

CAREER GUIDE TO SCIENCE MAJORS AT LEHMAN COLLEGE



LEHMAN
COLLEGE



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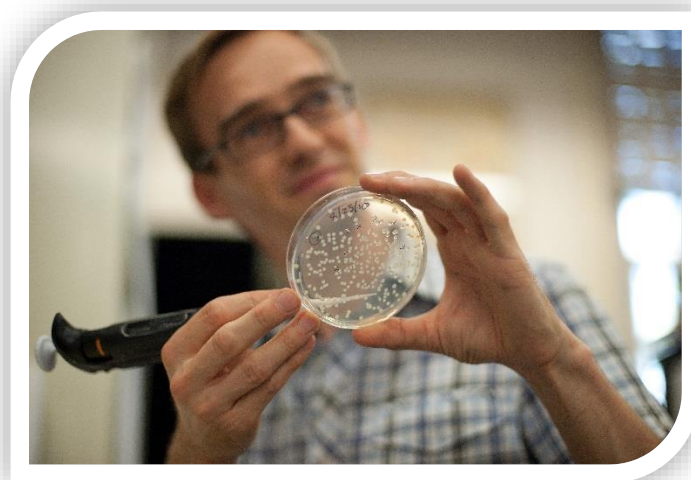
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INTRODUCTION

This guide was designed to provide undergraduate and graduate students with information and insights into the many science programs offered at Lehman College. It is intended for individuals who may be interested in pursuing careers in science and should serve as a tool to assist you in making decisions when selecting a major.

For each program you will find:

- A brief description of each major
- Examples of occupations in that field
- Possibilities for internship and volunteer opportunities
- Online resources for additional information

Please note that this guide does not replace the advisement expertise provided through Lehman's Career Services Center or your major academic department. Rather, it is intended to serve as an added resource as you begin to plan and prepare for your future career.

As you work toward your career goals, Lehman College will assist you every step of the way. To learn more about the majors listed in this guide, please contact the respective academic department.

The Career Services Center, located in Shuster Hall, Room 254, can provide assistance as you explore your options, select a major, identify experiential learning opportunities and learn about other available career developmental activities.

ANTHROPOLOGY MAJOR

B.A.

MINOR ALSO AVAILABLE

BRIEF DESCRIPTION

The discipline of anthropology utilizes a four-field approach to the study of humans. Physical Anthropology studies humans and their primate relatives in terms of evolution, biology, and behavior. Archaeology studies cultural evolution, elucidating past human societies from their beginnings to the recent development of complex societies. Anthropological Linguistics studies languages cross-culturally, including topics such as language structure and socio-cultural dimensions of language use. Cultural Anthropology studies the cultural similarities and differences among diverse societies around the world. Subsumed under Cultural Anthropology are such topics as religion, urban anthropology, gender studies, economic and political anthropology, medical anthropology, and anthropology of globalization. The Anthropology Department at Lehman focuses on research and undergraduate teaching, with a strong connection to the Ph.D. Program in Anthropology at the CUNY Graduate School.

OCCUPATIONS	SALARY RANGE	LEVEL OF EDUCATION
Anthropologist	\$45,000 to \$81,500 per year	Master's or Doctorate
Archaeologist	\$50,000 to \$85,500 per year	Master's or Doctorate
Archivist/Curator/Museum Worker	\$40,000 to \$79,500 per year	Graduate Degree
Geographer	\$52,500 to \$90,000 per year	Master's or Doctorate
Geologist	\$50,500 to \$113,000 per year	Master's or Doctorate
Historian	\$40,500 to \$69,500 per year	Graduate Degree
Secondary Teacher	\$40,500 to \$64,000 per year	Graduate Degree

CAREER OUTLOOK/PROJECTION

Employment of anthropologists and archeologists is projected to grow 19 percent from 2012 to 2022, faster than the average for all occupations. However, because it is a small occupation, the fast growth will result in only about 1,400 new jobs over the 10-year period. Jobseekers will likely face very strong competition.

EXAMPLES OF INTERNSHIPS/VOLUNTEER OPPORTUNITIES

- American Museum of Natural History – <http://research.amnh.org/anthropology/about/internship>
- Cultural Survival – <http://www.culturalsurvival.org/about/internships>
- Earth Watch – <http://www.earthwatch.org/aboutus/jobs/internships/>
- Smithsonian – <http://www.si.edu/Interns>

For additional information please contact the Career Services Center and the major advisor in the Anthropology Department.

