Pre-Health Stater Kit at UT Dallas

www.utdallas.edu/pre-health
## Becoming “Pre-Health” at UT Dallas

- “Becoming Pre-Health” handout
- Day 1: Pre-Health Starter Essentials
- AP Credits: the general guidelines

## Your Pre-Health Journey

- Required classes, by profession
- Preparing for admissions tests
- Competencies and Experiential Learning

## Evaluating Your Candidacy

- Health Professions Evaluation services
- Medical Admissions Rubric

## Frequently Asked Questions
BECOMING “Pre-Health” at UT Dallas

Pre-Health is not a designation of what you ARE, but a designation of what you ARE BECOMING.
ARRIVING AT UT DALLAS?
- Choose a Major
  For most health professions, there is no best major
  You register for classes with your major advisor
  Major not working out? Ask your advisor about changing it.
- Try Student Organizations
  Fun, volunteering, social and academic support

VISIT HPAC: HEALTH PROFESSIONS ADVISING CENTER
- MAKE A PLAN!
  www.utdallas.edu/pre-health
- appointment: call 972-883-6767; availability limited during times that advisors are supporting students' professional school applications
- drop in questions: 1:30-4:30; short questions only

BUILD YOUR COMPETENCIES
- Interpersonal, Intrapersonal, Critical Reasoning, and Science
- Classes vary by profession: see HPAC
- Most pre-med students take Chem I&II, Phys I&II, Bio I&II, O.Chem I&II, Biochem, Genetics, the associated labs, and additional sciences according to their interests
- Choose non-sciences that broaden your horizons! Consider introductions to PSY, SOC, NSC, ethics, business, and more

HAVE FUN. HELP OTHERS SUCCEED.
- Want to help people as your career? DON'T WAIT!
- UT Dallas students help people through Student Organizations, the Comet Cupboard, the Office of Student Volunteerism, and Dallas's hundreds of hospitals, clinics, therapy centers, churches, and non-profits
THE MOST IMPORTANT FOUR THINGS THAT NEW PRE-HEALTH STUDENTS NEED TO DO

Register for **General Chemistry I**
- CHEM 1311  General Chemistry (lecture)
- CHEM 1111  General Chemistry Lab
- CHEM 1013  General Chemistry Exams

Register for the highest **Math** course for which you are eligible

Sign up for the **Pre-Health Email Listserv**.
You will get information throughout the year about pre-health activities, opportunities, and other pre-health announcements.
To join, simply send a blank email from whatever email account you use the most
To: sympa@lists.utdallas.edu
Subject: subscribe prehealth-info

Check out the **HPAC Website** for information on lots of topics
www.utdallas.edu/pre-health
About AP Credit...

HPAC recommends that you **apply all AP credits**. There is no disadvantage to applying them.

It may advantage you to take a course in college **even if you have AP credit for it**.

Choosing whether to take a class for which you have AP credit? This chart provides a strong general guideline.

- **Is your AP credit for Physics, Biology, or Chemistry?**
  - **YES**
    - Did you score a 5 on the AP test?
      - **YES**
        - Are we talking about Bio I?
          - **YES**
            - Take it in college
          - **NO**
            - Are you comfortable in class with sophomores, juniors, and seniors?
              - **YES**
                - Take it in college
              - **NO**
                - Take it in college
      - **NO**
        - Do NOT take the course in college. Move on to advanced courses or take a useful elective.

- **NO**
  - Take it in college

Note: a small number of medical and dental schools do not accept “by exam” credits for prerequisite classes.
YOUR PRE-HEALTH JOURNEY

FRESHMAN

SOPHOMORE

JUNIOR

SENIOR

“GROWTH YEAR” EXPERIENCES?
### Pre-Health Classes
This chart reflects MINIMUM and RECOMMENDED classes for several health professions.

