April 2011 DRAFT

Strategic Plan
Department of Biological Sciences
College of Science
California State Polytechnic University

Vision & Mission Statement

Our vision is to become a community of internationally recognized teacher-scholars, using an evolving curriculum, integrated with hands-on activities to educate students on the theory and practice of the biological sciences and thus to develop critical thinking skills and become life-long learners and successful professionals, scientists, and entrepreneurs.

The Department of Biological Sciences at Cal Poly Pomona will:

- Prepare students at the undergraduate and graduate levels for advanced degrees as well as productive careers in an increasingly complex, technical, and multicultural world;
- Provide a broad-based curriculum that supports general biology as well as interdisciplinary studies in environmental biology and biotechnology;
- Support the integration of teaching and research to advance biological knowledge through classroom, laboratory, field, and computational studies;
- Foster collaboration and communication among departments, colleges, and surrounding communities; and
- Apply the University's learn-by-doing philosophy by integrating theory with practice to solve educational, environmental, health, and scientific problems of local and global communities.

The following template outlines our Strategic Plan for accomplishing the three primary goals of the Biological Sciences Department.

Goal 1: Advance excellence in teaching, learning, and scholarship using our polytechnic learn-by-doing-approach.

Objectives	Strategies	Success Indicators
1.1 Advance scientific knowledge through faculty mentored undergraduate and graduate student research.	• Hire faculty who have great potential for achieving excellence and synergy between research and teaching. • Increase the number of peer-reviewed publications with student authors. • Increase the number of faculty and student research presentations.	• # of faculty hired with research and teaching expertise. • # of peer-reviewed publications with student authors. • # of student authors of peer-reviewed publications.

	• Sponsor student research conferences, such as SCCUR. • Increase participation in Science Council Research Symposium, and national research conferences. • Increase participation in UR-BRONCO campus & departmental initiatives to promote undergraduate, graduate, & faculty research.	• # of faculty and student research presentations. • # of sponsored student research conferences. • # of faculty and student presentations at the Science Council Research Symposium and at national research conferences. • # of participants in UR-BRONCO from the Biological Sciences. • # of participants (undergraduate, graduate and faculty) and presentations affiliated with CSUPERB, Desert Studies Center, Ocean Science Institute, and the Council on Ocean Affairs, Science and Technology.
1.2 Increase the focus on undergraduate and graduate student laboratory and field-based research opportunities.	• Revise undergraduate and graduate courses and programs with a continued emphasis on laboratory and field-based intensive curriculum. • Increased admission and graduation requirements for graduate students. • Obtain additional faculty and student financial support from MBRS-RISE, HHMI, McNairs, CCRAA, Stem Cell Training Grant, etc. • Support the development of a Professional Science Master's (PABS) Degree program in Biotechnology. • Foster student internships in Biotechnology, Environmental Biology and Organismal Biology.	• # of revised lab and field-based courses approved. • Specific changes in admission requirements. • Total $ obtained for faculty and student scholarship from MBRS-RISE, HHMI, CCRAA, Stem Cell Training Grant, etc. • Progress towards approval of a Professional Science Master's (PSM) Degree program in Biotechnology. • # of student internships in Biotechnology, Environmental Biology and Organismal Biology. • # of industry partners involved with Biotechnology, Environmental Biology and Organismal Biology student internships.
1.3 Improve the infrastructure & staffing for teaching and research.	• Support the development of a new science building. • Modernize Building 8. • Increase the level of staffing to support teaching and research. • Support the submission of equipment grants to national funding agencies, like NIH and NSF.	• Progress towards development of a new science building. • # of modernizations made to Building 8. • # of newly hired staff. • # of equipment grants submitted to national funding agencies, like NIH and NSF.

	• Increase the acquisition of lab fees to support our wide array of highly technical student laboratory course offerings. • Seek additional financial support from Capital campaigns. • Improve out-of-classroom learning areas – BioTrek, Evolution Garden, Voorhis, etc.	• # of courses for which lab fees are acquired. • Total $ acquired from lab fees. • Total $ acquired from capital campaigns. • # of modifications made to support out-of-classroom learning areas. • # of courses making use of out-of-classroom learning areas.
1. 4 Focus on biotechnology, environmental biology and organismal biology.	• Hire tenure stream faculty in Biotechnology, Environmental Biology, and Organismal Biology.	• # of faculty hired in Biotechnology, Environmental Biology, and Organismal Biology.

Goal 2: Strengthen our diverse, learning–centered community to enhance interactions and embrace the future.

