

# PRE-HEALTH

~ DENTAL ~ MEDICAL ~ OPTOMETRY ~ PODIATRY ~ VETERINARY ~

# STUDENT GUIDE

*For Students Who Wish to Pursue  
Doctorate-Level Health Professions*



Stony Brook University

# Pre-Health Advising

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## Who is this booklet for?

This booklet is designed for those pre-health students who wish to apply to one of the doctorate-level health professions including dental, medical (allopathic (MD) and osteopathic (DO)), optometry, podiatry and veterinary schools.

### Contact Information:

Location: Stony Brook Union, Suite 105

Phone: (631) 632-7082

Email: [prehealth@stonybrook.edu](mailto:prehealth@stonybrook.edu)

Website: [www.stonybrook.edu/prehealth](http://www.stonybrook.edu/prehealth)

### Advising Hours:

For advising hours please visit our website: [www.stonybrook.edu/prehealth](http://www.stonybrook.edu/prehealth)

## What do we do?

- Provide individual and group advising for students preparing for careers in the health professions (including advice on completing prerequisites, gaining health-related and research experiences, etc).
- Provide individual advising regarding the application process for the doctorate level health professions as well as hold Current Applicant Information Sessions.
- Represent the Faculty Committee on Health Professions who advise and evaluate all Stony Brook students/alumni who wish to apply to the doctorate level health professions schools (MD, DO, Dental, Veterinary, Podiatry, Optometry).
- Maintain files of letters of recommendation for students who plan to apply to a doctorate level health profession and assist in the preparation and dissemination of their Faculty Committee evaluations.

## For Freshmen

If you are a freshman you should contact your [Undergraduate College Advisor](#) to discuss your prehealth plans.

# Health Professions

If you are interested in the health professions you should be well informed about the requirements and characteristics of several career fields and plan your undergraduate curriculum to broaden your options. You should be realistic about your own abilities and have several alternatives in mind. If you are unsure about which health career interests you most, you are encouraged to speak with your advisor. Below you will find several different health-related programs.

## Doctorate-Level Health Professions

- Allopathic Medicine (MD)\*
- Osteopathic Medicine (DO)
- Dental\*
- Optometry
- Podiatry
- Veterinary

\* Programs offered at Stony Brook University

## Other Health Programs Offered at Stony Brook University

The list below only includes the programs offered at Stony Brook University but it is by no means the only health programs you can apply to. For more information regarding these programs visit: [www.stonybrookmedicine.edu](http://www.stonybrookmedicine.edu)

Graduate Program in Public Health  
School of Health Technology & Management

- [Clinical Lab Sciences \(BS\)](#)
- [Health Care Policy & Management \(MS\)](#)
- [Health Science \(BS\)](#)
- [Occupational Therapy \(BS/MS\)](#)
- [Physical Therapy \(DPT\)](#)
- [Physician Assistant \(MS\)](#)
- [Respiratory Care \(BS\)](#)

School of Social Welfare

- [Social Work \(BS, MSW, MSW/JD, PhD\)](#)

School of Nursing

- [Nursing \(BS, MS, DNP\)](#)

## Explore Health Careers

For information on various health career options visit: [www.explorehealthcareers.org](http://www.explorehealthcareers.org)

- **Recommended Courses:**
- ADV 201:  
• Preparing for Medical School
- HAD 210:  
• Intro to Clinical Lab Sciences
- HAL 205:  
• Intro to Athletic Training
- HAS 190:  
• Intro to the Health Professions
- HAT 210:  
• Intro to Respiratory Care
- HNI 290:  
• Intro to Nursing
- HWC 210:  
• Intro to Social Work

# Planning Your Courses

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## Picking a Major

There is no preferred major for undergraduates seeking entrance to the schools of doctorate-level health professions. It is not necessary to major in a natural science. You should pursue the subject you enjoy and can perform well in.

## Pre-Health Prerequisites

Schools of the doctorate-level health professions expect that applicants will have completed the courses on the following page with a letter grade of C or higher. The courses listed are those offered at Stony Brook University. Transfer equivalents that have been evaluated are equally appropriate. Some schools and/or health professions have additional requirements.

All pre-health prerequisites should be completed by the time you apply. If you plan on graduating in four years and entering a graduate health program immediately, the pre-health prerequisites need to be completed by the end of your junior (3rd) year.