*you can register for this class as early as your first semester

**required at some schools but not all

<table>
<thead>
<tr>
<th>Medical</th>
<th>Dental</th>
<th>Physician Assistant</th>
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</thead>
<tbody>
<tr>
<td><strong>Required</strong></td>
<td><strong>Required</strong></td>
<td><strong>Required</strong></td>
</tr>
<tr>
<td>*Chemistry I</td>
<td>*Chemistry I</td>
<td>*Chemistry I</td>
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<tr>
<td>Chemistry II</td>
<td>Chemistry II</td>
<td>*Intro to Psychology</td>
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<tr>
<td>Biology I</td>
<td>Biology I</td>
<td>Organic Chemistry I</td>
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<tr>
<td>Biology II</td>
<td>Biology II</td>
<td>Statistics</td>
</tr>
<tr>
<td>Organic Chemistry II</td>
<td>Organic Chemistry II</td>
<td>A&amp;P I</td>
</tr>
<tr>
<td>Biochemistry I</td>
<td>Biochemistry I</td>
<td>A&amp;P II</td>
</tr>
<tr>
<td>Physics I</td>
<td>Physics I</td>
<td>**Chemistry II</td>
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<tr>
<td>Physics II</td>
<td>Physics II</td>
<td>**Biology I</td>
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<tr>
<td>Statistics</td>
<td>Statistics</td>
<td>**Biology II</td>
</tr>
<tr>
<td>at least 2 upper-division BIOL or NSC</td>
<td>Microbiology (with or without lab)</td>
<td>**Biochemistry I</td>
</tr>
<tr>
<td><strong>Recommended</strong></td>
<td>at least 2 upper-division BIOL or NSC</td>
<td>**Genetics</td>
</tr>
<tr>
<td>Genetics</td>
<td>**A&amp;P I</td>
<td>**Human Nutrition</td>
</tr>
<tr>
<td><strong>Recommended</strong></td>
<td>**A&amp;P II</td>
<td>**Medical Terminology</td>
</tr>
<tr>
<td>Additional advanced bioscience</td>
<td>*Intro to Neuroscience</td>
<td>**Recommended</td>
</tr>
<tr>
<td>*Intro to Neuroscience</td>
<td>*Intro to Psychology</td>
<td>Oral Histology</td>
</tr>
<tr>
<td>*Intro to Psychology</td>
<td>*Intro to Sociology</td>
<td>Additional advanced bioscience</td>
</tr>
<tr>
<td>*Intro to Sociology</td>
<td>**Classes that support your personal</td>
<td>Classes that support your personal</td>
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<tr>
<td></td>
<td>medical interests</td>
<td>dental interests</td>
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<tr>
<th>Pharmacy</th>
<th>Physical Therapy</th>
<th>Optometry</th>
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<tbody>
<tr>
<td><strong>Required</strong></td>
<td><strong>Required</strong></td>
<td><strong>Required</strong></td>
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<tr>
<td>*Chemistry I</td>
<td>*Chemistry I</td>
<td>*Chemistry I</td>
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<tr>
<td>Chemistry II</td>
<td>*Intro to Psychology</td>
<td>*Intro to Psychology</td>
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<tr>
<td>Biology I</td>
<td>Chemistry II</td>
<td>Chemistry II</td>
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<tr>
<td>Biology II</td>
<td>Biology I</td>
<td>Biology I</td>
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<tr>
<td>Organic Chemistry I</td>
<td>Biology II</td>
<td>Biology II</td>
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<tr>
<td>Organic Chemistry II</td>
<td>A&amp;P I</td>
<td>Organic Chemistry I</td>
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<tr>
<td>Biochemistry I</td>
<td>A&amp;P II</td>
<td>Physics I</td>
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<tr>
<td>Gen. Microbiology, Gen. Micro. Lab</td>
<td>Physics I</td>
<td>Physics II</td>
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<td>Physics I</td>
<td>Physics II</td>
<td>Statistics</td>
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<tr>
<td>Statistics</td>
<td>Statistics</td>
<td>Microbiology</td>
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<tr>
<td>Calculus</td>
<td>**Developmental Psychology</td>
<td>**A&amp;P I</td>
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<tr>
<td>**Genetics</td>
<td>**Medical Terminology</td>
<td>**A&amp;P II</td>
</tr>
<tr>
<td>**Molecular Biology</td>
<td>**Advanced Physiology</td>
<td>**Biochemistry I</td>
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<tr>
<td>**A&amp;P I</td>
<td>**A&amp;P II</td>
<td></td>
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<tr>
<td>**A&amp;P II</td>
<td></td>
<td></td>
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<tr>
<td>**Speech Communications</td>
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<tr>
<td>**Macroeconomics</td>
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<tr>
<td>**Computer Science</td>
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**NOTE!** Individual schools may require or recommend additional classes.
Admission Tests

All health professions have admissions tests.

