

**California State University, Fresno – Department of Biology
Graduate Degree Programs**

07/12/00

Certificate of Advanced Study Program in Biotechnology

California State University, Fresno offers a Certificate of Advanced Study Program in Biotechnology. This intensive one-year post-baccalaureate program emphasizes molecular biology and a wide range of laboratory skills at the forefront of modern biotechnology. The biotechnology field is growing rapidly, and as new products and applications are commercialized, there is increased need for highly skilled personnel capable of working in both research and production areas. Enrollment is limited to 12 to 15 students per year, who work closely with faculty in a variety of lecture and laboratory courses. Among the techniques studied are purification of biological macromolecules, gene splicing, DNA sequencing, culturing of mammalian cells, hybridoma production, and plant cell culturing and cloning.

The Certificate Program can lead to potential careers in expanding fields, such as drug and hormone production in the pharmaceutical industry, monoclonal antibody production for medical diagnostics, crop improvement, industrial bioprocessing and medical research. The program also provides a background for further postgraduate studies in fields such as biochemistry, molecular biology and agricultural biotechnology. Some of the courses may also be used at California State University, Fresno as components of master's degree programs in biology, chemistry, plant science, and related departments.