Position title: Assistant or Associate Professor position in Chemistry Education.

Start date: August 2020

Position Summary: The position is in the Department of Chemistry & Biochemistry at San Francisco State University.

The Department of Chemistry & Biochemistry offers undergraduate degrees in Chemistry (BA and BS) and Biochemistry (BS) and graduate degrees in Chemistry (MS) and in Chemistry with a concentration in Biochemistry. The department has approximately 400 undergraduate majors and 30 graduate (master’s) students. Faculty actively seek funding from federal agencies and private foundations to support research programs, acquire major equipment, and support student training programs. Major research instrumentation available in the department includes two 500 MHz NMR instruments, a field emission scanning electron microscope (FESEM), a powder X-ray diffractometer, an EPR, and several high-resolution mass spectrometers in a mass spectrometry facility. A comprehensive list of departmental resources and College of Science & Engineering facilities can be found at http://www.chemistry.sfsu.edu/resources_1fac_equip/0layout.php.

The position brings to the Department an emphasis on Chemistry Education. The position includes a full-time faculty workload per the Collective Bargaining Agreement between the California State University and the California Faculty Association. The workload primarily includes teaching undergraduate courses in general chemistry, graduate courses, and courses in the area of specialization; leading an active and externally-funded research program that advances knowledge in the field of one’s specialty; actively involving SF State undergraduate and graduate students in scholarship; and providing meaningful training opportunities for students.

The primary teaching assignments will be in Introductory Chemistry and General Chemistry lab and lecture (CHEM 100, 115, 215, 216), and in the faculty member’s area of specialization. The specialized course may be offered at the graduate or undergraduate level. Innovative additions to curricula, including courses and workshops, are welcome.

The scholarship should be discipline based education research and may address a range of topics in the areas of Chemistry Education. Ideally, the scholarship will complement the educational mission and goals of the Department of Chemistry & Biochemistry and help address areas of concern with respect to achieving those educational goals. We envision the new hire’s scholarship would focus on increasing equity and inclusion in Chemistry & Biochemistry by creating more effective teaching and learning environments, particularly in lower division courses.

The position allows for interaction with SF State College of Science & Engineering discipline-based education faculty in the Departments of Biology, Physics & Astronomy, and Mathematics; with members of the College of Science and Engineering’s Center for Science and Mathematics Education (CSME); and with members of the Center for Equity and Excellence in Teaching (CEETL). The candidate will also be able to participate in the
development of a Master’s concentration in Chemistry Education, focusing on scholarship of teaching and learning.

Additional responsibilities include, but are not limited to, productive participation on departmental, college, and university-wide committees; mentoring and advising graduate and undergraduate students; holding regular office hours; curriculum development and improvement, particularly with regard to student learning outcomes; participating in professional meetings in their discipline and peer-review activities; and remaining current in both subject area and teaching methodologies.

**Essential Job Tasks:**

- Prepare course materials such as syllabi, lecture and discussion materials, readings and assignments, assessments and exams and learning resources;
- Teach undergraduate and graduate courses that engage students and encourage active learning in both the lecture and research/scholarly work environments;
- Plan, evaluate and revise curricula, course content, course materials, and methods of instruction;
- Develop course materials that are linked to student learning outcomes for undergraduate students in the area of general chemistry and for graduate students in the area of specialization;
- Evaluate and grade students’ class work, assignments, papers, etc. in a timely manner;
- Compile, administer, and grade examinations or other learning assessments;
- Maintain student grades and other required records or reporting materials;
- Participate in assessment activities and program reviews as directed by the Department of Chemistry & Biochemistry;
- Plan, evaluate and revise curricula, course content, course materials, and methods of instruction;
- Hold regularly scheduled office hours for the purpose of advising and assisting students;
- Supervise and train students in the technical skills needed to conduct research in their research program;
- Mentor undergraduate and graduate students in research practices from technical skills to data analysis and experimental design and including writing and presentation skills appropriate to their professional development;
- Actively engage in research in one’s field of interest by leading an active and externally-funded research program;
- Present research findings in peer-reviewed journals, books, or professional conferences and meetings with SF State students as co-authors;
- Actively engage in the scientific community by participating as a reviewer for publication and grants and participating in meetings and collaborations as needed in one’s field;
- Actively participate on assigned department, college and university committees in accordance with Department of Chemistry & Biochemistry or College of Science & Engineering needs, and SF State's strategic vision;
- Actively participate in collegial interactions in fulfilling service assignments and other duties at the department, college, and university level;
- Additional duties as assigned.