PROFESSIONAL ORGANIZATIONS

- American Anthropological Association – <http://www.aaanet.org/profdev/careers/>
- American Association for Physical Anthropologists – <http://www.physanth.org/>
- Society of American Archeology – <http://www.saa.org/>
- American Academy of Forensic Sciences – <http://www.aafs.org/>

ANTHROPOLOGY, BIOLOGY, CHEMISTRY MAJOR B.S.

TRACK 1: CONCENTRATION IN PHYSICAL ANTHROPOLOGY

TRACK2: CRIMINALISTICS, PRE-MEDICINE, PRE-DENTAL AND PRE-VETERINARY

BRIEF DESCRIPTION

Anthropology (Physical), Biology, and Chemistry is an interdisciplinary major leading to the B.S. degree. The program serves several purposes: (1) to prepare students for specialization at the graduate level in one of several fields: human origins, human genetics, human growth, human adaptation, primatology, forensic anthropology, or criminalistics (forensic anthropology and criminalistic specializations utilize the facilities and staff of the Metropolitan Forensic Anthropology Team [MFAT] at Lehman College; MFAT personnel identify human skeletal and dental remains for law enforcement agencies, and students in these specializations receive practical experience through participation in MFAT investigations); (2) to prepare students for secondary-school teaching in the life sciences, with emphasis on human origins and biological variation in human groups; and (3) to prepare pre-medical and pre-dental students.

OCCUPATIONS	SALARY RANGE	LEVEL OF EDUCATION
Anesthesiologist	\$218,500 to \$369,000 per year	Medical Degree
Sports Physician	\$123,000 to \$206,000 per year	Medical Degree
Radiologist	\$211,000 to \$353,000 per year	Medical Degree
Criminologist	\$48,000 to \$78,000 per year	Graduate Degree
Forensic Scientist	\$41,500 to \$62,500 per year	Master's or Doctorate

CAREER OUTLOOK/PROJECTION

Employment through these fields is expected to increase between 18 and 31 percent from 2010 to 2020; faster than the average for all occupations.

EXAMPLES OF INTERNSHIPS/VOLUNTEER OPPORTUNITIES

- Refer to the Internship/Volunteer opportunities for Anthropology, Biology and Chemistry

For additional information please contact the Career Services Center and the major advisor in the Biological Sciences Department.

PROFESSIONAL ORGANIZATIONS

- American Association of Physical Anthropologists – <http://www.physanth.org/>
- American Chemical Society – <http://portal.acs.org/portal/acs/corg/content>
- American Academy of Forensic Science – <http://www.aafs.org/>
- National Biological Information Infrastructure – <http://ice.ucdavis.edu/partner/nbii>

FELLOWSHIP OR RESIDENCY INFORMATION

- American Medical Association – <http://www.ama-assn.org/ama/pub/about-ama/our-people/member-groups-sections/resident-fellow-section/rfs-resources/residency-vacancies-work-environment/find-residency-fellowship.page>

BIOLOGY MAJOR B.A.

DUAL DEGREE: B.A. & M.S. (REQUIRES DEPARTMENT PERMISSION)

MINOR ALSO AVAILABLE

BRIEF DESCRIPTION

Biology is the study of life with many sub-disciplines including ecology, evolution, zoology, microbiology, molecular biology and genetics. It is through recent advances in biological research that we have become more knowledgeable about ourselves and other living organisms on earth. New technological tools have made it possible for biologists to find solutions that impact our daily lives such as cures for diseases, environmental pollution, and loss of biodiversity. Biology is an exciting field of study that would prepare you for a range of careers where you can make a difference. With a degree in biology or by combining biology with related degrees, you can seek jobs in government, industry, health care, agriculture, marketing, publishing, education, computer science, and research. With additional training you can also pursue careers in medicine and law.

OCCUPATIONS	SALARY RANGE	LEVEL OF EDUCATION
Biologist	\$43,500 to \$86,500 per year	Master's or Doctorate
Cytotechnologist	\$48,000 to \$73,000 per year	Graduate Degree
Ecologist	\$43,500 to \$73,500 per year	Master's or Doctorate
Forensic Scientist	\$41,500 to \$62,500 per year	Master's or Doctorate
Marine Biologist	\$43,500 to \$73,000 per year	Master's or Doctorate
Pharmacologist	\$41,500 to \$106,500 per year	Master's or Doctorate

CAREER OUTLOOK/PROJECTION

Employment of biological technicians is projected to grow 10 percent from 2012 to 2022, about as fast as the average for all occupations. Continued growth in biotechnology and medical research is expected to increase demand for these workers.

