Preparing for Professional Study

High school is the perfect time to begin thinking about college and your future, and we are here to help every step of the way! This guide will prepare you for pursuing the academic credentials required for professional programs. Admittance to these programs is highly competitive, and many careers—such as those in law and health care—are limited to those who seek advanced study beyond the bachelor’s degree.

At SUNY you’ll find a variety of programs and majors, across all 64 campuses, that provide excellent preparation for virtually any professional program. If you are considering a career in a profession requiring graduate study, select an academic major that will help you adequately prepare and provide multiple career paths. Among the benefits of attending a SUNY campus are focused preprofessional and major advising, as well as student clubs, observation experiences, experiential learning and community service opportunities.

ARCHITECTURE

Architecture is the art and science of designing and building physical structures, with regard to aesthetic effect, that requires specialized training at an accredited school. It often includes design or selection of furnishings and decorations, supervision of construction work, and the examination, restoration, or remodeling of existing buildings. Architects are also responsible for the health and safety of the users of their spaces and must obtain a professional license from the state in which they practice.

Professional Architecture Programs at SUNY
- University at Buffalo, MArch/MS
- College of Environmental Science & Forestry, MLA/MS
- NYS College of Agriculture and Life Sciences at Cornell University, MLA/MP

Undergraduate Preparation
Qualities that future architects share are strong drawing-sketching-drafting skills, an excellent sense of design, ability to visualize a project, good communication skills, solid technical abilities, problem-solving skills, ability to collaborate, business sense and passion for the work. There are three pathways to pursuing your SUNY professional building or landscape architecture degree, and they include the following:

- Earning a five-year Bachelor of Architecture degree from a program accredited by the National Architectural Accrediting Board (NAAB);
- Obtaining a four-year undergraduate pre-professional degree focused on architecture or related studies and then acquiring a two-year Master of Architecture degree from an NAAB-accredited program;
- Completing an accredited three- or four-year Master of Architecture program (for students who have earned undergraduate degrees in other disciplines).

Helpful Resources
The American Institute of Architects (AIA) at www.aia.org

DENTISTRY

The Doctor of Dental Surgery (D.D.S.) and Doctor of Dental Medicine (D.M.D) are the degrees granted by American dental schools. Dental schools consider many factors when deciding which applicants to admit to their programs, and many utilize “holistic admissions” strategies to evaluate applicants. Examples of holistic factors include experiences, personal attributes and metrics (such as grades and Dental Admission Test scores).

Professional Dentistry Programs at SUNY
- University at Albany, 3+4 with Boston University Goldman School of Dental Medicine*
- University at Buffalo, DDS
- Stony Brook University, DDS

Undergraduate Preparation
The majority of students major in the sciences because of the strong science preparation required by most dental programs. Although a degree in a science major is not required, courses in general biology, general and organic chemistry, physics, statistics/calculus, communication, social sciences and humanities are recommended. Depending on the program, additional courses in biochemistry, microbiology, genetics, cell biology and anatomy may be required. The most successful candidates for admission not only demonstrate academic potential, but also show through their actions and experiences that they are motivated, compassionate and have the potential to be caring, ethical health care providers.

Helpful Resources
American Dental Education Association (ADEA) at www.adea.org

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LAW

The Juris Doctor (JD) degree is required to practice law in the United States. It is typically a three-year full-time program offered by law schools. A bachelor’s degree is required for admission to a JD program. The Law School Admission Test (LSAT) is also required by most U.S. law schools and assesses reading comprehension, logical and verbal reasoning proficiencies.

Professional Law Programs at SUNY

- University at Albany, 3+3 with Albany Law School
- University at Buffalo, JD
- NYS College of Human Ecology at Cornell University, 3+2 Dual PhD/JD with Cornell University
- Stony Brook University, 1.5+2.5 with Touro College

Undergraduate Preparation

Law schools seek students who excel in writing and speaking skills and who demonstrate the ability to think analytically, logically and creatively. Preparation for law school should include a blend of interdisciplinary liberal arts study, which emphasizes the communication of ideas, social sciences, business and economics, philosophy and logic, psychology and sociology and the art and science of law and government. The American Bar Association recommends that students major in an academic subject that interests them as law schools discourage any specific pre-law or legal studies major.

Helpful Resources

Law School Admission Council (LSAC) at www.lsac.org

MEDICINE

Most students will enter a Doctor of Medicine (MD) or Doctor of Osteopathic Medicine (DO) program upon completion of a bachelor’s degree. Medical schools are impressed by students with diverse interests, and the Association of American Medical Colleges recommends volunteering at a local hospital or clinic to gain practical experience in the health professions. A well-rounded sampling of extracurricular activities or work experiences, both related and unrelated to medicine, will help broaden an applicant’s knowledge and development. The Medical College Admission Test (MCAT) is required by most U.S. medical schools and assesses problem-solving, critical thinking, and knowledge of science concepts and principles pre-requisite to the study of medicine. Scores are reported in physical sciences, verbal reasoning, and biological sciences.

