Present: Selker (acting chair), Bond, Ciuffetti, Fisk, Markle, Pedersen, Rettig, Sanchez, Strickroth, Watrous

Absent: Bird, Brauner, Collins, Feller, Francis, Gobeli

Guests: Sherman Bloomer, Denise Lach, Harold Parks, Michael Quinn, Steven Radosevich, John Westall

I. Approval of Council Minutes

The minutes of the May 8, 2003, meeting of the Graduate Council were approved as distributed.

II. Chemistry Graduate Program Review Report

The Graduate Council conducted a graduate program review of Chemistry on January 30, 2003. Elaine Pedersen (Health and Human Sciences), chair of the review team, highlighted the summary and recommendations in the review, giving high marks to John Westall and the Chemistry department for the valuable contributions this department makes to the university in spite of the difficult budget climate at Oregon State University. Recommendations for departmental consideration and action are listed below:

**Graduate Teaching and Advising**

A re-examination of required graduate coursework is suggested. Given size of the faculty related to the various traditional divisions of chemistry, the Department should consider reducing the total number of graduate courses that are offered. Although the courses needed for graduate students will vary according to sub-discipline, an effort should be made to have a common set of degree requirements, for example, the number of courses, research proposals, seminar presentations, cumulative examinations, and so forth.

Continue involvement in multidisciplinary and interdisciplinary programs. This offers graduate students the opportunity for additional coursework and an enhanced graduate and research experience.

As faculty members retire, discipline-specific graduate coursework should be re-examined to insure compatibility with research areas identified as important to the Department and the research specialties of the faculty.

To insure adequate graduate faculty for various divisions and research interest group areas it is critical that new hires be tenure track faculty to insure no further loss of graduate faculty and research capabilities.
Faculty and Research Programs
While two of the three hires made in the last five years are women, one is an individual of color; the total number of faculty that are women and individuals of color is low. The Department is encouraged to continue to search for qualified women faculty and people of color as new hires by identifying capable women and individuals of color as recruiting targets as part of their hiring process for the replacement of retiring faculty.

It is critical that start-up funding be available for recruiting new tenure track faculty as senior level faculty retire. Substantially higher start-up funding will probably be necessary to attract women and people of color.

Although current faculty are productive and successful in acquiring grant funds, the changing needs of industry, the failure to refill faculty positions, and the need to replace faculty who are soon to retire, place the research programs in potential jeopardy. If research programs are in jeopardy, so is the graduate program. It is critical the Department be allowed to continue to hire faculty and be provided adequate start-up funds to recruit strong faculty.

Graduate Students
To rectify the situation described above, the Department is considering a variety of initiatives. Some of the initiatives can be pursued with few new resources (Chemistry Self Study Report, 2002). The review committee supports these initiatives and recommends their implementation:

- Re-examination of required graduate coursework and restructuring of TA workloads.
- Continue to recruit international students.

Other initiatives would require additional resources, but it is clear if the Chemistry Graduate Program is to remain strong and keep its current status these actions will be necessary. The following are recommended:

- Hire more graduate faculty.
- Rehabilitate existing facilities and pursue construction of a new facility.
- Increase graduate stipends to stay competitive.
- Increase access to advising and faculty interaction during the graduate student’s first year.
- Identify potential needs of incoming students and match applicant interests with faculty research.
- Provide opportunities for first-year students to learn more about each professor’s research activities.

Facilities
While a thorough cleaning would help and an immediate major renovation will provide some relief, the Department badly needs a new facility. Postponement could result in
compromising a program of otherwise excellent quality. Therefore, the problems with the laboratory facilities must receive high priority.

As indicated in the 1989 report, the Department must address the safety/health issues of graduate student desk space located in laboratories.

Resolving the issue of funding for the three major shared instrument facilities (currently supported via internal and external funding sources) would be beneficial to the Department.

Administration

Given that most graduate students hold GTA and GRA appointments in the Department and the importance of these positions to the research and teaching missions, the Department might consider ways to increase graduate student involvement. For example, the Department might consider graduate student participation on the Long-range Planning Committee or other committees as appropriate. Graduate students offer perspectives and insights that can represent valuable contributions to the Department.

Other—Electrical and Machine Shops

The Department needs to locate sustainable funding to support shop needs particularly in the machine shop area.

