What is the Program in Biomedical Science and Engineering?
The graduate Program in Biomedical Sciences and Engineering (PBSE) reflects the interdisciplinary and collaborative nature of biomedical research at UCSC. PBSE predoctoral fellows have the opportunity to study biology at the molecular, cellular, and systems levels, and can take advantage of advanced laboratory facilities, computational tools, and a highly collaborative research environment.

What can first-year students expect in PBSE?
Students in the Program in Biomedical Science and Engineering do research rotations their first year along with taking the core courses associated with one of the following four interdisciplinary training tracks: Bioinformatics & Computational Biology; Mechanistic, Structural & Chemical Biology; Molecular, Cell & Developmental Biology; and Microbial Biology and Pathogenesis.

Do you have any diversity fellowships or other opportunities specific to your program?
Our program can nominate students for the Cota Robles Fellowship. Additional funding may be available through the Initiative for Maximizing Student Diversity (marcimsd.ucsc.edu), the Research Mentoring Institute (http://www.cbse.ucsc.edu/diversity/rmi_grad), and NIH Training Grants.

When are graduate applications due for your program?
December 1st

Who can I contact for more information?
Teel Lopez, Graduate Program Coordinator
(831) 459-2385, tablack@ucsc.edu

http://pbse.ucsc.edu
• Mark Akeson Computational Tools for Angstrom-scale Control and Analysis of DNA and RNA Using Nanoscale Pores
• Manny Ares Splicing and RNA Processing
• Vicki Auerbuch-Stone Innate Immune Responses to the Human Pathogen Yersinia pseudotuberculosis
• Phil Berman Biotechnology and Infectious Diseases
• Needhi Bhalla Meiotic Chromosome Dynamics
• Hinrich Boeger Chromatin Structure and Gene Regulation
• Roberto Bogomolni Biophysical Chemistry, Photobiology, Light Energy Conversion and Signal Transduction in Biological Systems
• Barry Bowman Membrane Function and Calcium Regulation
• Manel Camps Use of Random Mutagenesis for Studies of Evolution and for Therapy
• Bin Chen Mammalian Brain Development
• Rebecca Dubois Structure, Function, and Engineering of Virus Proteins
• Oléf Einarsdóttir Bioenergetics, Redox Metalloproteins, Electron Transfer, Proton Translocation, Flash-photolysis, Time-Resolved Spectroscopy
• David Feldheim The Generation of Neural Connections
• Lars Fehren-Schmitz Human Palaeogenomics & Molecular Anthropology
• Camilla Forsberg Hematopoietic stem cells, transcriptional regulation, chromatin, blood cell development, cell surface receptors, genomics
• Ed Green Genome Sequence Assembly and Comparative Genome Analysis
• Grant Hartzog How Chromatin Influences Transcription
• David Haussler Computational Biology
• Lindsay Hinck Cellular Interactions During Organogenesis and Tumorigenesis
• Ted Holman Bioinorganic Chemistry, Lipoperoxidase, Heme Binding
• Richard Hughey Bioinformatic Tools for Sequence Analysis and Prediction
• Melissa Jurica Structure and Functional Analysis of Spliceosomes
• Rohinton Kamakaka Transcriptional Silencing and Insulators
• Kevin Karplus Protein Structure Prediction and Design
• Doug Kellogg Molecular Mechanisms that Coordinate Cell Growth and Cell Division
• Marm Kilpatrick Ecology of Infectious Diseases and Population Biology
• Dave Kliger Dynamics of Biomedical Molecules in Vision, Allostery, and Folding
• Roger G. Linton Marine Natural Products, Drugs for Neglected Diseases, Chemical Biology, and Chemical Probes
• Scott Lokey Chemical Biology, Cyclic Peptides, Small Molecule Screening
• Todd Lowe Computational and experimental discovery of non-coding RNAs, microbial genomics, extremophile biology
• Pradip Mascharak Inorganic Chemistry, Drug Design, Protein Active Site Modeling
• Glenn Millhauser Prions, Metalllobiochemistry, Agouti and Melanocortin Signaling, Total Protein Synthesis
• Harry Noller Structure and Function of the Ribosome
• Karen Ottemann The Molecular Virulence Factors of Helicobacter pylori
• Carrie Partch Molecular Mechanisms of Circadian Rhythmicy
• Nader Pourmand Biosensors, microarray, nanotechnology, pathogens, sequencing, genotyping, DNA fingerprinting
• Jevgenij Raskatov Disease-Oriented Chemical Biology: Creating Novel Molecular Therapeutic Strategies
• Seth Rubin Biochemical Mechanisms in Cell Growth and Division
• Chad Saltikov Molecular Mechanisms of Microbial Redox Transformation of Toxic Metals
• Jeremy Sanford Post Transcriptional Control of Gene Expression
• Bill Saxton Cytoskeletal Motors and Active Transport Processes
• Bill Scott Structure and Mechanism of RNA Enzymes
• Beth Shapiro Inferring the Evolutionary Dynamics of Species and Populations Using Genome-scale Data Sampled Over Time
• Alexander Sher Development of Experimental Techniques for the Study of Neural Function
• Marilou Sisson-Magnus Microbial Ecology, Evolutionary Biology
• Donald Smith Mechanisms Underlying Responses and Adaptations of Organisms to Toxic Metal Exposures
• Michael Stone Structure, Function, and Assembly of the Telomerase Ribonucleoprotein
• Susan Strome Chromatin and RNA Regulation in C. elegans
• Josh Stuart Computational Functional Genomics
• Bill Sullivan Cell Cycle, Cytoskeleton, and Host-pathogen Interactions
• John Tamkun Chromatin Remodeling in Drosophila Development
• Zhu Wang Prostate Development and Cancer, Tissue Stem Cells
• Fitnat Yildiz Molecular Mechanisms of Biofilm Formation in Vibrio cholerae
• Al Zehler Exon Recognition and Alternative Splicing
• Jonathan Zehr Aquatic Microbial Ecology
• Yi Zuo Functions of Glia at the Synapses in the Mammalian Nervous System