

Bioinformatics

The explosion in biological knowledge spawned by various genome projects has created entirely new fields and industries, and a need for a new cadre of trained computational biologists who are familiar with biology, mathematics, chemistry, and computer sciences. A new interdisciplinary undergraduate major has been created beginning in fall 2001 leading to B.S. degrees with a major or specialization in bioinformatics. The major involves the Division of Biology and the Departments of Bioengineering, Chemistry and Biochemistry, and Computer Science and Engineering as well as researchers at the San Diego Supercomputer Center. This major is designed to provide career opportunities for B.S. graduates, as well as opportunities for future advanced training at the graduate level. Bioinformatics will have a tremendous impact upon our understanding of cellular functions, protein structure and design, evolutionary biology, regulatory networks, and the molecular basis of disease.

Admissions

Students wishing to pursue a study in bioinformatics may select from majors offered by the Division of Biology, or the Departments of Bioengineering, Chemistry and Biochemistry, and Computer Science and Engineering. A major in bioinformatics is available within each of the listed departments and divisions. All the participating departments have a substantially common curriculum, but each has its own emphasis through its electives, and there are some differences in the core requirements. There is a limited number of seats available campuswide and admission into the bioinformatics premajor and major will be based on academic excellence and preparation as measured by GPA and a written statement. Currently, the combined number of premajors is limited to 75 and the number of majors is limited to 50. These limits may change from time to time. The major, its specific requirements, and the screening criteria are listed in the corresponding catalog sections of the Division of Biology, Department of Bioengineering, Department of Chemistry and Biochemistry, and Department of Computer Science and Engineering.