John Westall, Chemistry Department chair, said that hoods meet exhaust standards but might not pass a federal inspection. Sherman Bloomer (Dean, College of Science) said that the building would probably not pass an inspection by the Occupational Safety and Health Administration (OSHA). Barbara Bond (Forestry) said that OSHA inspected Cordley Hall in the 1980’s and required many changes. Barbara Watrous (Veterinary Medicine) reported that OSHA had inspected Vet Med recently. Westall reported that Chemistry departments across the country are reporting surprise spot-checks of their facilities by OSHA. Doug Markle (Agricultural Sciences), noting that the external reviewer detected odors in the Chemistry building that he had not smelled in many years, asked whether students or faculty were complaining of sickness or headaches. Westall responded in the affirmative. He reported that the third floor must be shut down on hot days because ether can boil in the laboratories. Bloomer said that Gilbert Hall is unfixable as a laboratory structure. The College of Science is looking into the possibility of moving the Chemistry Department into Linus Pauling Hall when it is built.

Bloomer told the Council that he is encouraging departments to rotate department chairs because he is “burning out some of my best people.” Burnout is such a major problem that it overrides the cost of lost continuity when leadership changes within a department.

The situation with declining faculty numbers has become worse since the program review took place due to additional retirements declared in the last two months. Because money is not available to rebuild faculty numbers from state funds, funds must be found from other sources. Bloomer did not believe that the Departments of Chemistry and Physics could support faculty salaries with grant monies. According to Westall, faculty who obtain grants from the National Institute of Health have a greater ability to generate salary funds than those whose work is
supported by National Science Foundation funds. The major challenge in hiring new faculty is finding money to remodel and equip a laboratory (startup funds) for those faculty members. Westall reported that they lost two candidates to other institutions earlier this year; startup costs may have been part of the problem.

Chemistry has been very successful at modifying workloads as the composition of faculty FTE changed. Many of the 100-level course instructors are getting higher evaluations from their students than tenure-track professors. Although tenure-track faculty recognize the fixed-term faculty as valuable, fixed term faculty do not serve on the graduate faculty, with the exception of one or two who serve on specific graduate student advisory committees. Given that one-quarter of the faculty has retired since Thanksgiving, the department is being forced to make difficult staffing choices. The research level can be sustained, but traditional teaching areas might suffer from declining breadth. Five of the six people who have retired this year will continue to work in the department in some way. Asked whether collaboration with another department could fill some of the gaps in faculty resources, Westall said that several graduate students are working in collaboration with other departments and in other labs now. Asked whether the OSU 2007 planning would affect Chemistry, Bloomer said that the planning efforts such as those undertaken in Chemistry have been the source of the best thinking in OSU 2007. Chemistry serves as the foundation for a number of departments in the university.

The report was approved as presented.

III. Mathematics Graduate Program Review Report

On February 28, 2003, the Graduate Council and the Curriculum Council conducted a joint undergraduate and graduate program review. Michael Quinn (Computer Science), the Curriculum Council representative on the review team and co-chair of the review presented the report to the Graduate Council. The executive summary of the report is included in these minutes as follows:

Mathematics is central to any college or university, especially to one with strong science and engineering programs. Oregon State University must protect its interest in the Department of Mathematics. While the quality of the undergraduate program is good, the graduate program is clearly in decline. Further reductions in the number of graduate faculty members would accelerate that decline, with a significant ripple effect on the rest of the campus. Thousands of OSU students take service courses from the Department of Mathematics each year. These courses rely upon an adequate supply of high quality graduate students. With this concern in mind, we make the following recommendations to the Dean of Science and the Provost:

1. Establish 25 as the minimum number of graduate faculty in the Department of Mathematics. (This number would include Professor Robert Burton, who holds a full-time administrative position outside the Department.) Provide the Department with a budget enabling it to hire new graduate faculty members to reach this size.
2. Modernize the networking infrastructure within Kidder Hall.
3. Ensure the Department has a budget large enough to hire an adequate number of graduate teaching assistants to support its service-teaching mission.