Professional Medical Programs at SUNY

- University at Buffalo, MD
- SUNY Downstate Health Sciences University, MD
- Stony Brook University, MD
- Upstate Medical University, MD

Undergraduate Preparation

Many majors will prepare students for professional study in medicine. Medical school core course requirements typically include one year each of biology and physics with laboratory; one year of mathematics, including a course in statistics; two years of chemistry with laboratory including one year of general chemistry and one year of organic chemistry or a combination of organic and biochemistry; and one year of English and/or writing. Many students choose to major in the physical sciences. However, you may also select a non-science major – provided you fulfill all of the pre-requisite coursework.

Helpful Resources

Association of American Medical Colleges at www.aamc.org and www.aspiringdocs.org

NURSE PRACTITIONER

A nurse practitioner (NP) is a registered nurse (RN) who has completed advanced education (a minimum of a master’s degree) regarding the diagnosis and management of common medical conditions. The core philosophy of the field is individualized care. Nurse Practitioners and Doctors of Nursing Practice (DNP) place high priority on prevention, wellness and education and provide a broad range of health care services to patients of all ages. Most NPs specialize in a particular field of medical care, and there are as many types of NPs as there are medical specialties.

Professional Nurse Practitioner Programs at SUNY

- Binghamton University, DNP
- University at Buffalo, DNP
- SUNY Downstate Health Sciences University, DNP
- Stony Brook University, MS/DNP
- SUNY Polytechnic Institute, DNP
- Upstate Medical University, DNP

Undergraduate Preparation

Licensed NPs must first complete registered nurse (RN) education and training. RN programs vary and include several options:

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**NURSE PRACTITIONER (CONTINUED)**

An associate degree in nursing (ADN); a bachelor of science degree in nursing (BSN); or completion of a diploma program with direct patient care for acutely or chronically ill patients. Associate degrees are generally offered at community colleges and take 2 to 3 years to complete. BSN programs, offered at many SUNY colleges and universities, usually take 4 to 5 years to complete, and diploma programs, administered in hospitals may be completed in 2 to 3 years. Depending on the program attended, some NP requirements may be fulfilled while completing the RN degree.

**Helpful Resources**
- National Council of State Boards of Nursing (NCSBN) at www.ncsbn.org
- American Academy of Nurse Practitioners (AANP) at www.aanp.org

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**OCCUPATIONAL THERAPY**

Occupational therapists provide treatments to develop, recover or maintain the daily living and work skills of people with a physical, mental or developmental condition. They work with people across the lifespan. Common occupational therapy services include helping children with disabilities to participate fully in school and social situations, helping people recovering from injury to regain skills, and providing support for older adults experiencing physical and cognitive changes.

**Professional Occupational Therapy Programs at SUNY**
- University at Albany, 4+2 with Sage Graduate School*
- University at Buffalo, MS
- SUNY Downstate Health Sciences University, MS
- Oneonta 4+2, with Sage Graduate School*
- Stony Brook University, MS

**Undergraduate Preparation**

Recommended undergraduate courses include general biology, general physics, anatomy and physiology, psychology (general, psychology of child development, abnormal psychology), statistics and sociology/anthropology (aging or lifespan development). Additional requirements vary by program, and may include medical terminology, ethics/philosophy, communication, exercise physiology/kinesiology, research methods and chemistry.

**Helpful Resources**
- American Occupational Therapy Association (AOTA) at www.aota.org

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**OPTOMETRY**

Doctors of Optometry (OD) are primary eye and health care providers who examine, diagnose, treat and manage disorders of the eye and visual system as well as identify any ocular manifestations of systemic diseases. As important members of the health care team, they provide care to patients of all ages and comprise the largest eye care profession in the country. Doctors of Optometry practice in a variety of settings, including private practices, multidisciplinary practices, hospitals, teaching institutions, community health care centers and the ophthalmic industry. SUNY is home to New York State’s only College of Optometry.

**Professional Optometry Programs at SUNY**
- Oneonta 3+4, with College of Optometry*
- Oswego 3+4, with College of Optometry*
- Plattsburgh 3+4, with College of Optometry*
- Potsdam 3+4, with College of Optometry*

**Undergraduate Preparation**

As with most pre-professional programs, Pre-Optometry is not a major. It is a concentration of courses that provide a foundation for admission to optometry school. Admission to optometry school depends largely on the Optometry Admission Test scores, as well as a background in math and science. Students are encouraged to pursue courses in the liberal arts, including sciences, humanities and social sciences. Biological science, general chemistry, organic chemistry, physics, mathematics, English and general psychology are generally required for admission to most optometry schools.

