

EXECUTIVE SUMMARY [NON-CONFIDENTIAL, NON-TECHNICAL ABSTRACT FOR PUBLIC INFORMATION OR PROGRAM PROMOTION]:

The CAB³S curriculum is designed to prepare majors with bachelor's degrees from molecular biology, biochemistry, applied mathematics, computer science and engineering to complete a master's degree program in Applied Biotechnology. This program will focus on preparing students to enter the pharmaceutical industry where they will work in teams including experts from each of these fields. The first course they will take is a six-module *Survey of Biotechnology*. Each module will focus on an area important to the development of pharmaceuticals. The topics will be taken from essential information required to understand the design of drugs, the distribution of drugs in the human body, the engineering requirements for bringing a newly developed drug into large-scale production, and the business and regulatory requirements for bringing a new drug to the market place. The second specialized course, *Applications Training in Biotechnology*, will put the students into teams, composed of members with expertise in molecular biology, biochemistry, applied mathematics, computer science, and engineering, to solve problems like those faced in an industrial setting. The focus of these courses is for students to learn the basics principles and applications from each of the five areas so that they can intelligently participate in team interactions with members whose expertise lies in one of these five areas. This project requests funds to develop these courses using a coordinator and six teams of faculty from five departments in two different colleges—faculty who do not normally develop joint courses.