EXAMPLES OF INTERSHIPS/VOLUNTEER OPPORTUNITIES

- Bellevue Hospital Center – <http://www.nyc.gov/html/hhc/bellevue/html/help/volunteer.shtml>
- Botanical Garden – <http://www.nybg.org/>
- Jacobi Medical Center – <http://www.nyc.gov/html/hhc/jacobi/html/home/home.shtml>
- Memorial Sloan-Kettering Cancer Center – <http://www.sloankettering.edu/summer-undergraduate-research-program>
- Brookhaven National Laboratory – <http://www.bnl.gov/education/program.asp?q=116>
- National Institute of Environmental Health Sciences–
<http://www.niehs.nih.gov/careers/research/summers/index.cfm>
- National Science Foundation – http://www.nsf.gov/crssprgm/reu/reu_search.jsp

For additional information please contact the Career Services Center and the major advisor in the Biological Sciences Department.

PROFESSIONAL ORGANIZATIONS

- American Institute of Biological Sciences – <http://www.aibs.org/careers/index.html>
- American Society of Cell Biology – <http://www.ascb.org/>
- American Society of Microbiology – www.asm.org
- American Academy of Forensic Sciences – <http://www.aafs.org/>
- Association for the Sciences of Limnology and Oceanography –
<http://www.aslo.org/career/aquaticcareer.html>
- Federation of American Societies for Experimental Biology – <http://www.faseb.org/>

Sources: bls.gov/ooh, www.lehman.edu/academics/biology/, <http://explorehealthcareers.org/en/index.aspx>

CHEMISTRY MAJOR

B.A., B.S.

SPECIALIZATION: BIOCHEMISTRY

MINOR ALSO AVAILABLE

BRIEF DESCRIPTION

What is chemistry? In simplest terms, chemistry is the science of matter. Anything that can be touched, tasted, smelled, seen, or felt is made of chemicals. What do chemists do? Chemists transform the everyday materials around us into amazing things. Some chemists work on cures for cancer while others monitor the ozone protecting us from the sun. Still others discover new materials to make our homes warmer in the winter, or new textiles to be used in the latest fashions. The knowledge gained through the study of chemistry opens many career pathways such as Biochemistry, Chemical Engineering, Environmental Chemistry, Food and Flavor Chemistry, Forensic Chemistry, Organic Chemistry, Inorganic Chemistry, etc.

OCCUPATIONS	SALARY RANGE	LEVEL OF EDUCATION
Biochemist	\$57,500 to \$98,000 per year	Graduate Degree
Chemical Engineer	\$63,500 to \$106,000 per year	Graduate Degree
Chemist	\$39,500 to \$ 87,500 per year	Master's or Doctorate
Food Technologist	\$43,000 to \$ 84,500 per year	Graduate Degree
Geneticist	\$41,500 to \$ 62,500 per year	Master's or Doctorate
Toxicologist	\$44,000 to \$ 84,500 per year	Master's or Doctorate
Botanist	\$43,500 to \$ 72,000 per year	Master's or Doctorate

CAREER OUTLOOK/PROJECTION

Employment of chemists and materials scientists is projected to grow 6 percent from 2012 to 2022, slower than the average for all occupations. Chemists and materials scientists with an advanced degree, particularly those with a Ph.D., are expected to experience better opportunities.

EXAMPLES OF INTERNSHIPS/VOLUNTEER OPPORTUNITIES

- Bellevue Medical Center – <http://www.nyc.gov/html/hhc/bellevue/html/help/volunteer.shtml>
- NYC DOH and Mental Hygiene – Public Health Laboratory - <http://www.nyc.gov/html/doh/html/hcp/labs.shtml>
- Montefiore Medical Center – <http://www.montefiore.org/volunteer>
- Unilever - <http://www.unilever.com/careers-jobs/>
- Brookhaven National Laboratory – <http://www.bnl.gov/education/program.asp?q=116>
- Lawrence Livermore National Laboratory – <https://internships.llnl.gov/>
- National Institute of Environmental Health Sciences – <http://www.niehs.nih.gov/careers/research/summers/index.cfm>
- National Science Foundation – http://www.nsf.gov/crssprgm/reu/reu_search.jsp

For additional information please contact the Career Services Center and the major advisor in the Chemistry Department.

