

Health Professions Careers Overview

General Health Careers Information

Learn about health professions careers, salaries, job outlook, hot topics and connect with professionals through the following websites:

- <http://www.Explorehealthcareers.org>

Physicians

- *Allopathic* medical schools award the M.D. degree
- *Osteopathic* medical schools award the D.O. degree
- Allopathic and osteopathic physicians receive very similar training. Osteopathic medicine tends to emphasize primary care and its curriculum also includes training in manipulative therapy in order to treat musculoskeletal disorders.
- Both types of physicians work in private practices, clinics, hospitals, etc. and their similarities are far greater than their differences.
- Both programs are four years of medical school plus residency requirements
- Association of American Medical Colleges <http://www.aamc.org>
- American Association of Colleges of Osteopathic Medicine: <http://www.aacom.org>

Dentistry:

- Diagnosis, treatment and prevention of conditions pertaining to the oral-maxillofacial cavity.
- Dental schools are four years with additional specialty training if needed.
- American Association of Dental Schools <http://www.adea.org>

Optometry:

- Diagnosis and treatment of conditions of the human eye and visual system
- Viewed as primary care providers to patients seeking ocular or visual care and prescribes medications, prescribes eyeglasses, contact lenses, and other visual aids, diagnosis abnormal eye diseases, provide pre- and post-surgical care of cataracts, refractive laser treatment, retinal problems and other conditions
- Consults with ophthalmologists for additional treatment
- Optometry schools are four-year programs. All states require a license to practice.
- Association of Schools and Colleges of Optometry <http://www.opted.org>

Pharmacy:

- Pharmacists assure appropriate use of medications; dosage is correct, patients understand the proper way to use the medication, and information provided by subscriber is correct
- Pharmacists are employed at: Hospitals and other institutional settings, managed care facilities, the pharmaceutical industry, academic settings, local pharmacies, military and the FDA
- Doctor of Pharmacy degree is a six-year program: 2 years pre-professional study and 4 years of professional study
- Learn about the application process and link to pharmacy schools: <http://www.pharmcas.org>

Physician Assistant:

- Physician assistants practice medicine with physician supervision
- Conduct physical exams, diagnose and treat illnesses, order and interpret tests, counsel on preventive health care, assist in surgery, and in most states can write prescriptions
- Program curriculum is 111 weeks, compared with 155 weeks for medical school; followed by clinical rotations in internal medicine, family medicine, surgery, pediatrics, obstetrics and gynecology, emergency medicine, and geriatric medicine
- American Academy of Physician Assistants <http://www.aapa.org>

Podiatry:

- Diagnoses of foot ailments, such as tumors or ulcers, fractures, skin or nail diseases, and congenital or acquired deformity. Treats deformities, such as flat or weak feet and foot imbalance, using mechanical and electrical method;
- American Association of Colleges of Podiatric Medicine <http://www.aacpm.org>
- American Podiatric Medical Association <http://www.apma.org>

Veterinary:

- Doctors of Veterinary Medicine are medical professionals whose primary responsibility is protecting the health and welfare of animals and people
- Veterinarians diagnose and control animal diseases, treat sick and injured animals, prevent the transmission of animal diseases and advise owners on proper care
- Involved in wildlife preservation and conservation and public health of the human population.
- Association of American Veterinary Medical Colleges: <http://www.aavmc.org>

Family Nurse Practitioner

- Nurse Practitioners are registered nurses with advanced education and clinical training.
- There are some FNP programs that do not require an RN to be admitted. Through these programs the graduate student earns an RN prior to the FNP coursework.
- American Academy of Nurse Practitioners: <http://www.aanp.org>

Chiropractic Medicine

- Doctors of Chiropractic are physicians who have completed a graduate degree at a chiropractic college
- Chiropractors utilize a holistic approach to healthcare with a focus on the patient's overall well being.
- American Chiropractic Association: <http://www.amerchiro.org/>

