Do I Qualify?

Candidates will

- Have demonstrable financial need per FAFSA
- Be first-time freshmen or sophomores with no more than 36 credit hours accumulated
- For freshmen: take SAT and ACT test soon enough to be considered for admission
- Indicate a potential interest in one of the following majors: chemistry, physics, statistics
- Be U.S. citizens or permanent residents (green-card holders)
- Have letters of recommendation from science or mathematics faculty

Application Checklist

- ☐ For freshmen: take SAT or ACT test soon enough to be considered for admission to USF
- ☐ For freshmen: complete Application to USF by 12/31/06. Information available at http://www.usf.edu/apply.htm
- ☐ Complete FAFSA application by 03/01/07. Information available at http://isis.fastmail.usf.edu/finaid/06-07/fafsa.htm
- ☐ Complete Computational-Science Scholarship application by 06/01/07. This application and additional information are available from http://rc.usf.edu/sstem
- ☐ Request two to four letters of recommendation, which are due by 06/01/07. A request form is available at http://rc.usf.edu/sstem

Contact Us

More detailed information and application materials are available at our website:

http://rc.usf.edu/sstem

Or by email:

scholarship@rc.usf.edu

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USF UNIVERSITY OF SOUTH FLORIDA

Computational-Science Scholarship
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USF UNIVERSITY OF SOUTH FLORIDA

Computational-Science Scholarship

From Potential to Success

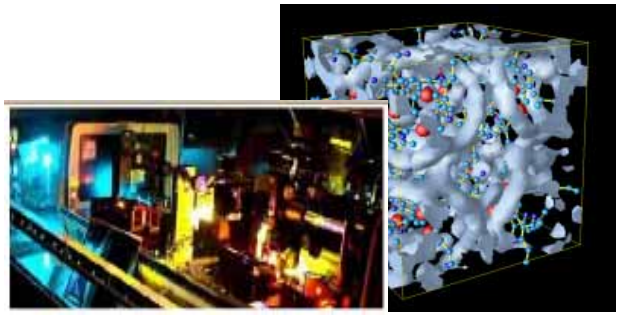
The Computational-Science Scholarship at USF has been established to give talented but financially challenged students the opportunity to succeed in a course of study in physics, chemistry, or statistics. Within these disciplines, students will have an opportunity to work in the exciting and expanding field of computational science. All students will gain additional skills by working with state-of-the-art computer systems. In addition to the financial aid and academic opportunities, students will receive additional assistance in the form of mentoring, tutoring, invitations to social events, a free GRE preparation course, and post-graduation placement assistance.

What is Computational Science?

Computational science is a growing multidisciplinary field, combining state-of-the-art computers with a traditional discipline, such as chemistry, physics, or statistics, to attain scientific knowledge. Modern, high-performance computers can perform billions of operations in a second, allowing computational scientists for the first time to explore real-world problems (e.g., weather prediction) that could never be solved with pen and paper. Computational science also helps bridge the gap between science and technology by aiding in the creation of new products and processes. Designs can be tested with computer models, reducing the expense of traditional experimental science. Computational science has already had a tremendous impact on a variety of scientific disciplines, such as bioinformatics, medicine, pharmacy, nanotechnology, and financial engineering, to name a few. Graduates with experience in both computation and a scientific discipline are much in demand.

Physics

Physics is the science of motion and materials, of the smallest and of the largest things in the universe. A bachelor's degree in physics will open doors to almost any technical field: some of our alumni continue on to graduate school, but others find rewarding employment as engineers. Several of our graduates have gone to medical school. Every B.S. student gets to spend at least a semester working on a current research problem, and some of our undergraduates have published their results in peer-reviewed journals and presented them at national meetings. Much of the research in the USF physics department is applied, with funding coming from (among other agencies) the National Science Foundation, the Office of Naval Research, the Department of Energy, and the National Institutes of Health. (Yes! Physicists do medical research, too). A physics degree isn't useful just for research: among famous people with physics degrees are Congressmen Rush Holt (D-NJ) and Vernon Ehlers (R-MI), German Chancellor Angela Merkel, several astronauts, including Sally Ride and Ronald McNair, and a number of actors, directors, and producers, including Judd Hirsch and James Cameron.



Chemistry

Chemistry is the central science describing how matter changes – chemists create new molecules and materials as well as trying to understand naturally occurring processes. Chemists exhibit a combination of both quantitative and qualitative reasoning to understand the world around us. As a result, chemistry represents one of the most exciting and flexible degrees possible. Many chemistry graduates directly use their training to work in the chemical and pharmaceutical industries, while others use their knowledge to pursue jobs in a biomedical field, consulting, business or even on Wall Street. Others choose to continue on to graduate school in science, medical school, law school (many patent lawyers have chemistry degrees) or other professional schools. Chemistry has recently become more diverse than ever, and our department has federally funded faculty members studying problems in many areas including computational chemistry, chemical education, synthetic organic and medicinal chemistry, crystal engineering, inorganic chemistry, polymer synthesis and evaluation, biochemistry and environmental chemistry. The chemistry department at USF strongly encourages undergraduate research, and virtually every laboratory has undergraduate researchers who publish their work and present their findings at scientific meetings.

Statistics

Statistics is the science that deals with the collection, classification, analysis, and interpretation of numerical facts or data, and that, by use of mathematical theories of probability, imposes order and regularity on aggregates of more or less disparate elements. Statisticians decide what information is valid and reliable and generate models that yield reliable predictions. They often help search for clues to the solution of a scientific mystery and keep investigators from being misled by false impressions by weeding out lurking variables and determining if variables are confounded. Statisticians work in a variety of fields, including agriculture, astronomy, animal health, biostatistics, defense, ecology, economics, education, engineering, epidemiology, finance, forestry, genetics, geography, government, history, insurance, law, manufacturing, marketing, pharmacology, physics, psychology, public health, quality improvement, risk assessment, sociology, space science, and sports; this brochure doesn't have enough space to list all the areas employing statisticians.

What are the Benefits?

Scholars will receive the following benefits:

- Scholarships of up to $40,000 over four years *on top of* other sources of financial aid (depending on unmet need)
- Training and experience in massively parallel computing
- Exposure to research groups
- Free tutoring
- Free test-preparation course for the Graduate Record Examination (GRE)
- Social events for scholars, professors, and graduate students
- Opportunities to network and meet professionals in the computational-science industry