<table>
<thead>
<tr>
<th>Profession</th>
<th>Test</th>
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<tbody>
<tr>
<td>Medicine</td>
<td>MCAT – Medical College Admission Test</td>
</tr>
<tr>
<td>Podiatry</td>
<td>students-residents.aamc.org</td>
</tr>
<tr>
<td>Dentistry</td>
<td>DAT – Dental Admission Test</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>PCAT – Pharmacy College Admission Test</td>
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<tr>
<td></td>
<td>pcatweb.info/</td>
</tr>
<tr>
<td>Optometry</td>
<td>OAT – Optometry Admission Test</td>
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<tr>
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<td><a href="http://www.ada.org/en/oat">www.ada.org/en/oat</a></td>
</tr>
<tr>
<td>All other Masters and</td>
<td>GRE – Graduate Record Exam</td>
</tr>
<tr>
<td>Doctoral Programs</td>
<td><a href="http://www.ets.org/gre/">www.ets.org/gre/</a></td>
</tr>
</tbody>
</table>

“When should I start preparing for admissions tests?”

- You are already preparing!
- You’ll take another very important step in years 1 and 2 of college: master basic sciences and learn to apply them.
- In the year of your professional school application, begin to study the test itself: the format, the timing, and how the right and wrong answers are phrased. You’ll take practice tests. You may choose to take a prep course. Discounted prep courses are available through HPAC.

Recommended Preparation for Admission Tests (by Year)

Year 1
Master basic sciences and labs. Tutor and teach others if you can. Apply your lessons by doing projects. Read some technical journals to stoke your curiosity and practice detailed comprehension.

Year 2
Master your sciences and labs. Tutor and teach others if you can. Apply your lessons by doing projects. Read some technical journals to stoke your curiosity and practice detailed comprehension.

Year 3
Master advanced sciences. Tutor and teach others if you can. Apply science through research or ind. study. FOCUSED PREP TIME!
- Study the test content and format. Plan your studies. – usually 1 week
- Review basic material – usually 4-6 weeks
- Work LOTS of practice passages and read the answer explanations – usually 8-10 weeks

Take the test.
In early summer, apply to profession schools.

Year 4
Take extension sciences to apply your basics.
Synthesize your understanding through applied research or by creating an honors thesis. If necessary, re-approach prep using new methods, then re-test to support a re-application.
The 15 COMPETENCIES

The Association of American Medical Colleges (AAMC) lists these **15 Core Competencies** that students should demonstrate before entering medical school.

[https://www.aamc.org/services/admissions-lifecycle/competencies-entering-medical-students](https://www.aamc.org/services/admissions-lifecycle/competencies-entering-medical-students)

### Pre-professional Competencies: Interpersonal

1. **Service Orientation**: Demonstrates a desire to help others and sensitivity to others’ needs and feelings; recognizes and acts on his/her responsibilities to society; locally, nationally, and globally.

2. **Social Skills**: Demonstrates awareness of others’ needs, goals, feelings, and the ways that social and behavioral cues affect peoples’ interactions and behaviors; treats others with respect.

3. **Cultural Competence**: Demonstrates knowledge of socio-cultural factors that affect behaviors; respects for multiple dimensions of diversity; informs own judgment; recognizes and appropriately addresses bias in themselves and others; interacts effectively with people from diverse backgrounds.

4. **Teamwork**: Works collaboratively with others to achieve shared goals; shares information and knowledge; puts team goals ahead of individual goals.

5. **Oral Communication**: Effectively conveys information to others; listens effectively; recognizes potential communication barriers and adjusts as needed.

