

(3) Statement from the candidate on teaching, research, and service addressing accomplishments since the last review and future plans and goals.

This is the first time that I have been through a post-tenure review as that first review would have occurred while I was serving as interim dean of the School of Sciences and Mathematics. This review covers the period that begins with fall 2002 when I returned to the department as chair.

Being a department chair for 16 other roster faculty, ten-plus adjuncts affects the other areas of my responsibility (teaching and service)..

Teaching

In the fall semester I typically teach CHEM 101 and CHEM 521 plus coordinate the departmental seminar program (CHEM 490). In the spring I teach CHEM 102 and CHEM 492 (Senior Seminar).

Teaching remains my first love of the tasks that we perform. I see myself as both a coach and a gatekeeper. As their instructor I want them to learn a basic set of facts and also how to apply those facts. They also need to learn how to think, and they need to learn how to learn. I want to teach them the tricks of the trade and to instill some enthusiasm about chemistry in their hearts. For a few I want to inspire them to aspire becoming a chemist. As a gatekeeper I must make sure that they possess a certain level of competence at the end of the course. I do not grade on a curve but apply an absolute scale. The bar is set at a certain height, not to be lowered. That's the gatekeeper function. The function as a coach is to help them build as tall a ramp in terms of acquired skills and knowledge for them to then use as their launching pad to clear the bar.

CHEM 101 General Chemistry

The students who teach take this course are non-science majors or are pursuing a career in allied health. Some are poorly prepared or come with an attitude of fear or trepidation. While maintaining high standards in the course I try very hard to encourage the students and to excite them about chemistry. Many come to the class with a very high level of preparation and the task is then to keep them from getting bored.

CHEM 102 Organic and Biological Chemistry

This course is the continuation of CHEM 101. The first 60 % or so is devoted to organic chemistry with the second portion of the course addresses a few topics in biochemistry. In order to not "blow away" the students I avoid a mechanistic approach. While it relies heavily on memorization, this is a learning method that most of these students are not adverse to. I try to emphasize the identification and nomenclature of functional groups and their physical properties. We study reactions, particularly those they will encounter in the subsequent biochemistry portion of the course. I also try to show the relevancy of

what they are learning from their perspective as a consumer. There are no applications of mathematics in this course.

In both CHEM 101 and 102 I believe in quizzing students often, typically every class day after the first week except for the class meetings immediately before, of, and immediately after a test. That generates a lot of work for me, but it helps to keep these students on task and gives me an insight into their level of comprehension.

CHEM 521 Instrumental Analysis

I teach the spectroscopy portion of this course that is team taught with Professors Asleson and Kinard. I have approximately twelve lectures to cover material that could easily fill up a semester long course. It is akin to seeing fifteen countries in a twelve day trip to Europe. My goals are to cover the basic fundamental processes involved in a qualitative manner, to go in-depth as to the actual instrumentation, to cover basic analysis methods with each technique, and discuss the pit-falls and interferences that can be encountered. I test the material at the end of the month using a short answer/ short essay format.

While I have made some use of the class management portion of WebCT for grades I have not had the time to fully explore this teaching aid. I do make use of my web site as each of my courses has a page that contains syllabi, sample tests, study hints, and other information.

In order to bring "relevancy" to courses and to increase opportunities for students to improve their written communications skills I have implemented assigning short projects in my 100-level introductory courses. These one to two page assignments ask students to write about

- 1) articles for the popular press concerning chemistry or the environment (Newsweek, Time, US News & World Report, Charleston Post & Courier)
- 2) compounds, elements, or pharmaceuticals of interest
- 3) famous chemists

These are due each time they take a test.

The efforts that I have made to improve my own teaching include:

1. Creating a teaching portfolio and updating it periodically.
2. Sitting in on colleague lectures and observing their techniques and lecture strategies.
3. Inviting colleagues to sit in and observe my lectures and making comments.
4. Attending Faculty Development Seminars sponsored by the Center for Effective Teaching and Learning
5. Making invited presentations at Faculty Development Seminars.
6. Keeping up with articles in the Journal of Chemical Education .

My teaching goals are to:

1. Introduce more current interest items into CHEM 101 and CHEM 102.
2. Make more and better use of the World Wide Web and other internet resources for student use as well as my own.
3. Institute a "Molecule of the Day" and/or a "Chemist of the Day" to start of each lecture, particularly in CHEM 101-102.
4. Add new literature references to my portion of CHEM 521 lecture.
5. Become a more effective lecturer by slowing my pace and being clearer and more concise in my descriptions and discussions.
6. Incorporate more opportunities for students to exercise oral and written communication skills.
7. Inculcate a more professional attitude in the students.
8. Encourage students more and to excite them more about chemistry.
9. Enhance health and safety aspects and student awareness of these in lab courses that I might teach.

RESEARCH

Having no dedicated lab space makes it difficult to conduct research. I try to keep abreast of the literature and have most recently begun using the newly acquired Web of Science. In a new chemistry building where there would be research space and freed of the shackles of the chairmanship I would like to renew efforts in spectroscopic research.

SERVICE

My vita lists my service record. Most of my day is devoted to service as department chair. Recently an additional aspect of that has been to lead departmental planning for a new facility. In the coming few years we will be conducting a number of searches as faculty retire. My goal is to continue the excellence of the department through this time of transition.