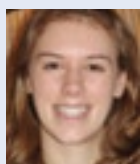


CONNECTICUT
COLLEGE

Laurel Mitchell '09

Physics



Q: Why did you major in physics?

A: I started as a chemistry major and enrolled in an introductory physics course to satisfy a major requirement. As the semester went on I realized that the aspects of chemistry that interested me were related to the physics of what we were learning, so I changed my major. I love physics because it satisfies my need for mathematical thinking and solves the big “whys” of the universe.

Q: Are you close with your professors?

A: Due to the small size of our department and the openness of the faculty, physics majors have a very close relationship with their professors. They are our friends, our teachers and our mentors, and they often invite us to dinners, organize guest lectures and help us conduct cutting-edge research.

Q: Have you performed and presented research?

A: For the last two years I have been doing an internship with Professor Monce in the accelerator lab and I plan to continue my research the summer after I graduate. Last spring, I presented my research at the National Conference for Undergraduate Research, and I've also attended the National Conference for Women in Physics and a meeting of the American Chemical Society.



Physics, Astronomy and Geophysics

Overview

The Connecticut College physics major is designed to provide flexibility so that students can tailor a program of study to fit their own interests. Students majoring in physics have the choice of concentrating in several areas, including general physics, astrophysics or physics for education. You'll even have the option of pursuing a five-year-long, dual-degree program in physics and engineering. Whatever option you select, you'll experience challenging coursework while working closely with your professors and peers. The low faculty-to-student ratio in most classes and the tight-knit, friendly atmosphere in the department ensure that you will get to know your professors both in and out of class.

Research Opportunities

Long- and short-term research projects are integral to your studies at Connecticut College. Students spend a lot of time performing research in the F.W. Olin Science Center, a contemporary science facility that houses faculty offices, classrooms and labs. The department's research facilities also include a flume, a 1 Million electron Volt heavy ion accelerator, a laser spectroscopy lab and an observatory. You'll have many opportunities to work with this equipment by becoming involved in semester-long independent study projects or multiyear research projects, including honors theses, with faculty members.

You may also have the opportunity to travel to national and international professional society meetings and present your research. In the past, students have attended meetings of the American Association of Physics Teachers, the American Geophysical Union, the American Astronomical Society and the National Conferences on Undergraduate Research. Students have traveled as far as Paris, Moscow and Zermatt to do research or attend international meetings and present their work.

Internships and Study Away

You will be encouraged to obtain summer internships or research positions either on campus or at other facilities such as the NASA centers, National Science Foundation-sponsored Research Experience for Undergraduates sites at major universities, and national or industrial laboratories. This type of work frequently results in student presentations at national professional meetings or in published papers that are co-authored with your research advisers.

There are many opportunities for students in the department to study away.

We recommend that you speak with your departmental adviser early in your sophomore year about your plans. Working out what courses can and need to be taken to complete the physics major or one of its concentrations while abroad can make the study-away experience successful, exciting and educationally rewarding.

Beyond Connecticut College

Our majors have followed many different paths after graduating. Some elected to continue their studies of physics and astronomy in graduate school. Others have pursued further study at medical and veterinary schools. Still others opted to go into a diverse array of fields including patent law, engineering, meteorology, finance, teaching, sports management and computer support.

Faculty

Thomas Ammirati, *Professor of Physics*

B.S., Polytechnic Institute of Brooklyn; M.S., Ph.D., Lehigh University
Low energy molecular collisions; methods for teaching physics; history of physics

Leslie Brown, *Associate Professor of Astronomy/Physics*

B.A., B.S., University of Delaware; M.A., Ph.D., Brandeis University
BVRI CCD photometry of active galactic nuclei and variable stars; astronomy education and public outreach

Beverly Chomiak, *Senior Lecturer in Geology/Geophysics*

B.A., M.S., University of Connecticut; Ph.D., New Mexico Institute of Mining and Technology
Economic geology and geochemistry; geographic information systems (GIS)

Arlan Mantz, *Oakes Ames Professor of Physics, Department Chair*

B.A., Catawba College; M.Sc., Ph.D., Ohio State University
Study of the temperature dependence of molecular absorption line widths and shapes using tunable lasers

Michael Monce, *Professor of Physics/Astronomy*

B.A., University of Colorado; M.S., Colorado State University; Ph.D., University of Georgia
Atomic and molecular physics; ion-molecule collisions; ion-atom collisions

Doug Thompson, *Professor of Geology*

B.A., Middlebury College; M.S., Ph.D., Colorado State University
Geomorphology; hydrology

Michael Weinstein, *Senior Lecturer in Physics/Astronomy*

Ph.D., The Pennsylvania State University
Astronomy education and public outreach; quasar-colors and photometric redshifts

Selected Courses

Modern Science and Technology — Gateway to a New Millennium; Electronics for Scientists; Modern Physics; Digital Design; Classical Mechanics; Thermodynamics and Statistical Mechanics; Electromagnetic Theory; Advanced Physical Optics; Applied Quantum Mechanics; Solar System Astronomy; Stars, Galaxies and Cosmology; Observational Techniques in Astronomy; The Origin and Fate of Our Universe; Introduction to Physical Geology; Hydrology; Mining and the Environment; Earth Surface Processes and Landforms; Coastal Dynamics of Southern New England; Environmental River Restoration

About Connecticut College

Connecticut College is a highly selective residential liberal arts college with 1,900 students from all over the country and the world. The academic program offers more than 50 majors in the arts, sciences, social sciences and humanities as well as innovative interdisciplinary programs. Students engage with dedicated faculty and each other to create a vibrant social, cultural and intellectual community in which learning is valued for its own sake — and individuals' diverse perspectives enrich the experience of all.

What can you do with a major in physics?

Kamen Todorov '08

Astrophysics

Pursuing a Ph.D. in astronomy and astrophysics at The Pennsylvania State University. Research focuses on planets outside our solar system. Participated in faculty-led research at the College and spent two summers at the NASA Goddard Space Flight Center.

Jaime Pepper '07

Astrophysics

Curatorial assistant at Harvard College Observatory in Cambridge, Mass., responsible for the maintenance and digitization of astronomical images and assisting Harvard graduate students and professors in their image research. At Connecticut College she participated in faculty research, which was recently published.

Desta "Mickey" Tadesse '04

Physics and Computer Science

Ph.D. candidate in electrical and computer engineering at Brown University. Current research focuses on timing analysis and post-silicon debug of microprocessors. Looking forward to starting a new position as design and debug engineer at Intel. At Connecticut College, he spent three summers working in the accelerator lab with Professor Mike Monce.

For more information, visit
www.conncoll.edu/academics/