PROFESSIONAL ORGANIZATIONS

- American Chemical Society – <http://portal.acs.org/portal/acs/corg/content>
- American Academy of Forensic Sciences – <http://www.aafs.org/>
- ASM International – <http://www.asminternational.org/>
- American Chemistry Council – <http://www.americanchemistry.com/>
- Materials Research Society – http://www.bls.gov/bls/exit_BLS.htm?url=http://www.mrs.org/

EARTH SCIENCE MAJOR

B.A. & CERTIFICATION

MINOR ALSO AVAILABLE

BRIEF DESCRIPTION

Earth Science is the study of our planet, including its materials, structure, processes, and history. Earth materials, such as water, oil, coal, metals, and soil, are our primary resources. Understanding Earth's structure helps us to find and collect these essential resources. Studying Earth processes such as volcanic eruptions, earthquakes, floods, and landslides, not only helps us understand how Earth materials form, but also helps us to avoid the hazards they pose to human life and property. Studying Earth's history helps us to understand present day processes in such as climate change by examining similar changes in the past.

Earth Science teachers are in high demand in the New York City and surrounding areas. Many Earth Scientists work in environmental and engineering consulting firms, alternative energy generation, mining and petroleum industries, ground water and hydrology, geo-hazards analysis and risk assessment, and Earth Science Education. Earth Scientists work in a variety of settings including outdoor fieldwork, laboratories, offices, and classrooms. They use a wide variety of techniques including chemical and physical analysis, satellite imagery and spatial analysis, and computer modeling. This work often involves travel and physical activity.

OCCUPATIONS	SALARY RANGE	LEVEL OF EDUCATION
Geologist	\$50,500 to \$113,000 per year	Graduate Degree
Environmental Engineer	\$54,000 to \$119,500 per year	Graduate Degree
Mining Engineer	\$61,000 to \$97,500 per year	Graduate Degree
Marine Biologist	\$43,500 to \$73,000 per year	Graduate Degree
Earth Science Teacher	Average Salary: \$55,050 per year	Graduate Degree

CAREER OUTLOOK/PROJECTION

Employment of geoscientists is projected to grow 16 percent from 2012 to 2022, faster than the average for all occupations. The need for energy, environmental protection, and responsible land and resource management is projected to spur demand for geoscientists in the future.

EXAMPLES OF INTERNSHIPS/VOLUNTEER OPPORTUNITIES

- Earth Watch – <http://www.earthwatch.org/aboutus/jobs/internships/>
- OurEarth.org – <http://www.ourearth.org/>

For additional information please contact the Career Services Center and the major advisor in the Environmental, Geographic and Geological Sciences Department.

PROFESSIONAL ORGANIZATIONS

- American Geosciences Institute – <http://www.agiweb.org/careers.html>
- The Geological Society of America – <http://www.geosociety.org/profdev/index.htm>
- Association for Women Geoscientists – <http://www.awg.org/eas/profiles.html>
- American Association of Petroleum Geologists – <http://www.aapg.org/>

ENVIRONMENTAL SCIENCE MAJOR

B.S.

SPECIALIZATIONS: ECOLOGY, URBAN ENVIRONMENTAL MANAGEMENT, ENVIRONMENTAL GEOLOGY, OR ENVIRONMENTAL ANALYSIS

MINOR ALSO AVAILABLE

BRIEF DESCRIPTION

Environmental Science stands at the interface between humans and the Earth, and explores the interactions and relations between them. Environmental Science includes a group of sciences that attempt to explain how life on Earth is sustained, how we interact with the earth, what leads to environmental problems, and how these problems can be solved. It integrates information and ideas from the natural sciences such as biology, chemistry, hydrology, climatology, oceanography and geology, the social sciences such as economics, politics, and the humanities, including philosophy and ethics. Studying Environmental Science, you will acquire awareness and appreciation of the natural and built environment, knowledge of natural systems and ecological concepts, understanding of current environmental issues, and ability to use analytical and problem-solving skills on environmental issues. Environmental scientists work on subjects like understanding the earth processes, evaluating alternative energy systems, pollution control and mitigation, sustainability, natural resource management, the effects of global climate change, and many more.

OCCUPATIONS	SALARY RANGE	LEVEL OF EDUCATION
Ecologist	\$43,500 to \$73,500 per year	Graduate Degree
Environmental Engineer	\$54,000 to \$119,500 per year	Graduate Degree
Epidemiologist	\$61,500 to \$100,500 per year	Medical Degree
Range Manager	\$45,500 to \$80,000 per year	Graduate Degree
Atmospheric Scientists/Meteorologists	Average Salary: \$89,260 per year	Bachelor's Degree
Conservation Scientists/Foresters	Average Salary: \$59,060 per year	Bachelor's Degree

CAREER OUTLOOK/PROJECTION

Employment of environmental scientists and specialists is projected to grow 15 percent from 2012 to 2022, faster than the average for all occupations. Heightened public interest in the hazards facing the environment, as well as the increasing demands placed on the environment by population growth, is expected to spur demand for environmental scientists and specialists.