Since 1990, the Department of Mathematics has suffered from flat or shrinking budgets. The general feeling among tenured faculty members is that the Department has absorbed more than its share of the pain as the College of Science has struggled to put its financial house in order. About one-third of the faculty members currently employed by the Department hold fixed-term appointments, but some faculty still have not accepted this new reality. Instead there is evidence the tenured faculty members are waiting for the situation to improve. While many of the Department’s woes can be traced to inadequate budgets, other problems stem from inadequate internal processes. We encourage all of the faculty members in the Department to look for opportunities to solve problems under their control. We make the following recommendations to the Department of Mathematics:

1. Continue to simplify academic programs while maintaining core competencies.
2. Pursue innovative pedagogical strategies to maintain student opportunities while reducing the cost of providing them.
3. Eliminate from the catalog courses that have not been taught in the past three years.
4. Improve the computing infrastructure of the Department, probably by moving to commodity, Windows-based computers and providing remote access to a high-performance Unix system. Ensure instructors have PCs in their offices.
5. Improve the faculty governance process to ensure progress can be made solving problems under the control of the Department.
6. Create a handbook for instructors and provide regular opportunities for instructors to meet with the leadership of the Department.
7. Find new sources of funding. In particular, if there is to be a large capital campaign associated with OSU 2007, ensure that the centrality of the Department to the mission of the University and the Department’s particular financial needs are well articulated.

Asked whether last-minute cancellation of classes is preventing students from completing their degrees in a timely manner, Harold Parks, chair of the Mathematics Department, said that core courses have not been cancelled. However, delay in scheduling electives has required some students to amend their graduate programs of study. According to Bloomer, the requirement that a minimum of eight students be enrolled in graduate courses was a university rule made years ago by Roy Arnold (Provost at that time). Mathematics has many problems meeting this threshold, but Bloomer said that, if the department can justify a small enrollment course, he would permit it.

The Council discussed concerns in the review report about the declining number of tenure-track faculty. Suggesting that Mathematics will never again have 30 tenure-track faculty members, Bloomer said that 25 faculty members is a reasonable number to use as a target.

Bloomer reported that he has secured funding for rewiring Kidder Hall, where the Mathematics is located. Negotiations are now taking place to reduce the variety of independent computer
systems in departments within the College of Science and to rely instead on a central server. Earlier efforts to improve computer systems by voluntary efforts at the department level have been replaced by a mandate for change. In response to an observation that graduate student access to computing could be enhanced through the purchase of inexpensive personal computers, Parks reported that their computer support person dislikes PCs and especially dislikes Microsoft products. Some faculty members consider the alternatives to their UNIX system unacceptable. Bloomer stated that the move to a central server will require shifting computer support decisions from departments to a central point.

Quinn reported that the number of required courses in the PhD curriculum was higher than at other schools. Lowering that number might address some problems associated with low course enrollment. Other suggestions from the review team include innovative teaching, using Web technology in courses, eliminating courses from the catalog that have not been taught in the last three years because “false advertising” was frustrating students, and more use of task forces to work on departmental issues.

The departmental faculty should have information ready that could support a capital campaign. Bloomer reported that he charged the department chairs this week to get their faculty on board to work on this.

A recent hiring search is bringing in a dual career couple with strong academic credentials and expectations for work in exciting new directions for Oregon State University. The department is very hopeful that this couple will be a strong draw for talented graduate students. The Council explored the difficulties in attracting top graduate students, noting that several faculty members have internationally distinguished reputations and welcoming personalities that should generate student loyalty and excitement. Parks said that several prominent professors left a few years ago and that national awareness of this had an impact on student perception of their program. Parks said that top students attracted to the West Coast would tend to choose the University of Washington (UW) over OSU. In response to questions from council members about why he thought that, he responded that UW is perceived to be a better school and Seattle to be a more interesting community than Corvallis.

Asked about the minimal discussion of diversity issues in the report, Quinn responded that diversity has not been an issue because of the difficulties of attracting any students and faculty. However, the most recent hire in the Mathematics Department was a woman.

In response to a suggestion that funding might be available if the department were to emphasize scholarly issues of mathematics pedagogy, a popular topic within the National Science Foundation, Parks said that this would take faculty away from their real research and emphasize areas that would not help a faculty member be promoted. Bloomer said mathematics education could lead to promotion if the research work was consistent with the faculty member’s position description. Bloomer has given up on expecting the state to fix these problems, but he has not given up on fixing the problems with other sources of funding.
Although the Graduate Council accepted the review report as presented, Council members concluded that the language expressing concern about departmental leadership was too subtle. Two issues were singled out as particularly problematic. First, the computer service support person is standing in the way of departmental progress in upgrading computer systems and software; he should be replaced. Second, the department chair needs to present a more positive image about the accomplishments and abilities of the current faculty. Alex Sanchez (Education) and John Selker (Engineering) will draft a letter summarizing the concerns of the Council. This letter will accompany the report as it is transmitted to the Provost.

