

**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.

There is a well-documented national need for development of curricula in bioinformatics, especially at the upper-division undergraduate level. Bioinformatics has been defined as “the science of understanding the structure and function of genes and proteins through computer-aided statistical analysis and pattern discovery.” A number of recent workforce studies have shown that there is a high current and unmet demand for people trained in bioinformatics. This is especially true in California, where there is a significant need for people with bioinformatics skills in the biotechnology and pharmaceutical industries in addition to academic research. This project will establish a foundation course in bioinformatics for third-year undergraduates, articulated with the biological science major, and available as an elective course for chemistry, computer science, and physics majors interested in bioinformatics. This project is part of larger effort being undertaken in concert with several campuses of the California State University (CSU) system with the support of the CSU Program in Education and Research in Biotechnology (CSUPERB) Bioinformatics Consortium, which is committed to integration of technology and faculty development in the area of bioinformatics education.