EXAMPLES OF INTERNSHIPS/VOLUNTEER OPPORTUNITIES

- NYS Department of Environmental Conservation – <http://www.dec.ny.gov/26.html>
- City of New York Parks and Recreation – <http://www.nycgovparks.org/opportunities/internships>
- Shell – http://www.shell.us/home/content/usa/aboutshell/careers_tpkg/
- Exxon Mobil - http://www.exxonmobil.com/USA-English/HR/careers_us.aspx
- National Security Agency – http://www.nsa.gov/careers/opportunities_4_u/students/index.shtml

For additional information please contact the Career Services Center and the major advisor in the Environmental, Geographic and Geological Sciences Department.

PROFESSIONAL ORGANIZATIONS

- Ecological Society of America – <http://www.esa.org/>
- National Council for Science and the Environment – <http://ncseonline.org/>
- Sierra Club – <http://www.sierraclub.org/>
- American Geosciences Institute – <http://www.agiweb.org/>
- National Environmental Health Association – <http://www.neha.org/index.shtml>

Sources: bls.gov/ooh, www.lehman.edu/academics/eggs/environmental-science.php, www.epa.gov/careers/, www.sws.org/job-postings, www.ecojobs.com/, www.nyc.gov/html/dep/html/job_opportunities/index_wide.shtml

GEOGRAPHIC INFORMATION SCIENCE M.S., CERTIFICATE, ADVANCED CERTIFICATE

MINOR ALSO AVAILABLE

BRIEF DESCRIPTION

Geographic Information Science (GISc) is a fast growing computer technology field involving mapping and analysis of spatial data. Geographic Information Systems (GIS) enable us to assess and manage existing conditions, and also help predict future conditions, ranging from monitoring disease occurrences, to endangered species preservation, to managing water supplies, to tracking real estate values, to crime solving. GISc is especially valuable in policy and decision making, and has become an indispensable component of most planning activities. GISc is used today in fields as diverse as criminal justice, marketing, economic development, public health administration, environmental assessment, risk analysis, ecology, urban planning, emergency management, real estate, government, and education.

OCCUPATIONS	SALARY RANGE	LEVEL OF EDUCATION
Urban and Regional Planners	\$41,251 - \$55,390 per year	Graduate Degree
Landscape Architects	\$41,004 - \$58,056 per year	Bachelor's Degree
Civil Engineer	\$50,246 - \$69,303 per year	Graduate Degree
Survey Researchers	\$47,720 - \$92,640 per year	Graduate Degree
Cartographers	\$45,800 - \$94,780 per year	Graduate Degree

CAREER OUTLOOK/PROJECTION

Employment of surveying and mapping technicians is projected to grow 14 percent from 2012 to 2022, about as fast as the average for all occupations. Recent advancements in mapping technology have led to new uses for maps and a need for more of the data used to build maps. As a result, surveying and mapping technicians are expected to have more work. Employment of urban and regional planners is projected to grow 10 percent from 2012 to 2022, about as fast as the average for all occupations. Population growth, economic conditions, and environmental concerns will drive employment growth for planners in cities, suburbs, and other areas.

EXAMPLES OF INTERNSHIPS/VOLUNTEER OPPORTUNITIES

- USDA – <http://www.dm.usda.gov/employ/student/internship.htm>
- Bureau of Land Management – <http://www.blm.gov/wo/st/en/res/Volunteer.html>
- Office of Emergency Management – http://www.nyc.gov/html/oem/html/get_involved/involved.shtml
- Lehman College comprehensive internship list - <http://www.lehman.cuny.edu/academics/eggs/internship-opportunities.php>

For additional information please contact the Career Services Center and the major advisor in the Environmental, Geographic and Geological Sciences Department.

PROFESSIONAL ORGANIZATIONS

- American Planning Association – <https://www.planning.org>
- National Society of Professional Surveyors – <http://www.acsm.net/>
- Technology Student Association – <http://www.tsaweb.org/>
- American Society for Engineering Education – <http://www.asee.org/>
- GIS Certification Institute – <http://www.gisci.org/>
- American Institute of Certified Planners – <https://www.planning.org/aicp/>
- Cartography and Geographic Information Society – <http://www.cartogis.org/>

GEOGRAPHY MAJOR

B.A.

MINOR ALSO AVAILABLE

BRIEF DESCRIPTION

Many people associate Geography simply with knowing where things are. While knowing where things are is important, Geography is much more than place names and locations. It is the study of spatial variation, of how and why things differ from place to place on the surface of the earth. Geographers focus on the interaction of people with each other and with the environment; they seek to understand how and why physical and cultural spatial patterns evolved through time and continue to change. Geography helps you to understand current events. Geography matters because it is the only discipline concerned with understanding why and how both physical and cultural phenomena differ from place to place. Geography is vital to an understanding of national and international issues such as global warming, AIDS, or population growth. Geographers' expertise can not only help us understand the world, but also help us improve it.