**Helpful Resources**
- Association of Schools and Colleges of Optometry (ASCO) at www.opted.org

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OSTEOPATHIC MEDICINE
Osteopathic medicine provides a holistic approach to health care, and a doctor of osteopathy has a fundamental belief in the power of the body to heal itself. Osteopathic physicians can choose any specialty, prescribe drugs, perform surgeries, and practice medicine anywhere in the United States.

They focus on direct patient contact, working side by side with other physicians and health care providers.

Professional Osteopathic Medicine Programs at SUNY
› Fredonia 3+4, with Lake Erie College of Osteopathic Medicine*
› Geneseo 3+4, with NYIT College of Osteopathic Medicine*
› New Paltz 3+4, with NYIT College of Osteopathic Medicine*, Touro College of Osteopathic Medicine*
› Old Westbury 3+4, with NYIT College of Osteopathic Medicine*

Undergraduate Preparation
Colleges of osteopathic medicine look for well-rounded students who have the potential to be excellent, compassionate, humanistic physicians. Medical schools look at the whole applicant, not simply GPAs or MCAT scores. Students who want to be physicians, who look beyond symptoms to find and treat the cause of disease, illness and injury, and who want to work in partnership with their patients to help each person achieve her or his highest possible level of health, are a good match for osteopathic medical education. Osteopathic medical students take courses in anatomy, physiology, microbiology, histology, clinical skills, physician/patient communication, pharmacology, major systems of the body (cardiovascular, respiratory, genitourinary, etc.), osteopathic principles and practices and osteopathic manipulative medicine.

Helpful Resources
American Association of Colleges of Osteopathic Medicine (AAOCM) at www.aacom.org

PHARMACY
The Doctor of Pharmacy (PharmD) is the standard degree for pharmacists. It requires six years of study, with the first two years often considered as pre-pharmacy. The pre-pharmacy program generally includes a set of courses that prepares students for admission to the professional PharmD program following a minimum of two or three years of undergraduate pre-pharmacy coursework.

Professional Pharmacy Programs at SUNY
› Binghamton University, PharmD
› University at Buffalo, PharmD
› Fredonia 3+4, with Lake Erie College of Osteopathic Medicine Pharmacy School*

Undergraduate Preparation
Among the factors considered for admission to a PharmD program are grades obtained in the pre-pharmacy courses (especially for the required pre-pharmacy science and math courses), communication skills, knowledge of the profession, critical thinking skills and standardized test scores.

To best prepare for a PharmD program, students should take courses in biology, general and organic chemistry, physics, statistics, calculus, psychology, communication and microbiology. Depending on the program, additional courses may include anatomy and physiology, human physiology, economics, social sciences, humanities and computer science.

Helpful Resources
Accreditation Council for Pharmacy Education (ACPE) at www.acpe-accredit.org
American Association of Colleges of Pharmacy (APhA) at www.aacp.org

PHYSICAL THERAPY
A Doctor of Physical Therapy (DPT) is a health care professional who diagnoses and treats individuals of all ages, from newborns to the elderly, with medical problems or other health-related conditions, illnesses, or injuries that limit their ability to move and perform functional activities. Physical therapy is performed by a therapist, with some services provided by a physical therapist assistant (PTA). Physical therapists and occupational therapists often work together to provide treatment for patients. Among the many physical therapy specialties are sports, wound care, EMG, cardiopulmonary, geriatrics, neurologic, orthopaedic and pediatrics. DPTs practice in many settings such as outpatient clinics or offices, health and wellness clinics, rehabilitation hospitals, skilled nursing facilities, extended care facilities, private homes, education and research centers, schools, hospices, fitness centers and sports training facilities.

Professional Physical Therapy Programs at SUNY
› University at Albany 4+3, with Sage Graduate School*
› Brockport 3+3, with Upstate Medical University*
› University at Buffalo, DPT
› SUNY Downstate Health Sciences University, BS/DPT
› Environmental Science & Forestry 3+3, with Upstate Medical University*
› Geneseo 3+3, with Upstate Medical University*
› Oneonta 3+3, with Upstate Medical University*

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**PHYSICAL THERAPY (CONTINUED)**

- Oneonta 4+3, with Sage Graduate School*
- Oswego 3+3, with Upstate Medical University*
- Stony Brook University, DPT
- Upstate Medical University, DPT

**Undergraduate Preparation**
The suggested pre-physical therapy curriculum includes courses in anatomy, physiology, biology (general, cell, genetics), general chemistry, physics, calculus/statistics, exercise science, nutrition, psychology and communication. Depending on the program, other recommendations include medical terminology, exercise physiology/kinesiology, biochemistry, computer science and microbiology.

