The Pre-Medicine program of study at ETSU prepares students for application to a four-year Doctor of Allopathic Medicine (MD) or Doctor of Osteopathic Medicine (DO) degree program. Completion of a bachelor’s degree is required for acceptance to most medical schools.

**Allopathic Medicine**

Doctors of allopathic medicine (MDs) are medical doctors who treat disease and injury using counteractive methods. For example, they will prescribe antibiotics to kill bacteria that have caused an infection. Allopathic physicians often work in public or private hospitals or clinics and many have private practices. Although many allopathic physicians become internists, generalists, or family practitioners, most specialize in other medical fields.

**Osteopathic Medicine**

Doctors of osteopathic medicine (DOs) practice a “whole person” approach to health care. In addition to treating specific symptoms, osteopathic physicians concentrate on treating the patient as a whole. Osteopathic physicians understand how all the body’s systems are interconnected and how each one affects the others. They focus special attention on the musculoskeletal system, which reflects and influences the condition of all other body systems. Osteopathic physicians often work in public or private hospitals or clinics and many have private practices. Although many osteopathic physicians become internists, generalists, or family practitioners, some specialize in other medical fields.

**DOs and MDs are Alike in Many Ways**

- Both DOs and MDs complete four years of basic medical education.
- After medical school, both DOs and MDs obtain graduate medical education through internships, residencies and fellowships. This training lasts three to eight years and prepares DOs and MDs to practice a specialty.
- DOs and MDs can choose to practice in any specialty of medicine—such as pediatrics, family medicine, psychiatry, surgery or ophthalmology.
- DOs and MDs must pass comparable examinations to obtain state licenses.
- DOs and MDs both practice in accredited and licensed health care facilities.

**APPLICATION PROCESS**

Students should start the application process approximately 18 months prior to when they desire to enter medical school. For example, if you plan to begin medical school in August 2018, you should begin application preparation in January 2017 (your junior year) or when you have completed all prerequisite courses and have adequately prepared for the application season. Applications are available in May; however, application deadlines vary from August through December for each school. Please research your school choices closely to determine when applications are due.

Most allopathic medical schools participate in the American Medical College Application Service (AMCAS). The website is www.aamc.org. Most osteopathic medical schools participate in the American Association of Colleges of Osteopathic Medicine Application Service (AACOMAS). The website is www.aacom.asacom.org. Many medical schools require or recommend a university composite letter of evaluation during the application process. Please contact your Pre-Medicine counselor for additional information.

**FRESHMAN**

- Complete medical school prerequisite requirements

**SUMMER**

- Build professional relationships with professors, advisors, counselors, and health care professionals for letters of recommendation
- Community service / volunteer work / job shadowing / engagement in student organizations; Document experiences

**SOPHOMORE**

- Choose a major

**SUMMER**

- Gain research experience
- Campus visits to professional schools of interest

**JUNIOR**

- Request letters of recommendation

**SUMMER**

- MCAT prep and exam
- Committee Evaluation
- Application

**SENIOR**

- Interviews

**TIMELINE**

- Find more detailed recommendations and resources in the AAMC’s Medical School Admission Requirements guide

**PRE-MEDICINE COUNSELOR CONTACT**

Medical Professions Advisement Office
423-439-5602

**EMPLOYMENT OPPORTUNITIES**

- 708,300 jobs in 2014
- 807,600 jobs projected in 2024

**MEDIAN SALARY**

- $241,273 for primary care in 2016
- $411,852 for specialists in 2016

For more information, see the Bureau of Labor Statistics http://www.bls.gov/ooh/healthcare/physicians-and-surgeons.htm

**ADVICE**

**Pre-medicine is not a major.** Therefore, you must choose a major (and minor, if appropriate) which supports your life goals by the time you earn 60 credit hours. Medical schools are interested in students who excel in the sciences and mathematics, but you do not have to major in these disciplines. Choose a major/minor that you enjoy and that plays to your strengths. Students should speak with a Pre-Medicine counselor before/when declaring a major.

**You must meet with your major advisor and MPA counselor each semester.** It is strongly recommended for you to meet with your Pre-Medicine counselor and major advisor each term before registering for the next semester. Students who receive scholarships or participate in specialized ETSU programs (such as athletics or Honors College programs) must also seek advisement from those departments. Serious consequences can occur if students fail to meet with advisors (e.g., failure to graduate on time, missing appropriate courses to prepare for the MCAT, etc.).
**What does it take to get into medical school?**

**Allopathic Medicine**
Overall GPA 3.70
2016 average as reported by the American Association of Medical Colleges (AAMC)
Science GPA 3.64
2016 average biology, chemistry, physics, math (BCPM) GPA reported by AAMC

**Osteopathic Medicine**
Overall GPA 3.56
2016 average as reported by the American Association of Colleges of Osteopathic Medicine (AACOM)
Science GPA 3.50

**MCAT Average**
Composite Score
Allopathic Medicine........... 508.70
Osteopathic Medicine......... 502.17

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**Core Preparation Courses**
Different schools may have varying prerequisite requirements. It is up to the student to research and ensure the required courses are completed before application to the preferred school(s) of interest.