Studying Geography provides access to a diversity of job opportunities in public and private enterprises dealing with the natural environment, human economic and social activities, spatial data in the government at federal, state, local levels (agriculture, commerce, education, health and human services, housing and urban development) or in teaching from elementary to postgraduate levels. Many Geographers today find excellent employment due to their skills with Geographic Information Systems (GIS).

OCCUPATIONS	SALARY RANGE	LEVEL OF EDUCATION
Surveyor	\$43,000 to \$71,500 per year	Undergraduate Degree
Archaeologist	\$50,000 to \$85,500 per year	Graduate Degree
Cartographer	\$48,000 to \$71,000 per year	Undergraduate Degree
Geographer	\$52,500 to \$90,000 per year	Graduate Degree

CAREER OUTLOOK/PROJECTION

Geographers need at least a master's degree for most positions outside of the federal government. Those with a bachelor's degree may qualify for some entry-level jobs in the federal government, but many of these jobs often require geography experience or training in geographic information systems (GIS).

EXAMPLES OF INTERNSHIPS/VOLUNTEER OPPORTUNITIES

- OurEarth.org – <http://www.ourearth.org/>
- NYC Department of Parks & Recreation – <http://www.nycgovparks.org/>
- US Census Bureau – <http://www.census.gov/research/opportunities/#intern>
- Wave Hill – <http://www.wavehill.org/donate/volunteer/>
- National Geographic – http://education.nationalgeographic.com/education/programs/ngs-geography-internship/?ar_a=1

For additional information please contact the Career Services Center and the major advisor in the Environmental, Geographic and Geological Sciences Department.

PROFESSIONAL ORGANIZATIONS

- Association of American Geographers – <http://www.aag.org/>
- National Council for Geographic Education – <http://www.ncge.org/>
- American Meteorological Society – <http://www.ametsoc.org/>
- National Society of Professional Surveyors – <http://www.acsm.net/>
- GIS Certification Institute – <http://www.gisci.org/>

PHYSICS MAJOR

B.A., B.S.

MINOR ALSO AVAILABLE

BRIEF DESCRIPTION

The Department of Physics and Astronomy prepares students for positions in government and industry and for graduate study in physics and related fields. Students in the Department may choose either a 36-credit major leading to a B.A. degree or a 54-credit major leading to a B.S. degree. The Department also offers a variety of basic courses designed for general education and for students in other departments, and cooperates with the Department of Middle and High School Education in preparing students to teach physics in secondary schools.

The B.S. degree program in Physics is designed for students who are planning a career in physics research and/or college and university level teaching. The B.A. program in Physics is designed for students who, although not planning a career in physics research and/or college/university level teaching, have a strong interest in physical science, particularly physics, and wish to prepare for a career in which a good basic knowledge of physics is useful. Among such careers are the health professions, elementary and secondary school science teaching, patent-law practice, industrial management, and science journalism.

OCCUPATIONS	SALARY RANGE	LEVEL OF EDUCATION
Astronomer	\$83,500 to \$141,000 per year	Graduate Degree
Hydrologist	\$52,500 to \$89,000 per year	Graduate Degree
Physicist	\$60,500 to \$159,500 per year	Graduate Degree
Astronaut	\$50,000 to \$92,500 per year	Graduate Degree
Biochemist and Biophysicist	Average Salary: \$81,480 per year	Doctoral or Professional Degree
Civil Engineer	\$53,000 to \$87,500 per year	Graduate Degree
Electrical and Electronics Engineer	Average Salary: \$89,630 per year	Graduate Degree

CAREER OUTLOOK/PROJECTION

Employment of physicists and astronomers is projected to grow 10 percent from 2012 to 2022, about as fast as the average for all occupations. Expected growth in federal government spending for physics and astronomy research should increase the need for physicists and astronomers, especially at colleges and universities and national laboratories.