**Helpful Resources**
- American Physical Therapy Association (APTA) at www.apta.org
- Commission on Accreditation in Physical Therapy Education (CAPTE) at www.capteonline.org

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**PHYSICIAN ASSISTANT**

Physician Assistants (PA) practice medicine as part of a team with physicians and are employed in all health care settings and in every medical and surgical specialty. Among their duties are obtaining patient histories, performing physical examinations, diagnosing illness, determining treatment plans, ordering and interpreting laboratory, diagnostic and therapeutic procedures and prescribing medication. They also provide patient education, counseling and follow-up care.

**Professional Physician Assistant Programs at SUNY**

- SUNY Downstate Health Sciences University, MS
- Stony Brook University, MS
- Upstate Medical University, MS

**Undergraduate Preparation**
PA program applicants often complete two years of college courses in the basic and behavioral sciences. Common pre-requisites include general biology, general and organic chemistry, anatomy and physiology, general psychology, statistics, sociology, microbiology and communication. Depending on the program and its focus, others may include algebra, genetics, cell biology and social and behavioral sciences. Although some programs allow entry directly from high school, most students have a bachelor’s degree and health care experience before entering a PA program. Patient care experience is a major part of the application to PA programs - programs require 1,000 to 3,000 plus hours prior to applying.

**Helpful Resources**
- American Academy of Physician Assistants (AAPA) at www.aapa.org

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**VETERINARY MEDICINE**

Veterinarians are at the intersection of animal and human health and the first line of defense in identifying and responding to infectious diseases. They advocate for effective public health policies and research diseases and conditions that reduce the quality of our animals’ lives. Trained veterinarians are leaders in the classroom, preparing the next generation of veterinarians and, of course, veterinarians care for our pets and the animals that share our planet. There are 28 U.S. veterinary medical colleges, including the NYS College of Veterinary Medicine at Cornell University.

**Professional Veterinary Medicine Programs at SUNY**

- NYS College of Veterinary Medicine at Cornell University, DVM
- NYS College of Agriculture & Life Sciences, with NYS College of Veterinary Medicine at Cornell University, BS/DVM*

**Undergraduate Preparation**
No specific undergraduate program is preferred, but students must complete a set of pre-veterinary requirements in biology, chemistry, physics, mathematics, statistics, genetics, physiology and animal nutrition. Courses in English, public speaking and humanities/social sciences are also required. Many students choose an animal science or biological science major because these bachelor’s degree programs generally include most of the pre-veterinary requirements. Significant volunteer/work experience with animals in settings such as a hospital, clinic, kennel, shelter, lab or zoo is recommended.

**Helpful Resources**
- Association of American Veterinary Medical Colleges (AAVMC) at www.aavmc.org

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BE A COMPETITIVE CANDIDATE

Grades Count
Admission to professional schools is competitive. So, take the most challenging courses you can and maintain a solid grade point average (3.5 cumulative grade point average or higher). Your hard work in high school will prepare you for the rigorous pre-professional coursework in college.

Be Curious
Learn all you can! Start by investigating the professional organizations outlined in this guide. Once on campus, talk with faculty members about the various pathways into graduate education.

Proven Knowledge
Scoring highly on standardized admissions tests for professional programs (LSAT, MCAT, DAT, GRE, etc.) demonstrates command of the subject material and indicates an ability to succeed on future assessments, such as professional licensing examinations. Get a head start by adequately preparing for the ACT, SAT, SAT II, etc., and by learning about professional program assessments.

You Have Options
There are many ways to achieve your end goal of gaining admission to a professional school, including starting at a SUNY community college or technical college.

Start on the Right Path
Many students pursue a college education at multiple institutions. For this reason, SUNY created Transfer Paths that outline the common lower division requirements shared by SUNY campuses for similar majors within most disciplines. These Transfer Paths will help you identify core coursework for multiple SUNY campuses and ease the transfer process should you choose to attend more than one SUNY campus.

Know Your School Counselor
Careful program planning is important to select proper classes and complete requirements in a timely way. So get to know your high school counselor and then your college advisor.

Volunteer, Volunteer, Volunteer
Many professional schools expect or require a volunteer experience. Your volunteer experience should show that you work well with a variety of people, that you like to help people and that you have learned about the profession through experience and informational interviews.

Be a Shadow
Ask someone working in your desired profession about spending time learning more about what he or she does. What is a typical day like? What kind of education and experience are required? Exposure to a broad range of opportunities is important; if you choose to shadow a professional, it should be considered only one of your many experiences.

Try it Out
Consider a summer camp, workshop, research, or internship experience. They are great ways to gain hands-on experience and learn more about your desired profession. These opportunities can also lead to letters of recommendation for college.