Allied Health – a sample list

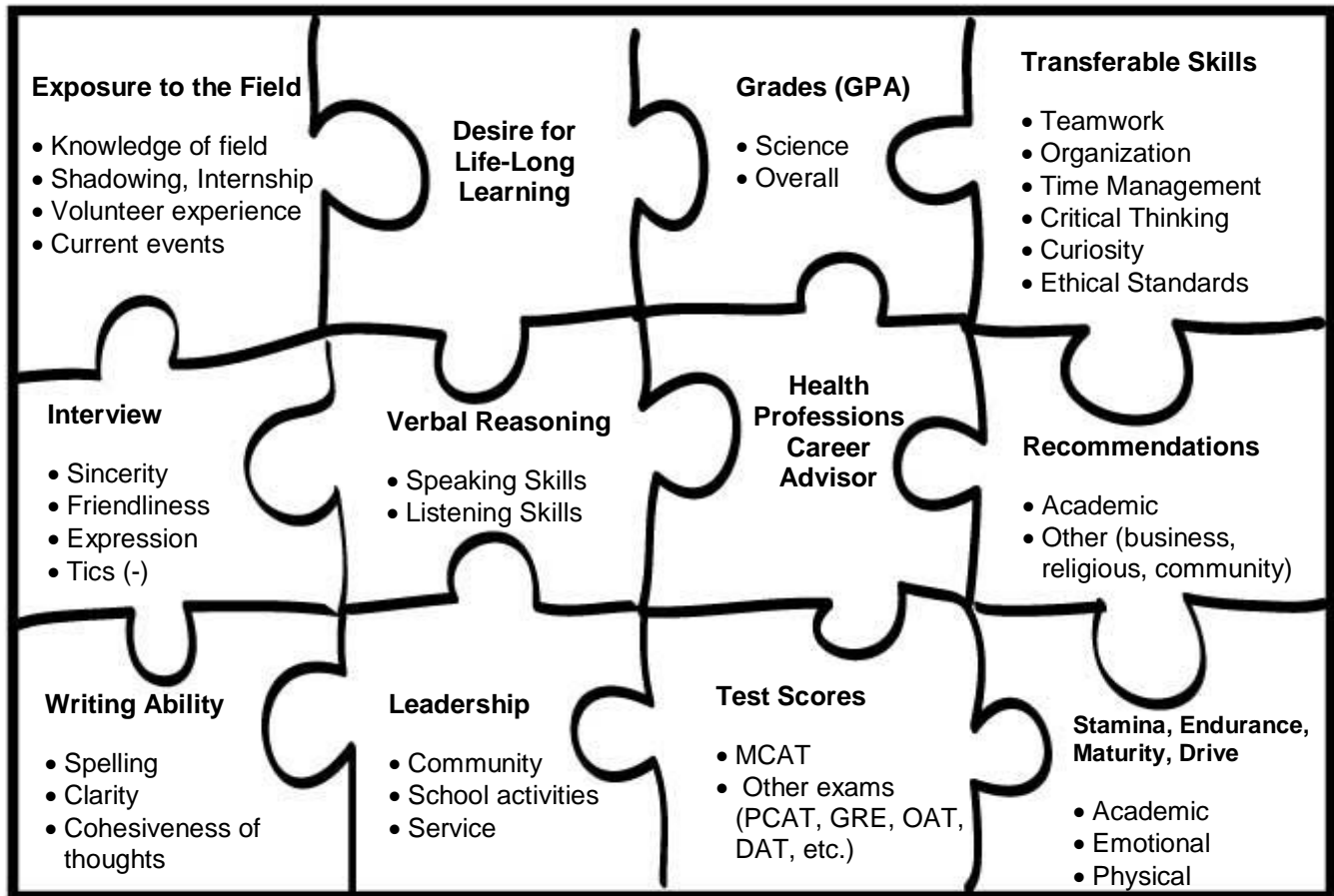
- | | |
|---|--|
| <ul style="list-style-type: none"> • Anesthesiologist Assistant • Athletic Trainer • Cardiovascular Technologist • Clinical Exercise Specialist • Cytotechnologist • Diagnostic Medical Sonographer • Electroneurodiagnostic Technologist • Emergency Medical Technician- Paramedic • Health and Fitness Specialist • Health Information Administrator/technician | <ul style="list-style-type: none"> • Kinesiotherapist • Medical Assistant • Medical Illustrator • Ophthalmic Medical Technician/Technologist • Orthotist/Prosthetist • Perfusionist • Respiratory Therapist • Specialist in Blood Bank Technology • Surgical Assistant • Surgical Technologist |
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Prepared by Office of Health and Legal Professions at the University of Maine utilizing information provided by the professional organizations associated with each career.