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>8</td>
<td>BIOL 1110/1111 and BIOL 1120/1121</td>
</tr>
<tr>
<td>General Chemistry</td>
<td>8</td>
<td>CHEM 1110/1111 and CHEM 1120/1121</td>
</tr>
<tr>
<td>Organic Chemistry</td>
<td>10</td>
<td>CHEM 2010/2011 and CHEM 2020/2021</td>
</tr>
<tr>
<td>Physics*</td>
<td>8</td>
<td>PHYS 2010/2011 and PHYS 2020/2021</td>
</tr>
<tr>
<td>Communication</td>
<td>9</td>
<td>ENGL 1010, 1020, &amp; SPCH 1300, 2300, or 2320</td>
</tr>
<tr>
<td>Social &amp; Behavioral Sciences</td>
<td>6</td>
<td>PSYC 1310, SOCI 1020</td>
</tr>
<tr>
<td>Biochemistry</td>
<td>6</td>
<td>Consult with your counselor</td>
</tr>
<tr>
<td>Philosophy/Humanities**</td>
<td>3</td>
<td>PHIL 2640, PHIL 2020 OR PHIL 2030</td>
</tr>
<tr>
<td>Probability and Statistics</td>
<td>3</td>
<td>MATH 1530</td>
</tr>
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</table>

**Additional Recommended Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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</thead>
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<td>BIOL 3100/3141</td>
</tr>
<tr>
<td>Cell Biology</td>
<td>5</td>
<td>BIOL 3150/3151</td>
</tr>
<tr>
<td>Human Anatomy/</td>
<td>8</td>
<td>HSCI 3000/3020</td>
</tr>
<tr>
<td>Human Physiology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calculus I and II</td>
<td>8</td>
<td>MATH 1910 and MATH 1920</td>
</tr>
<tr>
<td>Comparative Anatomy</td>
<td>4</td>
<td>BIOL 3220</td>
</tr>
<tr>
<td>Molecular Biology</td>
<td>3</td>
<td>BIOL 4647</td>
</tr>
<tr>
<td>Microbiology</td>
<td>4</td>
<td>HSCI 3320/3321</td>
</tr>
<tr>
<td>Immunology</td>
<td>3</td>
<td>HSCI 3540</td>
</tr>
</tbody>
</table>

*Calculus-based physics (PHYS 2110 and 2120) is strongly recommended.

**What can I be doing now to strengthen my application to medical school?**

**RELATED EXPERIENCE**
Students are encouraged to explore the medical field either through employment or as a volunteer. Medical schools want to know that a student has worked in the field, observed what is involved, and still has the desire to continue in that profession. It is extremely important that students planning to apply to osteopathic medical schools obtain shadowing experiences with a DO. Students should gain as much experience as possible without sacrificing grades.

**EXTRACURRICULARS**
The admissions committees of medical schools are interested in seeing a range of extracurricular activities, especially those demanding a significant leadership role. Students should demonstrate their ability to balance full academic schedules with extracurricular involvement on and off campus and/or through employment opportunities. ETSU has many organizations that students can join. Students should visit the SORC or www.etsu.edu/sorc for more information regarding extracurricular activities. It is not beneficial to simply join an organization; you must demonstrate leadership qualities!

**VOLUNTEER EXPERIENCE**
Medical schools are looking for candidates who express a commitment to community service. Students should seek volunteer projects that focus on giving back to the community, especially those related to the medical field.

**ONLINE ETIQUETTE**
Please consider personal email addresses when corresponding with professional schools. First impressions are often based on correspondence and email addresses should be appropriate for professional communication. Messages and images sent electronically are reflections of judgment and potential suitability for professional careers. Inappropriate behaviors shared through an accessible venue can be viewed and shared by anyone and may compromise your admission to medical school.

**The New MCAT**
The MCAT (Medical College Admissions Test) is generally taken at the end of a student’s junior year. Complete all prerequisite classes before taking the exam. Major changes occurred in 2015, now:

- **The Natural Sciences sections reflect recent changes in medical education, including the addition of Biochemistry.**
- **A Social / Behavioral Sciences section (Psychological, Social, and Biological Foundations of Behavior) recognizes the importance of socio-cultural and behavioral determinants of health and health outcomes.**
- **A Critical Analysis and Reasoning Skills section reflects the fact that schools want well-rounded applicants from a variety of backgrounds.**

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**Suggested 2-Year Schedule for Pre-Medical Students**

**Freshman**

<table>
<thead>
<tr>
<th>Fall</th>
<th>Spring</th>
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<tbody>
<tr>
<td>CHEM 1110/11</td>
<td>CHEM 1120/21</td>
</tr>
<tr>
<td>BIOL 1110/11</td>
<td>BIOL 1120/21</td>
</tr>
<tr>
<td>MATH 1530</td>
<td>ENGL 1020</td>
</tr>
<tr>
<td>ENGL 1010</td>
<td>MATH 1720/1910</td>
</tr>
<tr>
<td>PREH 1350</td>
<td>ELECTIVE</td>
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</table>