## G/P/NC and Withdrawal Options

It is important to discuss the [G/P/NC and Withdrawal options](#) for any class with an advisor before making that decision; however, this is especially important for the prehealth prerequisites. You should avoid a pattern of such remarks on your transcript. Professional schools may interpret this as indicating poor judgment, bad planning, or the inability to finish what you begin.

## When and Where?

Pre-health students take science courses for three reasons:

1. Health professions schools have science prerequisites,
2. Students need to show that they are academically strong in order to be competitive applicants
3. Students need scientific knowledge in their profession.

Keep all three of these points in mind when considering summer courses. Even though students might seek to “get prerequisites out of the way” in summer, schools might not be impressed by summer work - especially in the case of a student whose performance in science courses is weak during the academic year. For students who already have a good track record in science and mathematics courses, summer coursework can be a useful tool. A student who has a 3.5 or above grade point average and no grades below a B in science or math is a good candidate for summer coursework. Students who have not achieved this level of academic performance and students who wish to apply to selective graduate programs should consult with their pre-health advisor regarding summer courses and strategies to build a strong application.

All courses required should be taken at a four-year institution, not a community college. Transfer students who have taken pre-health requirements at a community college should have those courses evaluated, but once they are enrolled at a four-year institution they are encouraged to complete their remaining pre-health requirements there.

## Maintaining and Balancing Your Schedule

There are no substitutes for good grades. Anything which impairs your ability to earn good grades in challenging courses may ultimately cost you in terms of time and lost opportunities. Take on courses and experiences that you enjoy but that will also result in success.

# Pre-Health Prerequisites

Dental ~ Medical ~ Optometry ~ Podiatry ~ Veterinary

## One Year of English

WRT 102 fulfills half of this requirement (as well as completion of your DEC A writing requirement). Students often choose one class from EGL 191, EGL 192, EGL 193, WRT 301, WRT 302 or WRT 303 to fulfill the other half, but many English literature or Writing courses are equally appropriate. AP credits are not applicable. Speak to an advisor for more information.

## One Year of College Mathematics

Must include at least one semester of calculus. AP credits may be applicable. Speak to an advisor for more information.

Option 1: MAT 123 & MAT 125 \* Additional courses may be required for some graduate health programs.

Option 2: MAT 125 & MAT 126 Statistics is one of these recommended/required courses.

Option 3: MAT 131 & MAT 132 AMS equivalents are also acceptable.

Option 4: MAT 141 & MAT 142

## One Year of General Chemistry & Lab

Many students with AP credit for Chemistry will take the CHE 152/ CHE 143 advanced sequence. Speak to an advisor for more information.

Option 1: CHE 129/130 & CHE133 (lab) & CHE 132/CHE 134 (lab)

Option 2: CHE 131/CHE 133 (lab) & CHE 132/CHE 134 (lab)

Option 3: CHE 131 (ALEKS) & CHE 152/CHE 154 (lab)

## One Year of Biology & Lab

Two semesters of lecture and the accompanying lab courses; usually BIO 202, BIO 203, BIO 204 (lab), & BIO 205 (lab) or BIO 207 (lab). Students with a 4 or a 5 on the AP examination receive credit and are still expected to complete the above listed courses and labs.

## One Year of Organic Chemistry & Lab

Option 1: CHE 321, CHE 322 & CHE 327 (lab)

Option 2: CHE 331, CHE 332 & CHE 383(lab) or CHE 327 (lab)

## One Year of Physics & Lab

Option 1: PHY 121 & PHY 122 (lab included)

Option 2: PHY 125, PHY 126, PHY 127, PHY 133 (lab), PHY 134 (lab)

Option 3: PHY 131, PHY 133 (lab) & PHY 132, PHY 134 (lab)

## One Semester of Biochemistry

BIO 361: Biochemistry I (Required for Stony Brook School of Medicine and Dental Medicine. Also required by a growing number of graduate health profession schools.)

## Strongly Recommended for MCAT

SOC 105: Introduction to Sociology\*

PSY 103: Introduction to Psychology\*

**\*Additional/other courses in psychology or sociology can also be helpful on the MCAT**

## Additional Information

Veterinary schools often require 1 semester of microbiology with lab & biochemistry. Students should have two 10 week field experiences: one with large animals and one with small animals.

