Scholarships in Physics, Chemistry, Earth Science and Mathematics for Northeastern Illinois University College of Arts and Sciences

**Introduction**
The United States National Science Foundation (NSF) has awarded Northeastern Illinois University (NEIU) a grant to offer competitive scholarships to talented and motivated students intending to major in one of the disciplines of Physics, Chemistry, Earth Science, and Mathematics.

**The Scholarships**
Merit-based scholarships of up to $10,000 per year (based on financial need) for up to 2 years. The scholarship program also provides academic support through faculty mentors. Students selected into this program will be part of a cohort of highly motivated scholars who share academic and social experiences.

**Who Can Apply?**
Students with demonstrated financial need, who are current sophomores or freshmen at NEIU and students intending to transfer to NEIU as juniors or sophomores in Fall 2011, intending to major in Physics, Chemistry, Earth Science, or Mathematics. Applicant must be U.S. citizens or legal permanent residents to qualify.

**Eligibility Requirements**
Good academic record at current institution with a GPA of 3.25/4.00 or higher.

General questions for NEIU Admissions
773-442-4050

For information on Physics, Chemistry, Earth Science, or Mathematics programs
Dr. S. Srinivas, or Dr. P. Acioli, Physics
S-Srinivas@neiu.edu; P-Acioli@neiu.edu

Dr. K. Nicholson, Chemistry
K-Nicholson@neiu.edu

Dr. K. Voglesonger, Earth Science
K-Voglesonger@neiu.edu

Dr. N. Wrinkle, Mathematics
N-Wrinkle@neiu.edu

Application materials at http://physics.neiu.edu/nsf-stem
Physics

Physicists apply the problem-solving and critical thinking skills they are trained in, to answer fundamental questions about our physical universe. Traditionally, 50% of physics majors go into employment in private and public sectors right after graduation. The other 50% go on to graduate school in physics, astronomy, engineering, medicine, law, education or other professions. The emphasis on problem-solving skills prepares physics majors for a wide variety of careers in professions within and outside science and technology.

The Physics Program

The Physics Department offers a program leading to the Bachelor of Science degree. Critical thinking and problem solving skills are emphasized. The undergraduate coursework in physics provides a solid foundation in classical and modern physics, and focuses on helping students develop skills which enable them to enter careers in business, teaching, research, technology or graduate work in physics, engineering and related fields.

Course Requirements

The Bachelor of Science in Physics requires 12 credit hours among 200 level courses and 26 credit hours among 300 level core and elective physics courses. Courses within Physics include: General Physics, Modern Physics, Electricity and Magnetism, Quantum Mechanics, Thermodynamics, Optics, etc. Students are also required to take cognate courses in mathematics and chemistry.

Physics Contact Faculty for Scholarships

Dr. Sudha Srinivas, Tel: 773-442-5638
or Email: S-Srinivas@neiu.edu
Dr. Paulo Acioli, Tel: 773-442-4733
or Email: P-Acioli@neiu.edu

Chemistry

Chemists design, develop, and implement methods of synthesis, instrumentation, and theory to address basic questions about the nature of matter. Many graduates pursue careers in the forensics, research and development, and government agencies while others pursue graduate degrees in dentistry, medicine, and pharmacology.

The Chemistry Program

Students in the program have the opportunity work on research projects with faculty members as well as pursue internships in Chicago. The Bachelor of Science degree in Chemistry prepares its graduates for a career in the public or private sector or for further studies, including a Ph.D. in chemistry or a professional degree in law, dentistry, medicine, and pharmacology.

Course Requirements

The Bachelors of Science in Chemistry requires 22 credit hours among 200 level chemistry courses and 23 credit hours among 300 level chemistry core and elective courses. Students are also required to take cognate courses in mathematics and physics. Students may choose to pursue a degree certified by the American Chemical Society by completing three additional courses at the 300-level. Courses within the chemistry include: General Chemistry, Organic Chemistry, Quantitative Methods, Spectroscopy, Bio-Organic Chemistry, Environmental Chemistry, etc

Chemistry Contact Faculty for Scholarships

Dr. Ken Nicholson, Tel: 773-442-5691
or Email: K-Nicholson@neiu.edu

Mathematics

Mathematicians study patterns through the use of abstraction and logical reasoning. Mathematics is used in many fields, including natural sciences, engineering, and social sciences.

The Mathematics Programs

The undergraduate programs in Mathematics have been designed to provide the student with options suitable for various career plans and graduate school. Mathematics majors at Northeastern have two tracks: • Teaching of Secondary Mathematics This major prepares a student for high school teaching. This track includes 28 hours of coursework in the College of Education and leads to certification. • Applied Mathematics This major has the potential for careers in scientific, business, industrial and/or actuarial areas, in positions like statisticians, software engineers, programmers or consultants.

Course Requirements

The Bachelor of Arts in Mathematics requires 13 courses beginning with Calculus and including a number of electives. Applied mathematics students are urged to specialize in an applied field by taking a minor in Mathematics

Mathematics Contact Faculty for Scholarships

Dr. Nancy Wrinkle, Tel: 773-442-5754
or Email: N-Wrinkle@neiu.edu
Dr. David Rutschman, Tel: 773-442-5714
or Email: D-Rutschman@neiu.edu

Earth Science

Professionals in Earth Science work in many areas including exploration for new mineral and energy resources, consultation on environmental and engineering issues, research, teaching, writing, and as curators in museums. The nature of these positions often results in Earth Scientists dividing their time between the field, the laboratory, and the office. The U.S. Bureau of Labor Statistics projects the number of jobs in the Earth Sciences to increase by 22% between 2006 and 2016, as compared to 10% for all other occupations.

The Earth Science Program

The Earth Science Department uses an integrated approach to study the problems of the Earth environment through a synthesis of geology, meteorology, and oceanography. The Bachelor of Science degree in Earth Science provides a broad basic training, and prepares students for the public or private sector or for further study in the energy, mineral, hydrogeological, and environmental fields. Emphasis is placed on techniques of problem solving in experimental and field studies.

Course Requirements

The Bachelor of Science in Earth Science requires 8 credit hours among 200 level courses and 33 credit hours among 300 level Earth Science courses. Courses within Earth Science include: The Atmosphere and the Oceans, Mineralogy, Field Geology, Paleontology, Principles of Hydrogeology, and Geochemistry. Students are also required to take cognate courses in chemistry, mathematics and physics.

Earth Science Contact Faculty for Scholarships

Dr. Ken Voglesonger, Tel: 773-442-6053
or Email: K-Voglesonger@neiu.edu