Career Center
3rd Floor Memorial Union, 207.581.1359

Health Careers Puzzle

The importance of being well-rounded; without any one piece, the picture (your application) is incomplete



At UMaine, we offer:

- Admissions Test Assistance – Kaplan Test Prep
- Multitude of clubs and organizations on campus to get involved
- Job shadowing opportunities through out Maine Mentor Program
- Volunteer opportunities through the Bodwell Center, local healthcare facilities, and more
- Health Professions Committee – letters of recommendations
- Assistance with personal statement

Capital University, adapted from University of Illinois, 2010

The University of Maine does not discriminate on the grounds of race, color, religion, sex, sexual orientation, including transgender status and gender expression, national origin, citizenship status, age, disability, genetic information, or veterans status in employment, education, and all other programs and activities. The following person has been designated to handle inquiries regarding nondiscrimination policies: Director, Office of Equal Opportunity, 101 North Stevens Hall, 207.581.1226.

Example of a Possible Pre-Health Student Puzzle

This is an example of a junior or senior pre-health student

It is important to understand that not every pre-health student's "puzzle" or application is going to look the same. There is no such thing as a perfect puzzle!

<ul style="list-style-type: none"> • 30 hours of volunteering at Dirigo Pines • 100 hours of volunteering at EMMC • 75 hours for UVAC • 20 hours of volunteering at Bangor Humane Society • 100 hours for Front Desk position at Optometry Office 	<p>Job Shadowed:</p> <p>Physician's Assistant</p> <p>Family Physician</p> <p>Dental Assistant</p>	<p>Letters of Recommendations</p> <ul style="list-style-type: none"> • 3 science professors • 1 health professional • Research supervisor • Honors professor
<p>Member of Health Professions Club</p> <p>Treasurer of Operation H.E.A.R.T.S.</p> <p>Captain of Women's Rugby Team</p>	<p>Major: Psychology</p> <p>Minor: Pre-Med</p> <p>Minor: Spanish</p>	<p>50 hours of research</p>
<p>3.5 GPA</p>	<p>502 MCAT Score</p>	

Undergraduate Concentration in Pre-Medical Studies for Biology and Zoology

This concentration is intended for students preparing for a career in medicine or one of the other health professions (dentistry, optometry, osteopathy, physician assistant, pharmacy, podiatry, veterinary medicine and other health-related fields). Students completing this concentration will be fully prepared for advanced studies in these fields. In addition to the required science and mathematics courses, the concentration also includes general education courses that are desired by many medical schools. The concentration allows for considerable choice in courses and provides valuable guidance to students and their advisors with regard to course selection in their major and in general education requirements. Students in the pre-medical studies concentration must meet all of the requirements for the BIO-BS or ZOL-BS (see the undergraduate catalog)

Specific requirements:

1. Affiliated Sciences and Math

Choose CHY 251 & 253 and CHY 252 & 254 to meet the organic chemistry requirement.

2. Area I. Cell and molecular biology

Choose at least one of the following courses:

If only one course is chosen, it must be BMB 280 or BIO 480.