Optometry schools generally require 1 semester of statistics & 1 of psychology. Some desire 1 semester of abnormal psychology.

## Additional Coursework

Taking advanced science courses can be beneficial to your knowledge and application. Consider taking some of the following courses, only if you are confident you can do well.

- BIO 310: Cell Biology
- BIO 314: Cancer Biology
- BIO 315: Microbiology
- BIO 320: Genetics
- BIO 328: Mammalian Physiology
- ANP: 300: Human Anatomy

# Checklist

## English

WRT 102  
EGL \_\_\_\_\_

## Math

MAT \_\_\_\_\_  
MAT \_\_\_\_\_

## Chemistry

CHE 129/130  
OR  
CHE 131  
CHE 133 (lab)  
CHE 132  
CHE 134 (lab)

## Biology

BIO 202  
BIO 203  
BIO 204 (lab)  
BIO 205 (lab)  
OR  
BIO 207 (lab)

## Organic Chemistry

CHE 321  
CHE 322  
CHE 327 (lab)

## Biochemistry

BIO 361

## Physics

### Option 1

PHY 121 (with lab)  
PHY 122 (with lab)

### Option 2

PHY 125  
PHY 126  
PHY 127  
PHY 133 (lab)  
PHY 134 (lab)

### Option 3

PHY 131  
PHY 133 (lab)  
PHY 132  
PHY 134 (lab)

## Strongly Recommended for MCAT Exam

SOC 105\*  
PSY 103\*

\*Additional/other courses in psychology or sociology can also be helpful on the MCAT.

# Referrals

Biology Department  
G-05 CMM/BLL  
Phone: (631) 632-8530  
Fax: (631) 632-1347  
<http://www.stonybrook.edu/ugbiology>

Career Center  
W0550 Melville Library  
(631) 632-6810  
Fax: (631) 632-9146  
<http://www.career.sunysb.edu/>

Academic Success & Tutoring  
Various Tutoring Services  
<http://www.stonybrook.edu/tutoring>

Health Science Major  
Health Sciences Center, Level 2, Room 400  
Phone: (631) 444-6349  
Fax: (631) 444-7621  
<http://www.hsc.stonybrook.edu/shtm/index.cfm>

Psychology Department  
Psych B Rm 117  
Phone: (631) 632-7812  
Fax: (631) 632-7876  
<http://www.psychology.sunysb.edu/psychology/>

URECA- RESEARCH  
N3070 Melville Library  
Phone: (631) 632-4378  
Fax: (631) 632-4525  
<http://www.stonybrook.edu/ureca/>

# Pre-Health Advising Form

Academic and Transfer Advising Services - Stony Brook Union, Suite 105 - Stony Brook, NY 11794-3351

Name: \_\_\_\_\_ ID \_\_\_\_\_ Date \_\_\_\_\_ Advisor \_\_\_\_\_

Future Plans: \_\_\_\_\_ Current IP credits: \_\_\_\_\_ Phone # \_\_\_\_\_

Must send us updated transcripts

Fall 2013	Winter 2014	Spring 2014	Summer I 2014	Summer II 2014
	Note: max. 4 credits		Note: max. 9 credits	Note: max. 9 credits

Notes:

Fall 2014	Winter 2015	Spring 2015	Summer I 2015	Summer II 2015
	Note: max. 4 credits		Note: max. 9 credits	Note: max. 9 credits

Notes:

Fall 2015	Winter 2016	Spring 2016	Summer 2016	
	Note: max. 4 credits		Note: max. 9 credits	

Notes:

Fall 2016	Winter 2017	Spring 2017	Summer 2017	
	Note: max. 4 credits		Note: max. 9 credits	

Notes:

# Health-Related Experience

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When you are competing for a seat at a rigorous school of the health professions, you need more than good grades and “book knowledge” about the career that interests you. You need some first-hand experience of what the field of healthcare is like. Getting health-related experience is your evidence to the admissions committee that you are motivated, caring, compassionate, and sure of your career goal. Your experience can come in a number of ways but should include some patient interaction. It is best to think of your health-related experience in terms of semesters and years. The length of time you spend gaining health-related experience is a sign of your dedication.

