Physics M.S., Ph.D.

What can first-year students expect in the Physics Graduate Program?
In the first year of study, Ph.D. students are expected to take two core graduate-level courses per quarter, including the courses required for the Ph.D. degree and other courses specific to the student’s field of interest. All first-year students also take 205, Introduction to Research. All graduate students also attend a weekly colloquium, 292. Each student has a faculty adviser who helps to determine which courses are most appropriate, taking into account the student’s background and interests.

Do you have any diversity fellowships or other opportunities specific to your program?
Newly admitted students are nominated by the department’s faculty admissions committee for several competitive fellowships: Eugene Cota Robles Fellowships, Tuition Fellowships, Regents Fellowships, Chancellor’s Fellowships.

What salary (on top of tuition and fees) do first-year Graduate Student Researchers in your program earn?
The Physics Department supports graduate students with Graduate Student Research (GSR) and Teaching Assistant (TA) positions. Students are also encouraged to secure independent support during their academic career.

When are graduate applications due for your program?
January 15th.

Who can I contact for more information?
Graduate Advisor
(831) 459-4122, gradadvisor@physics.ucsc.edu

Sue Carter, Professor of Physics, researches organic and nanoparticle-based thin film optoelectronic devices and technologies for sustainability at the energy-food-water nexus. She has been the Chair of the American Physical Society Group for Energy Research, and has served on the UC Energy Institute and the California Solar Collaborative. Carter has also been actively involved with entrepreneurship, launching 3 start-up companies ranging from photovoltaic technologies to K-8 science education. She especially enjoys working with students and has mentored a large number of graduate and undergraduate students in applied physics.

http://www.physics.ucsc.edu/academics/grads
Physics Faculty

Anthony N. Aguirre Cosmological inflation and eternal inflation, heavy-element enrichment of the intergalactic medium, and other topics including, dark matter and population III stars, intergalactic dust, and black holes (possibly exploding ones).

Thomas Banks Theoretical elementary particle physics, cosmology and superstring/M Theory.

David Belanger Ordering process in materials, both pure and random.

Sue A. Carter Thin-film, solution deposited novel semiconducting films, energy related research including photovoltaics, solid-state lighting, and luminescent solar concentrators.

Joshua Deutsch Avalanches in magnetic systems and polymers in a vacuum.

Michael Dine Questions left unanswered by the Standard Model including the origin of the generation structure of quarks and leptons, and questions of early universe cosmology, such as the nature of the dark matter.

Gey-Hong Gweon Single particle spectroscopy of condensed matter systems.

Howard Haber Exploration of new theoretical directions beyond the currently accepted Standard Model of particle physics.

Tesla E. Jeltema Observational cosmology and particle astrophysics, including constraints on the nature of dark matter and dark energy and studies of the evolution of galaxies.

Robert P. Johnson Experimental particle physics and high-energy astrophysics.

Onuttom Narayan Phenomena occurring only in systems not in thermal equilibrium.

Jason Nielsen Experimental particle physics, new phenomena in high-energy hadron-hadron collisions, semiconductor tracking detector development.

Joel R. Primack Formation and evolution of galaxies and the nature of dark matter.

Stefano Profumo Astro-particle Physics, and Theoretical High Energy Physics

Steven M. Ritz Particle physics, director of the Santa Cruz Institute for Particle Physics

Zack Schlesinger Physics of Correlated Electron Systems

Bruce A. Schumm Experimental particle physics, including bottom quark physics at the SLAC B Factory, and planning and R&D for the International Linear Collider.

Abraham Selden Fundamental interactions among particles and the development of detectors to study such interactions

B. Sriman Shastry Strongly correlated matter, and integrable systems.

Alexander Sher Development of experimental techniques for recording and stimulation of activity of hundreds of neurons and use of these techniques to study neural function, structure, and development.

David M. Smith High-energy astrophysics; X-ray and gamma-ray detectors and instrumentation; solar, terrestrial, and planetary sources of gamma radiation.

Allan Peter Young Condensed Matter Theory, numerical simulation, disordered systems, quantum computing.