BIO 336 Developmental Biology

BIO 480 Cell Biology

BIO 483 Cell Biology Lab

BMB 280 Introduction to Molecular and Cell Biology

BMB 300 General Microbiology

BMB 305 General Microbiology Lab

3. Area II. Genetics

BIO 350 Concepts & Applications of Genetics

4. Area III. Physiology

Choose at least one of these courses:

BIO 377 Medical Physiology

BIO 378 Medical Physiology Lab

BIO 480 Cell Biology

BIO 483 Cell Biology Lab

BMB 440 Immunology

BMB 441 Immunology Lab

5. Area IV. Biodiversity

Choose at least one of these courses:

BIO 329 Vertebrate Biology and BIO 331 Vertebrate Biology Lab

BIO 335 Human Anatomy

6. Area V. Ecology and Behavior

Free choice among the Area V courses on the BIO-BS and ZOL-BS checklists

7. Capstone

Choose one of these courses:

BIO 388 Research Capstone in Biology – highly recommended

BIO 431 Emerging Infectious Disease

BIO 438 Morphogenesis in Development and Disease

BIO 450 Histology

BIO 480 and 483 Cell Biology & Lab (both must be taken)

HON 499 Honors Thesis

8. Other required courses

BMB 322 Biochemistry and BMB 323, Biochemistry Laboratory¹

PSY 100 General Psychology²

SOC 101 Introduction to Sociology²

One of the following courses is required, with ENG 315 being the preferred course:

ENG 315 Research Writing in the Disciplines³ (preferred)

or ENG 317 Business and Technical Writing³

or ENG 201 Strategies for Writing across Contexts³

Literature course⁴: an English literature course at the 200 level or higher

PHI 235 Biomedical Ethics⁵ (preferred)

(PHI 100, PHI 230, PHI 231 or PHI 233 are also acceptable if unable to register for PHI 235)

Footnotes:

¹Required by medical schools. If CHY 251/253 and 252/254 have been completed, BMB 323 can count as one of the four labs required in Areas I-V.

²Satisfies general education Social Contexts and Institutions.

³Satisfies general education Writing Intensive. Not required for students completing HON 211 and HON 212.

⁴Satisfies a general education area depending on the course chosen. Not required for students completing HON 211 and 212.

⁵Satisfies general education requirements for Ethics, Western Cultural Tradition, and Social Contexts and Institutions.

Recommended courses

INT 200 Orientation to Health Professions

BIO 208 Anatomy and Physiology (if BIO 377/378 and BIO 335 are not taken)

Notes

a. Inclusion of BIO 480, Cell Biology, is highly recommended. This course can only count in one area.

b. Physician assistant and pharmacy schools require two semesters of anatomy and physiology. This requirement can be met by combining BIO 335, Human Anatomy and BIO 377, 378 Medical physiology and lab OR by combining BIO 208, Anatomy and Physiology, and BIO 377, 378 Medical physiology and lab. Check with the Health Professions Specialist for details of the program you want to pursue.

c. Students pursuing this concentration may want to consider a minor in Neuroscience, Chemistry, Psychology, or Business.

Adapted from The University of Maine Undergraduate Program Catalog at catalog.umaine.edu

Minor in Pre-Medical Studies for All Other Majors

The following courses in science and mathematics are required for admission to most medical schools, and thus for the minor in Pre-medical Studies. Students must not make substitutions in this list. Students declaring a minor in Pre-medical Studies should consult with their academic advisor and with the Health Professions advisor regarding completing other major requirements and the General Education Requirement. All candidates should consult specific programs at medical schools and other graduate institutions of interest regarding additional requirements, which vary among institutions.

Students in majors with extensive overlap with the minor in Pre-Medical Studies are not eligible for this minor. These majors include, but are not limited to, Animal and Veterinary Sciences (Pre-Veterinary Concentration), Biochemistry, Bioengineering, Biology, Botany, Food Science and Human Nutrition (Food Science Concentration), Microbiology, Molecular and Cellular Biology, and Zoology.