## Volunteering

Volunteers are always needed and hospitals will try to place you in a setting that will be mutually beneficial. If necessary, call or visit several facilities to find the one that best meets your needs. There are also other ways, outside the hospital, that you can help the community. For more information on volunteering please visit:

- Pre-Health: <http://www.stonybrook.edu/prehealth>
- Career Center: <http://www.stonybrook.edu/career>
- Stony Brook University Medical Center: <http://www.stonybrookmedicine.edu/volunteer>

## Shadowing

You can shadow a doctor to see what a typical day is like for them. Start with your own doctor and ask for referrals of other doctors who may allow you to shadow them as well. Exposure to a broad range of opportunities is important; if you choose to shadow a health-care professional, it should be considered only one of your many experiences.

## Stony Brook University Opportunities

- [Academic Associates](#)
- [Geriatric Internship Program](#)
- [AIDS Peer Education Program](#)
- [Blood Bank](#)
- [C-CERT: Campus Community Emergency Response Team](#)
- [Center for Prevention & Outreach Peer Education Groups: CHILL, CHOICE, Swallow This](#)
- [Long Island State Veterans Home @ Stony Brook University](#)
- [SBVAC: Stony Brook Volunteer Ambulance Corps](#)

## Response Suicide Prevention Hotline

<http://www.responsehotline.org/>

## Other Health Related Experience

You can also get paid for getting health-related experience. Some students work as residential support counselors at places like the Long Island Head Injury Association, DDI (Developmental Disabilities Institute), the Maryhaven Center of Hope, etc.

It is a good idea to get involved with some clubs and organizations on campus that interest you as well.

AED Honor Society  
MAPS  
Minorities in Medicine  
Pre-Dental Society  
Pre-Med Society  
Pre-Nursing Society  
Pre-Physician Assistant Club



# Research Experience

## Is Research Required?

Many prehealth students, especially premeds, ask the question, "Do I need to do research to be a competitive applicant?"

- If you want to have a career in medical research, you absolutely, positively should do some research, and get letters of recommendation from your research supervisors.
- If you want to be a practitioner, a healer, a clinician, and have no desire to do research, then research is not necessary.

However, if you can fit some research experience into your schedule, it is an extremely good idea, especially if you would like to get into an MD program in the United States.

- More and more applicants to medical school report some sort of research experience
- Research experience can help you highlight your formidable intellectual skills
- Research--if you like it--might help make you a more interesting applicant
- Perhaps you would be able to get a very good letter of recommendation from your research supervisor

## Resources

If you have made the decision to do research, you have a good number of resources to help you find the experience that is right for you. You can find out about research opportunities at:

- Pre-health: <http://www.stonybrook.edu/prehealth>
- URECA (Undergraduate Research and Creative Activities): <http://www.stonybrook.edu/ureca>
- Brookhaven Laboratory: <http://www.stonybrook.edu/bnl/>
- Cold Spring Harbor Laboratory: <http://www.cshl.edu/>

Please remember that regardless of whether you want to be a dual degree (MD/PhD) medical researcher or a practitioner who conducts no research at all, it is important to have health-related experience. But above all, remember that strong academics are a basic and first priority for which there is no substitute. You want to make the most of your education by studying hard, mastering your material, and learning the reasoning skills that you need to be a life-long learner and problem solver.

**URECA Contact Info**  
N3070 Melville Library  
Phone: (631) 632-4378  
Fax: (631) 632-4525

Did you know  
that research  
can be done  
in every major??  
It does not need  
to be in the  
natural sciences.

# Applicant Information

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Applicants traditionally apply during the summer after their junior year. Students should have completed the prerequisites listed on page 4 by this time. However, many students will wait until after their senior year. You are encouraged to discuss your plan with an advisor.

## The Faculty Committee on Health Professions

Stony Brook University has a faculty committee which will evaluate any student applying to medical, dental, optometry, podiatry, or veterinary school and write a Committee Letter Evaluation on their behalf. This committee is made up of a variety of faculty members throughout Stony Brook University.

## Committee Letter Evaluation

The Committee Letter Evaluation is prepared on the basis of an interview; an Autobiographical Packet that asks for a personal statement and details about the student's undergraduate courses and activities; a minimum of three letters of recommendations, admission test scores and transcripts from all colleges attended. This letter is typically written in the year prior to the student's planned acceptance (most often at the end of the junior year). Students should stop by the Pre-Professional Advising office for more information regarding the committee letter.

