

What can students expect to learn in the Biomolecular Engineering and Bioinformatics program?

Bioinformatics combines mathematics, science, and engineering to explore and understand biological data from high-throughput experiments, such as genome sequencing and gene expression chips. The program builds on the research and academic strengths of the faculty in the Center for Biomolecular Science & Engineering. One notable output from our research is that UCSC is the primary release site for the public version of the human genome. Other research in our department is focused on innovative new high-throughput sequencing technologies and using these data to explore genome-scale biological questions. Another department strength is the development of protein-based subunit vaccines targeting important human viruses. The graduate degree prepares the student for life as a cutting-edge researcher in bioinformatics, creating new tools to answer new questions.

What salary (on top of tuition and fees) do first-year Graduate Student Researchers in your program earn?

Our GSRs earn approximately \$7,100 per quarter.



When are graduate applications due for your program?

December 1st.

Who can I contact for more information?

Ed Green, Graduate Director
(831) 502-7394, ed@soe.ucsc.edu

Tracie Tucker, Graduate Program Adviser
(831) 459-5737, ttucker@soe.ucsc.edu

Phillip Berman Drug development, vaccines, AIDS, monoclonal antibody therapeutics, immunology, molecular cell/biology, recombinant protein production (commercial scale)

David Deamer Membrane biophysics, nanopore analysis, DNA sequencing, biomolecular self-assembly

Rebecca Dubois Human virus proteins, biochemistry, protein engineering, x-ray crystallography, molecular mechanisms of virus entry and replication proteins, virus nanoparticles, antiviral drug development, vaccines

Camilla Forsberg Hematopoietic stem cells, transcriptional regulation, chromatin, blood cell development, cell surface receptors, genomics

Richard Edward Green (pictured on front) Genomics, computational molecular biology, genome assembly, human evolutionary genetics, ancient DNA, high-throughput sequencing, mRNA-processing and alternative splicing

David Haussler, Investigator, Howard Hughes Medical Institute, Director, Center for Biomolecular Science and Engineering, Cancer genomics, Immunogenomics, Molecular evolution, neurodevelopment, comparative genomics, bioinformatics, computational molecular biology, statistical models, machine learning, neural networks

Richard Hughey Research Areas: Bioinformatics, hidden markov models, computer architecture, parallel computation

Kevin Karplus Prokaryotic genome assembly, nanopore data analysis

Todd Lowe Experimental and computational genomics, ncRNA gene finders, and high-throughput RNA sequencing to study the biology of extremophile archaea and bacteria

Nader Pourmand Director of the UCSC Genome Sequencing Center, Bioelectronics, biosensors, chemosensors, nanotechnology, single cell characterization, sequencing, genotyping, pathogen detection, DNA fingerprinting

Josh Stuart Computational functional genomics, comparative analysis of gene regulation, cross-species inference of gene networks, probabilistic graphical models