IV. Category I Proposal for a Graduate Certificate in Sustainable Natural Resources

Denise Lach (Sociology) and Steven Radosevich (Forest Science) presented a Category I proposal. As stated in the proposal summary, “The proposed intensive twelve-week, 24-credit Graduate Certificate Program in Sustainable Natural Resources is designed to engage university instructors and scientists, and resource professionals in a process that integrates diverse approaches and perspectives to find workable solutions for complex natural resource issues of local, state, regional, national, or international importance. The Certificate Program is designed for mid-career agency, company, industry, or agency employees and others with at least two years professional experience beyond a Bachelor’s Degree in Arts, Humanities, or Science who want more training and experience to solve such problems. Courses in the Certificate Program will provide in-depth disciplinary knowledge in several natural resource disciplines, as well as cross-disciplinary thinking and problem solving.”

The certificate program will involve all new classes, which will be offered only through this certificate program. The courses will be tightly integrated rather than being taught independently. The program will span 14 weeks in total with 2 one-week breaks. Lach said that the program easily could be reduced to one that generates 18 credits.

Because the program schedule and budget came up consistently in liaison letters, Radosevich spoke to those points. Concern was voiced that students might not be able to survive such an intense program. Two 8-day breaks were added to the program so that students had some time to recover and have some leisure time. Asked whether a true graduate experience could be generated in the intensive time schedule proposed, Radosevich said that, although all the instructors are experienced graduate educators, the program would be more effective if a smaller number of credit hours were required. The time to complete a project is substantial toward the end of the term. Because some people could not complete it under these circumstances, the project could be completed in the following term or in absentia.

The program will be financed entirely by students’ tuition. During summer terms, 86% of tuition paid is returned to the departments offering the courses. The administrative cost is small, although more help may be needed with the admissions process. The admission materials include a statement of purpose, a description of the project, and transcripts. Radosevich was asked whether the efforts of the large number of faculty members involved would have a negative
effect on their research and on their service to other graduate students. He said that no one faculty member will teach for more than three weeks.

Plans are to offer the program for the first time in the summer of 2004, then repeat it for the second time during the summer of 2006. Even without any advertising, many inquiries have been received, suggesting that recruiting the number of students needed to cover the costs of the program should not be a problem. Radosevich and Lach have written a grant for scholarship aid, which should be helpful if the initial offering of the program does not attract a sufficient number of students. The program will be evaluated after two years to determine whether the enrollment goals have been reached.

Lach said that they had considered alternative schedules such as offering the program over successive summers. Their research identified the intensive summer model as the one most appropriate for mid-level professionals. Web-based courses were not considered because of the interactive nature of the classes.

The Graduate Council has been considering a change in the minimum number of credits required for a graduate certificate. Radosevich said that he had been a member of the Graduate Council when the graduate certificate guidelines had been approved. He did not recall any rationale for the 24-credit minimum except the use of that number by the University of Oregon. He and Lach would welcome a change in the required number of credits and said that his program, based on 18 credits of courses, would serve the needs of the students better than the currently proposed program. Council discussion of the challenges of offering the program for a full three months on a very time-intensive basis led some Council members to oppose the program as currently designed. These same Council members indicated that a less intensive program for 18 credits was more feasible and encouraged Radosevich and Lach to consider resubmitting a proposal that would address these concerns.

Council action on the proposal was postponed, but with the following comments to be sent to Radosevich: First, the Council members plan to review their background material on graduate certificates and will entertain a motion on June 12, 2003, to reduce the minimum number of credits required for a graduate certificate from 24 to 18. Second, Radosevich and Lach are requested to provide a revised proposal that is based on 18 credits of courses and that presumes that students will devote, on average, 540 hours to complete the program. This number follows the guidelines in the Curricular Procedures Handbook, which says that “One credit represents a total time commitment; in and out of class; of three hours each week in a 10-week term.” If the Council approves the reduction from 24 to 18 in the number of credits required for a graduate certificate, it will entertain a motion to approve the revised certificate proposal from Radosevich and Lach. If it fails to approve that change, the Council will vote on the original proposal.