### SUGGESTED ACTIVITIES

- Participate in student groups and cultural events.
- Engage with the local community through volunteering.
- Study abroad
- Develop confidence and speaking through Toastmasters.
- Seek classes in psychology, sociology, cultures, and languages

### Pre-professional Competencies: Intrapersonal

**Ethical Responsibility to Self and Others**: Behaves in an honest and ethical manner; adheres to ethical principles; resists peer pressure; demonstrates ability to follow rules and procedures.

6. **Reliability and Dependability**: Consistently fulfills obligations in a timely and satisfactory manner; takes responsibility for personal actions and performance.
7. **Resilience and Adaptability**: Demonstrates tolerance of stressful environments or situations and adapts effectively; is persistent, even under difficult situations; recovers from setbacks.

8. **Capacity for Improvement**: Sets goals for continuous improvement and for learning new concepts and skills; engages in reflective practice for improvement; solicits and responds appropriately to feedback.

### Thinking and Reasoning Competencies

9. **Critical Thinking**: Uses logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems.

10. **Quantitative Reasoning**: Applies quantitative reasoning and appropriate mathematics to describe or explain phenomena in the natural world.

11. **Scientific Inquiry**: Uses scientific processes to integrate and synthesize information, solve problems and formulate research hypotheses; is facile in the language of the sciences and participates in scientific discourse; can explain how scientific knowledge is discovered and validated.

12. **Written Communication**: Effectively conveys information to others using written words and sentences.

### Science Competencies

13. **Living Systems**: Applies knowledge and skill in the natural sciences to solve problems related to molecular and macro systems including biomolecules, molecules, cells, and organs.

14. **Human Behavior**: Applies knowledge of the self, others, and social systems to solve problems related to the psychological, socio-cultural, and biological factors that influence health and well-being.

### Suggested Activities

- Carefully attend to rules and guidelines.
- Make do lists.
- Meet deadlines.
- Maintain your health.

- Do an independent study. Do an honors thesis.
- Attend presentations and conferences.
- READ science publications to stay current, but also books for pleasure.

- Take basic pre-med science: Chem, Biology, O.Chem, Biochem, and Physics
- Take basic pre-med non-science: Intro Neuroscience, Intro Sociology, Intro Psychology, etc.
- Expand your mastery through teaching and research.
Experiences

All professions expect you to do some hands-on career exploration. Meet different sorts of practitioners, find out what they do and don’t like about their jobs.

Based on your experiences, your healthcare interests will naturally become more focused over time.

When applying to profession schools, you’ll be asked, “What have you learned from your experiences?”

<table>
<thead>
<tr>
<th>Setting</th>
<th>Date</th>
<th>Hours</th>
<th>Notes to Remember (what you did, what you learned)</th>
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<tbody>
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EVALUATING YOUR CANDIDACY

Am I ready for professional school?

Will I be admitted?

Can HPAC help to optimize my application?
Health Professions Evaluation (HPE) is a suite of HPAC services to help you prepare and file your professional school applications. **Registration is required.**

Registration occurs from Oct-Nov *in the year before you apply to professional school.*

**Services:**

1) A Prewrite to make the process quicker and easier

2) A Biographical Form that mimics medical and dental applications

3) A Personal Statement Workshop to help you create strong application essays

4) Revision of your Biographical Form and essays with an assigned HPAC advisor

5) Free businesslike portraits for use in your medical or dental application

6) An Interview Skills Workshop to help you prepare for various interview styles

7) Collection and distribution of up to 5 recommendation letters to medical or dental schools

8) An Application Workshop to help you navigate the medical and dental applications.

**Students may additionally receive (as resources permit):**

9) Interviews with UT Dallas faculty/staff

10) A Committee Evaluation added to your individual letters of recommendation
This rubric resembles those used by medical and dental schools nationwide, and by UT Dallas’s Health Professions Evaluation (HPE) Committee.