EXAMPLES OF INTERNSHIPS/VOLUNTEER OPPORTUNITIES

- NASA - <http://www.nasa.gov/audience/forstudents/postsecondary/index.html#.U5nC-HbDVe4>
- Smithsonian National Air and Space Museum – <http://airandspace.si.edu/explore-and-learn/get-involved/>
- The Aerospace Corporation – <http://www.aerospace.org/careers/internships/>
- Department of Energy – <http://ed.fnal.gov/interns/programs/ipm/>
- Lawrence Livermore National Laboratory – <https://internships.llnl.gov/>
- National Security Agency – http://www.nsa.gov/careers/opportunities_4_u/students/index.shtml
- National Science Foundation – http://www.nsf.gov/crssprgm/reu/reu_search.jsp
- Society of Physics Students – <http://www.spsnational.org/programs/internships/>

For additional information please contact the Career Services Center and the major advisor in the Physics Department.

PROFESSIONAL ORGANIZATIONS

- American Physical Society – <http://www.aps.org/>
- American Institute of Physics – <http://www.aip.org/>
- American Astronomical Society – <http://aas.org/>

Sources: www.lehman.edu/academics/physics-astronomy/, www.lehman.edu/career-services/physics2.php, www.bls.gov/ooh/Life-Physical-and-Social-Science/Physicists-and-astronomers.htm, www.careercornerstone.org/, <http://sciencecareers.sciencemag.org/>

PRE-ENGINEERING TRANSFER PROGRAM

BRIEF DESCRIPTION

Lehman College offers a Pre-Engineering Transfer Program, administered by the Department of Physics and Astronomy. Students study at Lehman for two years before transferring to the School of Engineering at City College. (For more information, consult the Pre-Engineering adviser in Gillet Hall, Room 131.)

The only complete engineering program in CUNY is at City College. Students at Lehman College can transfer to the School of Engineering at City College after completing twenty-four credits, including two semesters of calculus and one semester of either physics or chemistry. Although a well-prepared student can complete these requirements in two semesters, it is strongly recommended that a student entering this program should plan to spend three semesters at Lehman College.

OCCUPATIONS	SALARY RANGE	LEVEL OF EDUCATION
Chemical Engineer	\$63,500 to \$106,000 per year	Graduate Degree
Civil Engineer	\$53,000 to \$87,500 per year	Graduate Degree
Mechanical Engineer	\$59,500 to \$96,500 per year	Graduate Degree
Environmental Engineer	\$54,000 to \$119,500 per year	Graduate Degree

CAREER OUTLOOK/PROJECTIONS

Employment of engineers is expected to grow between 6 to 19 percent from 2010 to 2020, slower than the average for all occupations. Job prospects may be best for those who stay abreast of the most recent advances in technology.

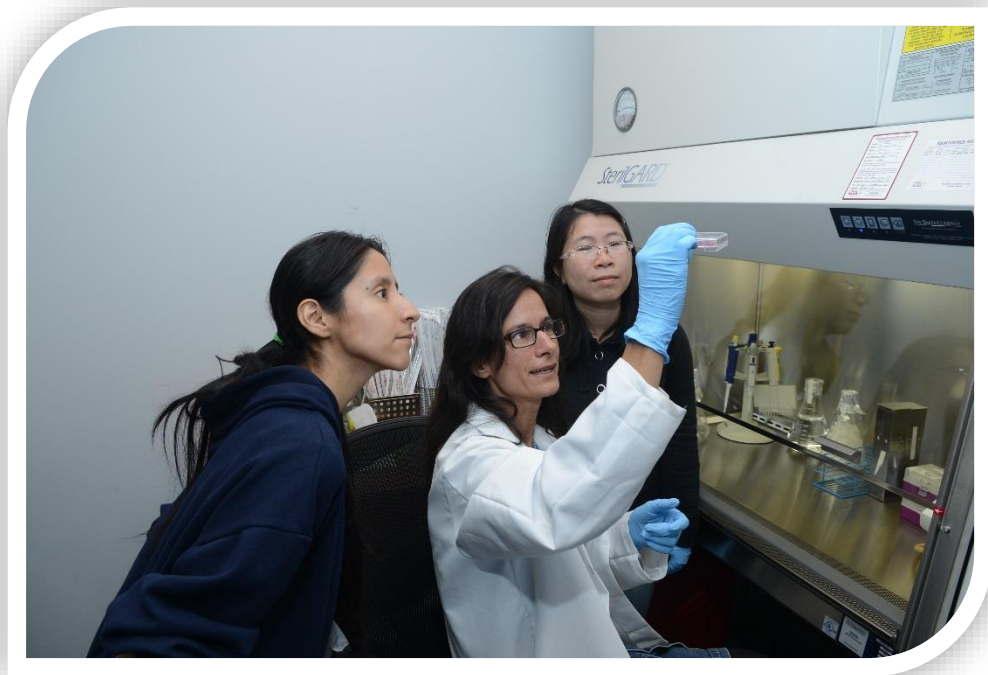
EXAMPLES OF INTERNSHIPS/VOLUNTEER OPPORTUNITIES

- Refer to the Internship/Volunteer opportunities for Physics

For additional information please contact the Career Services Center and the major advisor in the Physics Department.

