

EXECUTIVE SUMMARY [NON-CONFIDENTIAL, NON-TECHNICAL ABSTRACT FOR PUBLIC INFORMATION OR PROGRAM PROMOTION]: State the application's broad, long-term objectives and specific aims, making reference to the potential public benefits of the project relevant to California. Do not include proprietary or confidential information. This may be distributed before the funding decision has been finalized.

It is important to expose college undergraduates to the cutting edge methods and technologies that are building upon the immense progress associated with the sequencing of genomes. We need to provide students with a dynamic and critical set of information-gathering skills and a framework within which to imagine their own professional futures in computational biology and bioinformatics.

The proposed two-course series in bioinformatics that delves more deeply into the biology, algorithms, statistics and programming underlying bioinformatics applications will provide a bridge for students in biology and computer science interested in entering the bioinformatics field.

Many biotechnology and genomics companies and academic laboratories are seeking workers with skills in bioinformatics. The two-semester sequence of courses and the technology enhancement will introduce computer scientists to bioinformatics, provide biologists with in-depth instruction in bioinformatics applications/algorithms, and provide access to technology, questions and opportunities for interdisciplinary collaboration that closely resemble what graduates will encounter in the workplace.