<table>
<thead>
<tr>
<th>Exceptional Qualified</th>
<th>Strongly Qualified</th>
<th>Probably Qualified</th>
<th>Possibly Not Qualified</th>
<th>Not Qualified</th>
</tr>
</thead>
<tbody>
<tr>
<td>A “bonus” category. Students at this level are often exceptionally smart but also uniquely accomplished, with long records of kindness, altruism, and experience in healthcare.</td>
<td>Candidates in this category are strong bets for success in health professions. They have shown clear readiness for professional school and practice, based on clearly-demonstrated AAMC Competencies and experience in healthcare.</td>
<td>There isn’t sufficient evidence to predict whether candidates in this category will do well in health professions. If a candidate in this category isn’t admitted, they’ll usually improve weak areas and re-apply in a stronger category.</td>
<td>Evidence suggests a deficiency in at least one AAMC Competency area. These candidates might struggle in health professions school or practice.</td>
<td>Candidates in this category have shown unsuitability for professional school or practice.</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>Oral communications skills exceptional. Excellent interpersonal and teamwork skills, including interactions serving in unfamiliar cultures or groups</td>
<td>Shows professionalism, empathy, answering/listening skills, and self-confidence. Effective leadership, interpersonal, and teamwork skills. Some interactions with unfamiliar cultures or groups.</td>
<td>Occasionally shows professionalism, empathy, answering/listening skills, and self-confidence. Successful interpersonal skills in a professional setting. Inconsistent evidence of leadership or exposure to unfamiliar cultures or groups.</td>
<td>Establishes a clear rapport with interviewer, but lacks evidence of professionalism, empathy, answering/listening skills, or self-confidence. Satisfactory interpersonal skills. Minimal evidence of initiative, leadership, or exposure to unfamiliar cultures or groups.</td>
</tr>
<tr>
<td>Intrapersonal</td>
<td>Exceptionally mature, professional, responsible and moral. Accepts criticism, frustration, or failure maturely, and exhibits self-confidence. Recognizes self controllable deficiencies and successfully addresses them.</td>
<td>Mature, professional, responsible moral. Accepts criticism, frustration, or failure while exhibiting some self-confidence. Recognizes self controllable deficiencies and can present a realistic, logical plan to address them.</td>
<td>Somewhat mature and professional. Lacks ability to self-reflect and self-analyze in-depth. Recognizes self controllable deficiencies and suggests simple remedies (some unrealistic).</td>
<td>Strong character, but lacks ability to self-reflect and self-analyze. Recognizes self-controllable deficiencies but does not present remedies.</td>
</tr>
<tr>
<td>Experience</td>
<td>Exceptional, mature knowledge of the profession, as shown by extensive experience and research.</td>
<td>Realistic, professional, and confident about professional future, as shown by quality experience and research.</td>
<td>Confident in abilities as professional based on occasional quality experience. May not have researched all options.</td>
<td>General understanding of profession. Some healthcare exposure but minimal research or clinical exposure.</td>
</tr>
<tr>
<td>Study Skills</td>
<td>GPA &gt;3.8 including heavy course loads. Evidence of seeking challenge and personal interests. Test scores indicate mastery in all sections.</td>
<td>GPA &gt; 3.65 or very strong recent trend at full course loads. Significant depth in bioscience QR breadth across disciplines. Test scores indicate strength in all sections.</td>
<td>GPA &gt; 3.5 or positive recent trend. Some education beyond prerequisites. Record lacks strong performance under heavy loads. Test scores above average, possible weak in sections.</td>
<td>GPA &lt; 3.5. Record may include weak periods, multiple drops/repeats, or consistent light loads. Test scores weak overall or critically weak in sections.</td>
</tr>
<tr>
<td>Committee’s Recommendation Level</td>
<td>“Recommended with Enthusiasm”</td>
<td>“Recommended with Confidence”</td>
<td>“Recommended”</td>
<td>“Recommended with Reservations”</td>
</tr>
<tr>
<td>% accepted to medical or dental schools</td>
<td>100% admitted</td>
<td>~80% admitted</td>
<td>~50% admitted</td>
<td>~30% admitted</td>
</tr>
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</table>

Evidence for each category is gathered from the candidate’s:

- **Academic Record**: classes, grades, loads, trends, choice of classes, and test scores.
- **Activities since college**: healthcare, research, teaching, community service, and extracurricular
- **Essays**: written by the candidate, describing their background and motivations
- **3-5 Recommendation Letters**, including from two science professors
- **Interviews**
What do medical schools look for?
Applicants must show academic discipline, personal integrity, empathy, industry, and understanding of professional healthcare, and often takes steps to expand their comfort zones to include new subjects, viewpoints, and cultures. Each school may emphasize different factors.
For details, see the AAMC Pre-Med Competencies.