- 4 BIO 100, Basic Biology
- 4 BIO 200, Biology of Organisms
- (OR)
- 4 BIO 208, Anatomy & Physiology
- 4 BMB 322 and 322L, Biochemistry and laboratory
- 4 CHY 121 and 123, Introduction to Chemistry and laboratory
- 4 CHY 122 and 124, Molecular Basis of Chemical Change and laboratory
- 5 CHY 251 and 253, Organic Chemistry I and laboratory
- 5 CHY 252 and 254, Organic Chemistry II and laboratory
- 4 MAT 126, Calculus I
- 8 PHY 111 and 112, General Physics I and II, *or*
- PHY 121 and 122, Physics for Engineers and Physical Scientists I and II
- 4 INT 200, *Orientation to Health Professions (OPTIONAL)*

MINOR WILL BE CERTIFIED BY SCHOOL OF BIOLOGY AND ECOLOGY

Accelerated and Special Programs

University of New England College of Osteopathic Medicine Agreement (UNECOM)

To foster increased training of physicians for Maine, the University has entered into an agreement with the University of New England College of Osteopathic Medicine (UNECOM), in Biddeford, ME. This agreement allows very highly qualified Maine high school students to enter an accelerated program resulting in the DO degree (Doctor of Osteopathic Medicine). Accepted students become candidates for reserved slots in the UNECOM program, and may enter the four-year graduate medical program after only three years of undergraduate study. Acceptance to UNECOM is contingent upon maintenance of an excellent undergraduate academic record while at UMaine. The School of Biology and Ecology offer an Accelerated Binary Degree Program; where students participating in the program are required to major in Biology and to complete a specific curriculum covering three years and one summer of coursework at UMaine. This includes all general-education requirements except the capstone experience (which is completed at UNECOM). Upon successful completion of the initial year at UNECOM, students are awarded a BS from the University of Maine. The DO is awarded by UNECOM upon successful completion of three additional years of medical study. Interested candidates should contact: The Health Professions Office at the University of Maine.

3+4 Agreement with New England College of Optometry (NECO)

This agreement allows very highly qualified students to enter an accelerated program resulting in the OD (Doctor of Optometry). Accepted students become candidates for reserved slots in the New England College of Optometry program, and may enter the four-year graduate optometry program after only three years of undergraduate study. Acceptance to New England College of Optometry is contingent upon maintenance of an excellent undergraduate academic record while at UMaine. Upon successful completion of the initial year at New England College of Optometry, students are awarded a BS from the University of Maine. The OD is awarded by New England College of Optometry upon successful completion of three additional years of optometry study. Interested candidates should contact the UMaine Health Professions Office for application materials.

3+3 Agreement with Logan University of Chiropractic

The University of Maine and Logan University of Chiropractic have joined together in order to offer students an opportunity to complete their undergraduate and doctor of chiropractic degrees in less time. Students complete 90 semester hours of credits at the University of Maine as a biology or kinesiology (KPE) major. All students who successfully complete the Pre-Chiropractic Program with a cumulative GPA of 3.25 or higher and meet all other admissions criteria shall be accepted at Logan University of Chiropractic. Upon completion of specified course work at Logan University of Chiropractic, students will be awarded their B.S. in Biology or KPE degree from the University of Maine.

Tufts Maine Track Program

Tufts University School of Medicine (TUSM), in partnership with Maine Medical Center (MMC) in Portland Maine, offers a "Maine Track" for applicants who are interested in a unique, innovative curriculum that will offer clinical training experiences in Maine and expose medical students to the unique aspects of rural practice as well as training in a major tertiary medical center.

Tufts Maine Track Early Assurance Program

Tufts University School of Medicine (TUSM) also offers a Maine Track Early Assurance Program for eligible students at participating institutions in the state of Maine. The undergraduate schools currently participating in this program are: Bates College, Bowdoin College, Colby College and all University of Maine campuses. Students apply to this program during their sophomore year. Applying to this program does not preclude them from later applying regular decision to Tufts or other medical schools. Historically, UMaine students have found success in securing these limited seats.