## Letters of Recommendation

Letters of recommendation are an important part of the application process. Students are encouraged to ask for letters as soon as possible. You can start asking for letters now and we will keep them on file for you until you are ready to apply. Students should begin in the freshman year to request evaluations from their instructors, using the recommendation forms available on the pre-health website: <http://www.stonybrook.edu/prehealth>

Always remember to ask for letters well ahead of deadlines. It is courteous to give the recommender at least three weeks to complete and mail the letter to the Pre-Professional Advising office and to provide them with a copy of your resume and a stamped envelope.

## Who should you ask for letters?

The most basic and important thing that you can do is to get to know some of your professors. The best opportunity you have for accomplishing this task is your professors' office hours.

List of potential recommendation writers:

- a professor in your major department
- a professor for a large prehealth course (preferably 2)
- a professor who has supervised research that you worked on (Keep in mind that if you are interested in an MD/PhD program, you should get two or more research letters.)
- a professor who taught you a humanities or literature course
- a professor from a course that you just plain enjoyed and did well in (at schools you transferred from too!)
- doctors, dentists, optometrists, veterinarians and other health care professionals

**Committee Letter Packet**  
Your Committee Letter Packet includes your Committee Letter Evaluation and at least 3 letters of recommendation you have on file with our office.

**\*\*Please Note**  
If you are beginning to accumulate letters of recommendation for your application to colleges of medicine, dentistry, optometry, podiatry, or veterinary medicine, these letters cannot be used for applying to other programs. They can be sent to graduate schools of the health professions only.

## Entrance Examinations

You should try to take your admissions test (DAT, GRE, MCAT, OAT) in the spring or summer. Some students choose to take the test later because they hope that they will get a higher score with more study time. A high score is important, but you should remember your application deadlines!

- **DAT- Dental Admission Test:** All US Dental schools require this exam. You will need to have completed biology, general chemistry and organic chemistry. This test is administered year round.
- **GRE- Graduate Record Examination:** You may need to take this test if you are applying to Podiatry or Veterinary Schools. This test will measure verbal reasoning, quantitative reasoning, critical thinking and analytical writing and it is not related to a specific area of study. (You do not have to complete your Pre-Health prerequisites to sit for this exam.) This test is administered year round.
- **MCAT- Medical College Admission Test:** All US medical schools require this exam. You will need to have completed all of your Pre-Health prerequisites before sitting for the exam. Most of the exams take place between April and September, however, there are a few test dates in January and March.
- **OAT- Optometry Admission Test:** All Optometry schools require this exam. You will need to have completed all of your Pre-Health prerequisites before sitting for this exam. This test is administered year round.

### Test Prep

There are a variety of companies that offer test prep including Kaplan and Princeton. Many of them offer discounts to Stony Brook Students.

## Helpful Resources

### Websites

#### MD Allopathic Schools:

- AAMC: Association of American Medical Colleges  
<http://www.aamc.org/students>

#### DO Osteopathic Schools:

- AACOM: American Association of Colleges of Osteopathic Medicine  
<http://www.aacom.org>

#### Dental Schools:

- ADEA: American Dental Education Association  
<http://www.adea.org>

#### Podiatry Schools:

- AACPM: American Association of Colleges of Podiatric Medicine  
<http://www.aacpm.org/>

#### Optometry Schools:

- ASCO: Association of Schools and Colleges of Optometry  
<http://www.opted.org>

#### Veterinary Schools:

- AAVMC: Association of American Veterinary Medical Colleges  
<http://www.aavmc.org/>

The Student Doctor Network

- <http://www.studentdoctor.net/>

Explore Health Careers

- [www.explorehealthcareers.org](http://www.explorehealthcareers.org)

### GPA Calculator

- Pre-Professional Advising  
<http://www.stonybrook.edu/prehealth>  
Click on GPA Calculator

### Books

- MSAR: Medical School Admission Requirements Guide
- Osteopathic Medical School Information Book
- ADEA Official Guide to Dental Schools
- VMSAR: Veterinary Medical School Admission Requirements

### Additional Books

- Essays that will get you into Medical School
- Med School Confidential
- The Medical School Interview



Faculty Committee on Health Professions

Academic and Transfer Advising Services  
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