

CSUMB's new Biology major resulted in an influx of students interested in careers in biotechnology and medicine. The major is currently heavy at the introductory level, but a profusion of upper division students is anticipated for Fall 2009. We are requesting funding for the development of a new interdisciplinary upper division course, called Environmental Biotechnology (BIO 344L), that will use molecular biology to address local water quality issues.

Freshwater harmful algal blooms pose a serious threat to humans and animals. Acute exposure to waters contaminated by toxin-containing organisms is associated with liver failure and chronic exposure with increased rates of cancer (WHO 2009). The focus of the Cyanobacterial Harmful Algal Blooms (CHAB) research cluster is to use basic molecular biology tools to generate rapid methods to detect harmful organisms in freshwater samples. The BIO 344L course will use principles and techniques developed by the CHAB lab to train students for internship positions in biotechnology and fill a curricular gap in new Biology major.