



# CALIFORNIA STATE UNIVERSITY, FULLERTON

Office of the Dean

College of Natural Sciences and Mathematics

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TO: Su Swarat, Director of Assessment and Educational Effectiveness

FROM: Marie Johnson, Dean   
College of Natural Sciences and Mathematics

SUBJECT: Dean's Evaluation: Department of Biological Science Program Performance Review

The Department of Biological Science conducted a Program Performance Review (PPR) in AY 2017-2018; the department's self-study, the external PPR committee report, and the Chair's response to the external review are attached to this document.

The PPR included a comprehensive review of the department's current standing with respect to programs, students, faculty, and resources as well as an outline of long term plans. The external review committee was comprised of four highly qualified individuals representing diverse viewpoints relevant to the Department's mission and goals. The review committee included one member from another department in the College of Natural Sciences and Mathematics (Dr. Phil Armstrong, Geological Sciences, CSU Fullerton), one member with expertise in science education from another college at Cal State Fullerton (Victoria Costa, Second Education, CSU Fullerton), one biology faculty member from a sister CSU (Stuart Wooley, Biology, CSU Stanislaus), and one biologist who currently serves as Associate Provost for Research at a CSU institution (Jeff Thompson, Biology, CSU San Bernardino).

## Program Strengths

**Vision and goals.** The department has a clearly articulated vision of itself and its role in the college, university, and larger society. The department goals are appropriate and aligned with the University Strategic Plan. The Long-Term Planning goals outlined on page 29 and following of the PPR are appropriate and extensive.

**Faculty member commitment.** The department is strong and collegial with faculty members deeply committed to student success in the classroom and to mentoring students in research activities. The department is especially commended for its pioneering and on-going leadership role in Supplemental Instruction.

**Curriculum reform.** Department faculty members have engaged in extensive and thoughtful curriculum reform with a focus on active learning and streamlining paths to graduation while maintaining appropriate course rigor.

**External funding.** Department faculty members are research active with a number of faculty successfully securing external funding in very competitive fields.

**Excellent staff.** Staff members are exceptionally committed to the department and often go above and beyond in performing their duties.

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## Recommendations

**Biol 151 DFW rates.** DFW rates in Biol 151 have averaged 45% over the preceding four semesters. Faculty members have engaged in multiple attempts to raise these rates and these attempts must continue as this course serves as the gateway to the major. Faculty note a lack of student enthusiasm and preparation. The amount of required course material should be seriously considered. Most students take Biol 151 in their first term and, starting Fall 2018, these same first term students will be simultaneously enrolled in CNSM 101 Think Like Einstein. CNSM 101 is designed to develop our students critical thinking skills as well as the soft skills required for college success. We hope such a course will increase student success in other first semester courses such as Biol 151.

**FTES funding.** The department has experienced a loss of FTES and an increase in majors. The reasons for decreasing FTES are well documented in the PPR; the increase in majors may result from reduced impaction as well as student interest. The loss of FTES causes decreased funding at the same time that the increase in majors requires additional support both in materials for labs and student research and in faculty time for advising and mentoring. Given these fiscal realities, the department may need to prioritize which of those activities contribute most strongly to the mission. Without additional funding, field trips, lab work, small enrollment classes, and release time for non-teaching duties may need adjusting.

**Graduate program size.** A question for the department to consider is how many graduate students is ideal and what are the criteria for making this decision? Criteria may include number of tenure and tenure track faculty, lab and office space, and graduate student roles in mentoring undergraduate research.

**Space renovation.** The department is encouraged to think broadly about space in the context of the upcoming McCarthy Hall renovation. What physical layout would best contribute to student success? Could research groups share space to maximize efficiency and build intellectual synergies? If the renovation will be done in stages, what should be done first to increase transparency, build community, and give our first-generation students a sense of belonging?

**Equipment repair and purchase.** The department should maintain, revise, and update an equipment life cycle database with items listed in priority order to facilitate purchase and repair of large ticket items. This list can also be used to justify carry forward funding.

**Alumni engagement.** The department should consider how it engages with its alumni. Alumni can be powerful supporters; they can provide internships for current students, jobs for graduates, and philanthropic support both in dollars and in kind donations. How does the department track its alumni and what sort of engagement can these alumni have with the department? Are the most informative questions being asked on the Exit Survey?

**Culture of service.** The Program Performance Review was largely written by one person with some information gathering by others and is symptomatic of a department which historically has required the Chair to do nearly all of the administrative work. Involving other faculty in administration of this department will strengthen the unit.