**Sophomore**

<table>
<thead>
<tr>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
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<td>CHEM 2020/21</td>
</tr>
<tr>
<td>PHYS 2010/11</td>
<td>PHYS 2020/21</td>
</tr>
<tr>
<td>SPCH*</td>
<td>SOCI 1020</td>
</tr>
<tr>
<td>PSYC 1310</td>
<td>ELECTIVE</td>
</tr>
<tr>
<td>ELECTIVE</td>
<td>ELECTIVE</td>
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</tbody>
</table>

*Students should maintain a minimum of 17-19 credit hours per semester*

*Consult your Pre-Medicine counselor before choosing a speech course*

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*WATCH WHAT YOU POST!*

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The admissions process for medical school is critical and requires diligent planning and research. It is important to consult with your Pre-Medicine counselor before choosing a speech course to ensure you meet the requirements for medical school.
STUDENT ORGANIZATIONS

Alpha Epsilon Delta Honors Society (AED)
AED is a health pre-professional honor society encouraging excellence in scholarship. It emphasizes the significance of health education and promotes cooperation and contact among professionals.

American Medical Student Association (AMSA)
AMSA is committed to involving its members in the social, moral, and ethical obligations of the profession of medicine. This group also provides opportunities to give back to the community through volunteer activities and helps to assist students with job shadowing.

Health Occupations Students of America (HOSA)
HOSA provides students with knowledge and understanding of various health care careers. It also provides opportunities for students to participate in various state and regional competitions focused on current health issues.

Minority Association of Pre-Health Students (MAPS)
This organization is open to all ETSU students. MAPS aims to provide students with valuable opportunities in the community to enhance their knowledge of the health care field they are planning to enter. Opportunities include job shadowing, volunteering, and research. MAPS is also geared toward forming friendships among members.

Pre-Student Osteopathic Medical Association (Pre-SOMA)
The goals of this organization are to promote osteopathic medicine, to educate students about career opportunities in the field, to increase the number of applicants to osteopathic medical school, and to prepare students for success as osteopathic physicians.

HOW CAN I GET EXPERIENCE?
You can start by asking your own primary care provider or specialist for shadowing opportunities.

ASPIRING DOCS  The Aspiring Docs program through the AAMC (https://www.aamc.org/students/aspiring) offers guidance related to the field of medicine and helps aspiring medical school applicants secure clinical shadowing experience.

TIMMY GLOBAL HEALTH  Timmy Global Health offers students the opportunity to partner with a nonprofit organization to provide global health equality and help deliver financial, medical, and human resources to community-based health and development projects across the world. Learn more by visiting www.timmyglobalhealth.org

SUMMER HEALTH PROFESSIONS EDUCATION PROGRAM (SHPEP)
This is a six-week academic enrichment program for freshman and sophomore college students who want to become physicians or dentists. SHPEP hosts students at 13 program sites across the county, including Duke University, the University of Virginia, and University of Louisville. Learn more and apply at www.sh pep.org

QUILLEN COLLEGE OF MEDICINE  Quillen College of Medicine offers excellent structured clinical internship opportunities for students. Many of these experiences are seasonal and include an application process, so do your research early to keep from missing out on the next cycle.

MEDICAL HORIZONS  This summer program, the result of a partnership between ETSU's Quillen College of Medicine and Mountain States Health Alliance, allows students to participate in four 1-week internships in various specialties including family medicine, pediatrics, internal medicine, surgery, psychiatry, and obstetrics/gynecology. In addition to shadowing physicians in various specialties, you will also receive lectures on topics related to the medical field. Learn more and apply for the program at www.etsu.edu/com/sa/admissions/medicalhorizons

ANATOMY INTERNSHIPS  These internships, which run in the fall, spring, and summer semesters, offer students hands-on experience in the gross anatomy lab at ETSU’s Quillen College of Medicine. Students participate in projects, observe dissections, and practice suturing. Learn more and apply for an internship at http://www.etsu.edu/com/dbms/academics/anatomy.php

QUILLEN’S PATIENT SIMULATION LAB  Gain experience in Quillen’s patient simulation lab to learn more about opportunities available to budding health professionals and to experience hands-on learning, much like you would as a medical student. Learn more and apply at http://www.etsu.edu/com/simlab/summerinternship.php

RURAL COMMUNITY HEALTH PROJECT  This experience, best suited to students who are interested in rural health careers, involves a 6-8-week group project supervised by a health care professional. You will have the chance to help address real health problems within a community by performing data collection, interviewing the public, preparing health education materials, and/or working in health promotion. You will also be shadowing and observing the work of your physician supervisor. Learn more and apply at http://www.etsu.edu/com/ruralprograms/premedical/community.php

American Association of Medical Colleges (AAMC)
https://www.aamc.org

American Association of Colleges of Osteopathic Medicine (AACOM)
https://www.aacom.org