

**FACULTY NEEDS ASSESSMENT APPLICATION**  
**Fall 2017**

Name of Person Submitting Request:		<b>Sheri Lillard</b>
Program or Service Area:		<b>Chemistry</b>
Division:		<b>Science</b>
Date of Last Program Efficacy:		<b>Spring 2016</b>
What rating was given?		<b>Continuation</b>
# of FT faculty 6 (+ 1 FT temp)	# of Adjuncts 20	Faculty Load ( <b>per semester</b> ): 13.90 (EMP)
Position Requested:		Full-Time Faculty (1 of 2)
Strategic Initiatives Addressed: <a href="#">Strategic Directions + Goals</a>		Access, Student Success

1. Provide a rationale for your request. (Explain, in detail, the need for this position.)

The demand for Chemistry courses at both the introductory level and major's preparation has increased. For Fall 2017, the full-time faculty are covering approximately 37% of the courses we offer. Without our temporary FT faculty, the number decreases to 33%, making the FT temporary position permanent a necessity.

Additionally, our department cannot solely rely on our adjunct instructors to cover the rest of the classes we offer to students. In the past two semesters, we had several adjunct faculty quit after the semester has started, due to securing full-time employment. Consequently, it makes staffing classes incredibly difficult, let alone a class that is already in session. Moreover, chemistry always had a limited pool of adjunct faculty, and in the past few years, we had to scramble to hire qualified instructors a few days before the semester starts. To overcome these challenges, our department heavily relied on a waiver (67% rule), which requests permission from Human Resources to allow part-time faculty to teach above the cap. This is something that our department wants to avoid for future semesters. It is stressful and does not benefit students having instructors that are spread too thin. Overall, the employment opportunities for those meeting minimum qualifications in the discipline are excellent (<http://www.bls.gov/oes/current/oes192031.htm#>), however because part-time hourly work cannot compete with the opportunities available in the field, this makes adjunct faculty hard to keep.

The increased interest in transfer programs in STEM fields has pushed demand for major's preparation in recent years. The department is simply unable, given current staffing levels, to meet the demand for career paths at the associate's and bachelor's degree levels for qualified students. One plausible solution is to increase our full-time faculty. This will alleviate the pressure of being constantly understaffed, but it will also provide a consistent quality in education that our college aim to provide for our students.

2. Indicate how the content of the department/program's latest Efficacy Report and/or current EMP supports this request and how the request is tied to program planning. (*Directly reference the relevant information from your latest Efficacy Report and/or current EMP in your discussion.*)

The trends for allied health and STEM (Science, Technology, Engineering and Math) pathways were identified in the last program efficacy (Efficacy, pp. 27-28). We see more students with an

interest in pursuing a STEM career and/or allied health pathway. In addition, UC-Riverside's medical school and its spotlight on the lack of medical providers in the Inland Empire has spurred even more interest in the community for STEM preparation. We continue to support major's preparation evening classes (p. 8) for students pursuing STEM pathways who work during the day, and one-day Fri and Sat sections of CHEM 101 and CHEM 150 for working students. The tremendous growth in general chemistry (150/151 – 10 sections FA17), and organic chemistry (212/21 – 5 sections FA17) reflects this trend. General chemistry is required for all STEM pathways, and organic chemistry is required for chemistry and biology pathways.

3. Indicate any additional information you want the committee to consider (*for example, course fill rates, regulatory information, compliance, updated efficiency, student success data, planning, etc.*).

To address the drop in efficiency, we have added more sections of major's preparation Chemistry classes last year. The lower cap on these classes reduces efficiency, but improves the number of degrees granted as the general and organic chemistry sequences are required for the Chemistry Associate's Degree.

Chemistry is a central science and the entry-level courses for pathways in nearly all Allied Health Career Technical Education (CTE), transfer programs, and all Science, Technology, Engineering and Mathematics (STEM) transfer programs. The restructuring of Anatomy and Physiology resulted in Chemistry being the first course to multiple subsequent courses along the allied health pathway. General Chemistry is required for all chemistry, biochemistry, biology, ecology, microbiology, geology, earth sciences, physics, and engineering transfer students. Also, General Chemistry is required for medical, pharmacy, dental and other allied health professional schools. It is usually the first course at the university level due to prerequisite sequencing of other majors or mathematics prerequisites to begin a sequence. When Chemistry is unable to provide sufficient sections, all areas of science and allied health feel the consequences of too few students in the pipeline. This impacts the efficiency and degree attainment of the institution.

We have grown as fast as possible to accommodate demand and support the mission of the college, but we have reached the limit of our adjunct pool. We generated an average faculty load (FTEF) of 13.90 full-time equivalent faculty with six full-time positions + 1 temporary FT faculty (2016-2017 EMP). Currently (Fall 2017), only 37% of our sections (16 out of 43) are taught by FT faculty.

The district has asked us to grow our FTES generation because this is a program that can help achieve the growth required to capture more state funding. However, with our current staffing level this is not a sustainable activity.

4. What are the consequences of not filling this position?

We will need to cancel more classes due to lack of qualified instructors. In the past few years, we consistently had at least one part-time faculty teaching more than 67% every semester. Only because we were able to hire a FT temporary faculty, were we able to minimize this situation. If we lose this FT faculty position, we cannot maintain instructional quality. We will have to scale back our offerings without full-time faculty. This means the institution will have fewer degrees granted in all STEM fields, decreasing the transfer-readiness of our students and providing fewer qualified students to the allied health (nursing) pipeline.