The Pre-Medicine program of study at ETSU prepares students for application to a 4-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 2015, you should begin application preparation in January 2014 (your junior year) or when you have completed all prerequisite courses and have adequately prepared for the application season.

Most allopathic medical schools participate in the American Medical College Application Service (AMCAS). The website is [www.aamc.org](http://www.aamc.org). Most osteopathic medical schools participate in the American Association of Colleges of Osteopathic Medicine Application Service (AACOMAS). The website is [www.aacomas.aacom.org](http://www.aacomas.aacom.org). Many medical schools require or recommend a composite letter of evaluation during the application process. The MPA staff is available to assist students through this process.

**Timeline**

Find more detailed recommendations and resources in the AAMC's [Medical School Admission Requirements guide](http://www.aamc.org).

- **FRESHMAN** Complete medical school prerequisite requirements.
- **SUMMER** Build professional relationships with professors, advisors, 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** MCAT prep and exam Committee Evaluation Application Interviews
- **SUMMER** Pre-med is not a major. Therefore, you must choose a major (and minor, if appropriate) 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.

You must meet with your advisor each semester. You are required to meet with your pre-professional and major advisors each term before registering for the next. 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.).

**Advisor contact**

Medical Professions Advisement Office
423.439.5602
ARC in Culp Center

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**Employment Opportunities**

<table>
<thead>
<tr>
<th>Jobs in 2012</th>
<th>Jobs Projected in 2022</th>
<th>Median Salary for Primary Care</th>
<th>Median Salary for Specialists</th>
</tr>
</thead>
<tbody>
<tr>
<td>619,400</td>
<td>814,700</td>
<td>$220,942</td>
<td>$396,233</td>
</tr>
</tbody>
</table>

What does it take to get into medical school?

### Allopathic Medicine
- **Overall GPA**: 3.69
- **Science GPA**: 3.63
- **MCAT Score**: 29.5

### Osteopathic Medicine
- **Overall GPA**: 3.44
- **MCAT Score**: 25.9

#### Core Preparation Courses | Specific requirements vary by school

<table>
<thead>
<tr>
<th>Subject</th>
<th>Hours</th>
<th>Course Code(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>8</td>
<td>BIOS 1110/1111, BUS 1120/1121</td>
</tr>
<tr>
<td>General Chemistry</td>
<td>8</td>
<td>CHEM 1110/1111, CHEM 1120/1121</td>
</tr>
<tr>
<td>Organic Chemistry</td>
<td>10</td>
<td>CHEM 2010/2011, CHEM 2020/2021</td>
</tr>
<tr>
<td>Physics*</td>
<td>8</td>
<td>PHYS 2010/2011, PHYS 2020/2021</td>
</tr>
<tr>
<td>Communication</td>
<td>9</td>
<td>ENGL 1010 + 1020, SPCH 1300, 2300, or 2320</td>
</tr>
<tr>
<td>Sociology</td>
<td>3</td>
<td>SOCI 1020</td>
</tr>
<tr>
<td>Psychology</td>
<td>3</td>
<td>PSYC 1310</td>
</tr>
<tr>
<td>Biochemistry</td>
<td>5</td>
<td>BIOL 1417/1415 or BIOL 1416/1417</td>
</tr>
<tr>
<td>Philosophy / Humanities**</td>
<td>3</td>
<td>PHIL 2640, PHIL 2030</td>
</tr>
<tr>
<td>Probability and Statistics</td>
<td>3</td>
<td>MATH 1530</td>
</tr>
</tbody>
</table>

#### Additional Recommended Courses

<table>
<thead>
<tr>
<th>Subject</th>
<th>Hours</th>
<th>Course Code(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Genetics</td>
<td>5</td>
<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>4</td>
<td>HSCI 3000</td>
</tr>
<tr>
<td>Human Physiology</td>
<td>4</td>
<td>HSCI 3020</td>
</tr>
<tr>
<td>Calculus I and II</td>
<td>8</td>
<td>MATH 1910, 1920</td>
</tr>
<tr>
<td>Comparative Anatomy</td>
<td>4</td>
<td>BIOL 3220</td>
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<tr>
<td>Molecular Biology</td>
<td>3</td>
<td>BIOL 4647</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.
**PHIL 2030 is recommended for the MCAT philosophy knowledge requirement; it does not fill a gen ed requirement.

Different schools may have different 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.

### MCAT Score

- **2013 average as reported by the American Association of Medical Colleges (AAMC)**
- **2013 average biology, chemistry, physics, math (BCPM) GPA reported by AAMC**
- **2013 average score reported by AAMC**

### 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 located on the first floor of the Culp center 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. 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.

Watch what you post!

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### Suggested 2-year schedule for pre-medical students

#### Freshman

<table>
<thead>
<tr>
<th>Fall</th>
<th>Course Code(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1110/11</td>
<td>BIOS 1530</td>
</tr>
<tr>
<td>BIOL 1110/11</td>
<td>ENGL 1010</td>
</tr>
<tr>
<td>MATH 1350</td>
<td>PREH 1350</td>
</tr>
</tbody>
</table>

#### Sophomore

<table>
<thead>
<tr>
<th>Fall</th>
<th>Course Code(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 2120/21</td>
<td>BIOL 1120/21</td>
</tr>
<tr>
<td>ENGL 1020</td>
<td>MATH 1720/1910</td>
</tr>
<tr>
<td>SPCH*</td>
<td>ELECTIVE</td>
</tr>
</tbody>
</table>

* Consult your advisor before choosing a speech course.

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. Important changes are coming to the test in 2015:
- The Natural Sciences sections will reflect recent changes in medical education.
- A new 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 new Critical Analysis and Reasoning Skills section reflects the fact that schools want well-rounded applicants from a variety of backgrounds.
STUDENT ORGANIZATIONS

Alpha Epsilon Delta – National Pre-Health Honor Society (AED)
AED functions as 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.

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.

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 compete in various state and regional competitions to learn about 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.

HOW CAN I GET EXPERIENCE?

You can start by asking your own primary care provider or specialist for shadowing opportunities.

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.

The Summer Medical and Dental Education Program (SMDEP) is a six-week academic enrichment program for freshman and sophomore college students who want to become physicians or dentists. SMDEP hosts students at 12 program sites across the county, including Duke University, The University of Virginia, and University of Louisville. Learn more and apply at www.smdep.org.

Quillen College of Medicine also 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 clinical experience 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 Quillen COM. Students participate in projects, observe dissections, and practice suturing. Learn more and apply for an internship at www.etsu.edu/com/dbms/academics/anatomy.aspx.

SUMMER INTERNSHIPS

Gain experience in Quillen’s gross anatomy lab and 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 at www.etsu.edu/com/simlab/summerinternship.aspx.

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 www.etsu.edu/com/ruralprograms/premedical/community.aspx.

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