-medicine/m-d-program/admissions/requirements>

- **What are the admissions requirements for the Physician program at Texas A&M College of Medicine?**

- A submitted College of Medicine secondary application and fee paid
- A maximum of three individual letters of evaluation or a Health Professions Advisory Committee Packet
- Official MCAT with no pending scores and not older than five years by time of enrollment
- Computer-Based Assessment for Sampling Personal Characteristics (CASPer) and Duet, a value-alignment assessment
- Official transcripts (sent to TMDSAS within 30 days of request)

- <https://medicine.tamu.edu/degrees/md/requirements.html>

- **What are the admission requirements for the University of Houston College of Medicine?**

- 90 undergraduate hours at an accredited university in the United States or Canada
- All pre-medical requirements listed below must have been completed at a United States or Canadian University. Courses that do not conform to this requirement will not be accepted, even if transferred credit has been given for them by a U.S. or Canadian school.
- Advanced placement credit is accepted only if the school granting the credit lists the specific course(s) and number of units granted per course on an official transcript.
- MCAT is required. The test must be taken by September of the application year, and scores cannot be more than 5 years old.
- While there is no minimum GPA required for application, the UH College of Medicine will consider applicants for admission who have demonstrated academic excellence.
  - <https://www.uh.edu/medicine/admissions/application-process/>

- **Twelfth Grade**

- **How often does a Physician need to renew their license?**
  - A Physician should renew their license every two years.
    - <https://www.tmb.state.tx.us/page/renewals-physicians#:~:text=To%20maintain%20an%20active%20license,advance%20of%20the%20expiration%20date.>
- **Do Physician Assistants need to take Continuing Education courses in order to keep their license?**
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<b><u>Admissions</u></b>			
<b>What exam does the student need to take for the profession they're interested in?</b>			
<b>9th</b>	<b>10th</b>	<b>11th</b>	<b>12th</b>
<ul style="list-style-type: none"> <li>● Introduce Exam to be taken</li> </ul>	<ul style="list-style-type: none"> <li>● Exam Test description</li> <li>● Outline</li> </ul>	<ul style="list-style-type: none"> <li>● Exam Registration and Preparation</li> </ul>	<ul style="list-style-type: none"> <li>● Exam Score and Retesting</li> </ul>

- **Ninth Grade**

- **What exam does the student need to take in order to become a Physician?**

- In order for a student to become a Physician, they must take the United States Medical Licensing Exam, or the USMLE.
  - <https://www.usmle.org/step-exams>
- **Tenth Grade**
  - **What is the USMLE?**
    - The USMLE assesses an examinee's ability to apply knowledge, concepts, and principles, and to demonstrate fundamental patient-centered skills. These skills constitute the basis of safe and effective patient care.
      - <https://www.usmle.org/step-exams>
  - **What is the Test Outline for the USMLE?**
    - The USMLE is divided into a 3 part exam.
      - Part 1, or Step 1 as listed in the Exam, is designed to measure basic science knowledge. Some questions test the examinee's fund of information per se, but the majority of questions require the examinee to interpret graphic and tabular material, to identify gross and microscopic pathologic and normal specimens, and to solve problems through application of basic science principles.
        - <https://www.usmle.org/prepare-your-exam/step-1-materials/step-1-content-outline-and-specifications>
      - Step 2 assesses an examinee's ability to apply medical knowledge, skills, and understanding of clinical science essential for the provision of patient care under supervision and includes emphasis on health promotion and disease prevention.
        - <https://www.usmle.org/prepare-your-exam/step-2-ck-materials/step-2-ck-content-outline-specifications>
      - The test items and cases for Step 3 reflect the clinical situations that a general, as-yet undifferentiated physician might encounter within the context of a specific setting.
        - <https://www.usmle.org/prepare-your-exam/step-3-materials/step-3-content-outline-and-specifications>
- **Eleventh Grade**
  - **How does the student register for the USMLE in order to become a Physician?**
    - In order to register for the USMLE exam, the student can use the link below to register for it. The student must pass the Step 1 exam in order to take the next one, and so on.
      - <https://www.usmle.org/apply-exams>
  - **How can the student prepare for the USMLE?**
    - In order to prepare for the exam, the USMLE website offers various resources for the student to use. Each Step has sample test questions and practice exams that can aid the student in their studies.



- <https://www.usmle.org/prepare-your-exam/step-1-materials>
- **Twelfth Grade**
  - **What score does the student need in order to pass the USMLE?**
    - The passing score for each test varies.
      - For Step 1, the student must achieve a score of 194 in the USMLE exam.
        - <https://www.boardvitals.com/blog/9-things-to-know-before-taking-usmle-step-1-exam/>
      - For Step 2, the student must achieve a score of 209 in the USMLE exam.
        - <https://www.kaptest.com/study/usmle/passing-scores/#:~:text=The%20current%20USMLE%20Step%202,re%20seen%20by%20residency%20programs.>
      - For Step 3, the student must achieve a score of 198 in the USMLE exam.
        - <https://www.kaptest.com/study/usmle/passing-scores/#:~:text=The%20current%20USMLE%20Step%202,re%20seen%20by%20residency%20programs.>
    - **Can the student retake the USMLE if they fail?**
      - The USMLE program limits to six the total number of times an examinee can take the same Step or Step Component. An examinee is ineligible to take a Step or Step Component after six or more prior attempts to pass that Step or Step Component, including incomplete attempts. All attempts at a Step or Step Component are counted toward the limit, regardless of when the exams were taken.
        - <https://www.ecfm.org/2021ib/reexamination-and-reapplication.html>