Objectives	Strategies	Success Indicators
2.1 Increase collaborative teaching and learning opportunities	• Offer joint appointments for faculty members with other science, engineering, and agricultural science departments. • Continued development of the PABS program. • Support student internships in Biotechnology, Environmental Biology, and Organismal Biology. • Support the student exchange program with Technology Park Malaysia (TPM). • Increase collaborations with neighboring institutions including Oak Crest Institute, City of Hope, Rancho Santa Ana Botanic Garden, etc. • Increase student and faculty collaborations with various industry partners. • Support the Biological Sciences Departmental Seminar Series. • Increase the number of guest speakers in courses from industry and from various local and regional institutions (especially in SCI 101/102, BIO 302, BIO 499 - Forensic Biology, Recent	• # of joint faculty appointments. • # of students in the PABS program. • # of student internships. • # of students graduating via the TPM program in two years • # of collaborative projects with neighboring institutions. • # of student and faculty collaborations with various industry partners. • # of Biological Sciences Departmental Seminars. • # of guest speakers in biological sciences courses. • # of international collaborations. • Progress towards development of study abroad programs • # of study abroad programs. • # of international field course trips.

	Advances in Biology, Blood Transfusion courses). • Develop international collaborations with Foreign Universities in Mexico, France, Argentina, etc. • Develop study abroad courses. • Support international field course trips to Mexico, Costa Rica, etc.	
2.2 Recruitment of a diverse faculty and student community	• Utilize the resources of the RISE , CCRAA, LSAMP, SEES programs to recruit diverse student population. • Utilize the resources of the ADVANCE grant to support and recruit a diverse faculty population.	• Demographics of student population. • Demographics of faculty population.
2.3 Promote a progressive curriculum that focuses on strategic growth areas.	• Recruit new tenure-track faculty in strategic growth areas. • Survey industry partners and alumni to gauge future growth opportunities and hiring trends. • Enhance and promote strategic growth areas.	• # of faculty hired in strategic growth areas. • # of industry partners contacted • results of industry surveys. • # of alumni contacted. • results of alumni surveys. • # of events dedicated to promotion of strategic growth.

Goal 3: Deepen our engagement with our city, region, state, nation and world.

Objectives	Strategies	Success Indicators
3.1 Increase community outreach in ways that are complementary to our existing programs	• Enhance the BioTrek exhibit for local schools and clubs • Hire Biology Educator • Enhance interactions with the LADDER program with the Pomona Unified School District and with Western University. • Continue the development of the 4+4 Bridge program with the Western University Medical School. • Enhanced involvement in local school district science fairs. • Development of International	• Development of the Evolution Graden exhibit associated with BioTrek. • # of local schools and clubs visiting the BioTrek exhibit. • Hiring of a Biology Educator • # of faculty collaborating with the LADDER program and Western University. • # of students enrolled in the 4+4 Bridge program with the Western University Medical School.

	research collaborations. • Faculty and student presentations at local, regional, national and international conferences • Development of a Clinical Laboratory Science collaboration with Cal State LA • Increase interactions with IPOLY High School	• # of faculty and students involved in operating and judging local school district science fairs. • # of faculty publications associated with International collaborations • # of students participating in the Clinical Laboratory Science collaboration. • # of faculty and IPOLY students involved in research and teaching collaborations.
3.2 Encourage national and global engagement through research and teaching collaborations with collaborators from other states and countries.	• Increase student and faculty activities that address global challenges that touch on natural and medical sciences. • Promote international programs with faculty input and design. • Promote international outside expert collaborations. • Recruit outside speakers to promote global importance of science disciplines. • Promote faculty presentations to public and to local professional organizations. • Increase funding for national and international travel for faculty and students.	• # of faculty & # of activities related to global challenges such as global warming, food supplies & medical care. • # of international programs and # of faculty & students involved in international programs. • # of international collaborations. • # of outside speakers invited to speak on global issues. • # of public presentations by faculty staff and students at local professional meetings. • Total $ obtained and expended on international travel for faculty and students.
3.3 Engage students and faculty in active learning pedagogies including undergrad research, study abroad, community-based learning, and internships.	• Use student research in teaching pedagogy to enhance curriculum. • Encourage and track number of student interns with industry.	• # of students enrolled in research supervisory courses. • # of student original research publications • # of student presentations on original research. • Surveys of students in industry positions.
3.4 Enhance the student pipeline by fostering sustainable connections	• Maintain compilation of current employment opportunities. • Enhance relations between alumni,	• Updates to list of employment opportunities

with K14, industry, and alumni for better recruitment, placement, and constructive feedback.	current students and the Biological Sciences Department. • Encourage outreach programs with local community colleges, secondary schools, and grade schools • Promote collaborations and faculty consulting with industry partners. • Improve alumni database for outreach activities. • Improve departmental website to disseminate information/news to the community for better outreach. • Encourage alumni participation in on-campus career symposia or career fairs. • Conduct meetings with alumni advisory boards. • Expand fundraising efforts devoted to outreach activities.	• Development of Web-based alumni contact forms & surveys. • Results of alumni surveys. • Participation in Alumni for a Day program. • # of outreach programs with local community colleges and school districts. • # of faculty-industry partnerships. • Updates to alumni database. • Updates to departmental website. • Institute tracking of alumni participation in on-campus events. • Development of an alumni advisory board. • Total $ raised related to outreach activities.