



# CALIFORNIA STATE UNIVERSITY, FULLERTON

Office of the Dean

*College of Natural Sciences and Mathematics*

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12 May 2022

TO: Su Swarat  
AVP for Institutional Effectiveness & Accreditation Liaison Officer

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

SUBJECT: Dean's Evaluation: Department of Geological Sciences Program Performance Review

The Department of Geological Sciences conducted a Program Performance Review (PPR) in AY 2021-2022; 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, faculty, student support, and resources as well as an outline of long-term plans. The external review committee was comprised of three 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 (Merri Lynn Casem, Professor and Chair, Biological Science, CSU Fullerton), one member with expertise in science education (Christine Irwin, alumnus and high school science teacher), and one geology faculty member from a sister CSU (Claire Todd, Professor and Chair, Geological Sciences, CSU San Bernardino).

## **Program Strengths**

**Student focus.** The department was recognized for its commitment to student success. In particular, BS students are required to write a thesis (BA students may opt to write a thesis). This commitment is time and energy intensive for students and faculty alike but is an exceptional high impact practice. Further, the department makes tangible efforts to connect with alumni and establish strong ties that benefit students seeking employment upon graduation.

**DEI initiatives.** The department is commended for completing Unlearning Racism in Geoscience (URGE) training together. Their discussions on these topics are reflected by their close-knit, family atmosphere, which permeates department culture. The faculty, staff, and students are committed to the same goals and work collaboratively to achieve them.

**Field based curriculum and research.** The department has developed a very strong field-based curriculum. This curriculum is enhanced by faculty who undertake extensive research field work and involve students in these inquiries. This field background is essential to our graduates who wish to earn professional licensing credentials.

## **Areas for growth**

The external review committee identified several areas of opportunity and one area of concern.

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**Continue DEI work.** The review committee recommended that the department continue to build on its DEI momentum. Identifying DEI focused professional development opportunities at all levels (t/t faculty, lecturers, TAs) should be on-going. The department should also develop metrics for success to identify which actions are most beneficial. Geology will be searching for a tenure track resource geologist next academic year, and thus has an opportunity to think carefully about search practices and decision rubrics using a DEI lens.

The Chair, in his written response, notes that the department is planning to expand the URGE training discussions to TAs and lecturers next year and to implement a department level DEI Committee. This work will also be reflected in the revised Department Personnel Standards (one set for tenure track and a different set for temporary faculty) the department will write next year. Two faculty are also designing a peer mentoring program, being piloted this term, which will further work to build inclusion and improve student retention.

**Assessment.** Further refinement of assessment measures is recommended. This additional refinement may yield insights about student success across demographic populations and lead to initiatives that further support the department's DEI efforts. A specific opportunity may be present with Geol 101 which can be a tool for student recruitment.

The Chair states that the department plans to refine program level SLOs into incremental outcomes that students can master as they progress to degree. Two recent hires have expertise in assessment, expertise which will be leveraged, and the faculty members given appropriate leadership credit in the RTP process.

**BA and MA options.** The department has an established BA major option for students. Students who opt for this degree program are not required to write a thesis. Many of these students are future teachers and thus require different support from those seeking employment within the geosciences. The department is encouraged to reimagine the BA curriculum and to maximize the visibility of these majors by having them connect with area K-12 schools and community colleges. These efforts may also raise the profile of the department and lead to an increase in student enrollment. Similarly, the department is urged to consider adding a non-thesis MA option for students who are seeking an advanced degree to progress in their profession.

The Chair reflects that these suggestions are current topics at recent faculty meetings. Connecting with local schools may also provide an ideal service opportunity for students involved with the peer mentoring program being developed.

**GE course coordination.** The department is encouraged to coordinate the general education courses they offer more intentionally. Providing consistent structure regarding implementation of student learning outcomes, adoption and use of a single lab manual, and recognizing the role of lecturers in building inclusive classrooms that entice students to major in geology should be examined.

The Chair will ensure all faculty are aware of OER resources appropriate to these courses and work towards reducing the number of labs that a TA has the opportunity to develop on his or her own. The department GE coordinator will be charged with standardizing learning outcomes for Geol 101 and Geol 101L.



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*Summary.* The Department of Geological Sciences is a student-centered, highly effective department which works together towards common goals. The field-based curriculum, research productivity of the faculty, and efforts to apply a DEI lens to all aspects of the department are commendable. Continued focus on these DEI initiatives, improved assessment measures, tighter GE course coordination, and examining the non-thesis BA (and potential MA) programs, combined with strong support from the college and university, will keep the department moving towards sustained excellence.

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