PROFESSIONAL ASSOCIATIONS

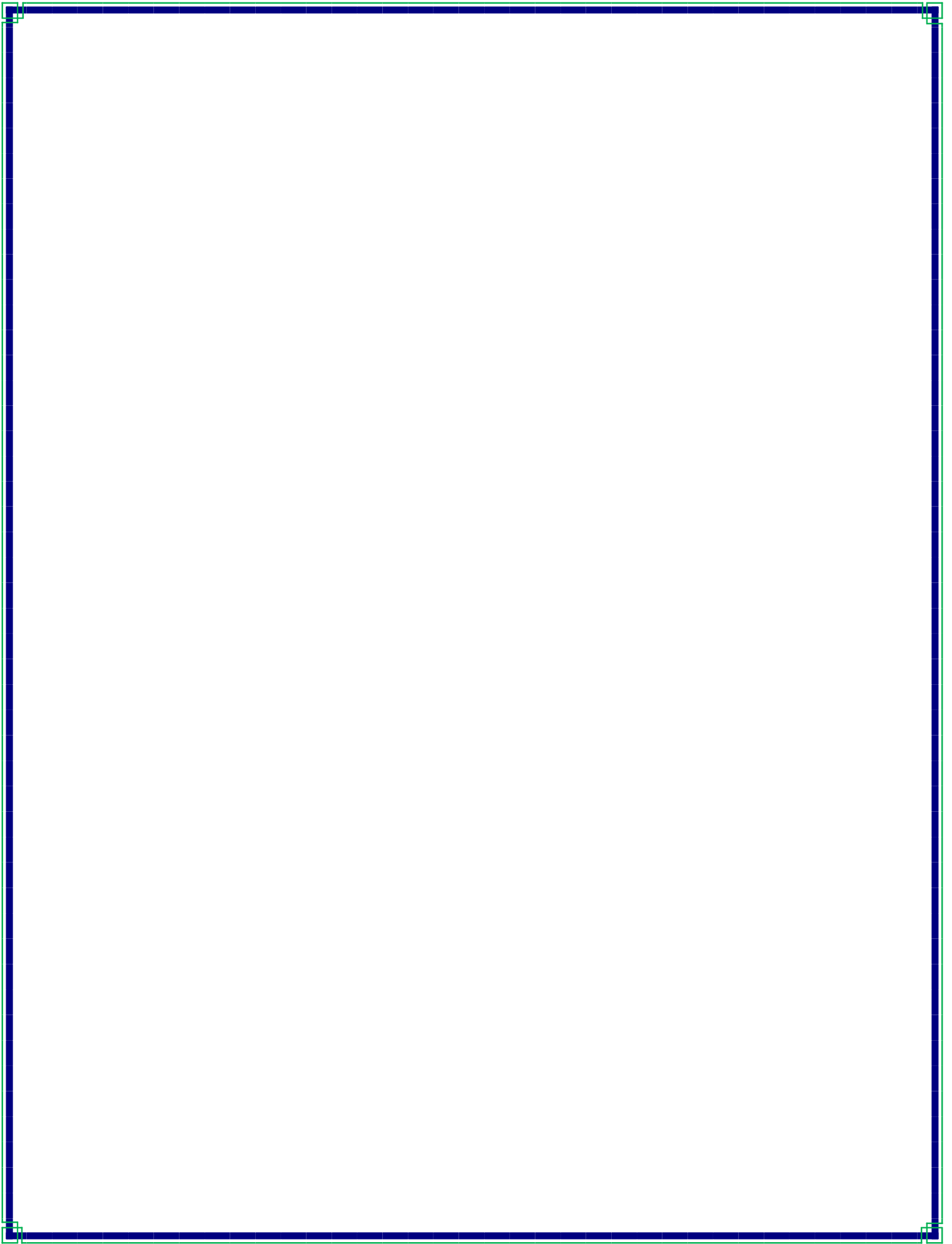
- National Society of Professional Engineers – <http://www.nspe.org/index.html>
- Environmental and Engineering Geophysical Society – <http://www.eegs.org/>
- American Society of Civil Engineers – <http://www.asce.org/>
- American Society of Mechanical Engineers – <http://www.asme.org/>
- American Academy of Environmental Engineers – <http://www.aace.net/>
- Junior Engineering Technical Society – <http://www.jets.org>
- American Nuclear Society – <http://www.new.ans.org/>



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