What do dentistry, pharmacy, optometry, and other health professions schools look for?
Most professions ask for qualities similar to medical schools, but with important differences. Pre-dental students, for example, may also need to show perceptual ability and fine-motor dexterity. Ask a pre-health advisor for details.

Where do I find reliable information about getting in to professional school?
NOT from internet forums: the information is mostly wrong or overly simplified. NOT from individual doctors: a small sample is never a reliable source.

UT Dallas provides free pre-health advising for its students at HPAC: full-time advisors who are constantly in touch with professional schools, have resources not available to students, and provide customized, individual advising. Students with professional advising gain admittance to medical schools at more than double the rate of students who self-advise.

Current, accurate information can also be found at national profession education sites like TXHES.com, AAMC.org or ADEA.org.

Can I take community college courses?
Yes, though HPAC recommends taking university sciences if possible. Ask a pre-health advisor for details.
Students beginning at community college should take advantage of Comet Connections.

What courses are required by professional schools?
Minimum prerequisites vary by school. An overview is included in the Pre-Health Starter Kit

What's the best major?
Students should major in an area about which they're passionate, then use their electives to study healthcare-related sciences and non-sciences. Seeking your personal interests is important preparation for your future career.
Professional schools regularly accept students from all majors.
Note: dental schools often ask for a substantial number of biology classes beyond their minimum requirements, making Biology an especially popular major for pre-dental.

Should I get a minor? A double major?
Minors and double majors do not especially qualify you for professional school admission, but may be appropriate if your interests are split between multiple fields.

What is HPAC?
The Health Professions Advising Center helps students prepare to enter health professions. HPAC is many students' first contact at UT Dallas and supports students throughout their training for and application to professional schools.
HPAC advisors teach classes and help students explore their interests, select classes and experiential learning, find summer experiences and internships, and revise professional school applications. Contact HPAC

What is HPE?
The Health Professions Evaluation process is a suite of support services for health professions applicants. It includes seminars, workshops, and application and essay revisions. HPAC also collects and distributes
recommendation letters for medical and dental applicants. Qualifying applicants can also receive faculty interviews and a committee evaluation that help admissions departments get to know you better. An overview is included in the Pre-Health Starter Kit.

**What is JAMP?**
A state program to help high-performing socioeconomically disadvantaged pre-med students. Interested students should inquire during their freshman year at UT Dallas and apply for JAMP at the beginning of their sophomore year.

**How do I gain healthcare experience?**
Usually by donating your time in hospitals, clinics, and community settings. You can supplement that experience by observing practitioners (shadowing) or by working in healthcare—as a pharmacy tech, EMT, Physician Scribe, clinical research assistant, etc.

**How do I gain research experience?**
Usually by identifying research projects to which you'd like to contribute, then donating your time. Approach the professor or researcher respectfully to discuss your interests and how many hours you want to commit.

**When should I take an MCAT/DAT/PCAT/OAT/GRE?**
"As soon as you're ready, but not until." Most students take an admissions exam after 2 or 3 years of college. Ask an advisor which exam you’ll need and what material will be covered. An overview is included in the Pre-Health Starter Kit.

**When do I apply for professional school?**
Traditional students apply after their junior year. Non-traditional students should ask an advisor. In 2020, over 60% of students admitted to medical schools were non-traditional.

**How will I pay for professional school?**
Financial aid is widely available, mostly in the form of low-interest government loans. Programs like the Native American Health Service and the Uniformed Services may pay for your professional school in exchange for service after you graduate.