February 18, 2009, Three year follow-up review of graduate programs in nuclear engineering and radiation health physics.
Department of Nuclear Engineering and Radiation Health Physics
Oregon State University, Corvallis, OR 97331

In attendance:
Graduate Program Chairmen:    Dr. A. Farsoni (current)
                                Dr. Q. Wu (past)
Department Head:               Dr. J.N. Reyes, Jr.
Assistant Head:                Dr. K. Higley
Graduate Council Rep          T. M. Filtz, Pharmacy
Graduate Council Rep          R. Harter, HHS

The external review of the graduate programs in the Department of Nuclear Engineering (NE) and Radiation Health Physics (RHP), College of Engineering, Oregon State University, was conducted on February 13, 2006. The required three year follow-up was conducted at the Radiation Center on February 19, 2009. Previously, the review team was very favorably impressed with the NE and RHP graduate programs. They are well-regarded nationally, serve a regional and national need, and are growing in funding, faculty and students. The review team’s initial report focused on suggestions for improvement to a very strong program. The follow-up review found the programs gaining in strength. A follow-up report on progress (appended) was presented to the review team (Filtz and Harter) and was discussed for approximately 1 hour. The following is a brief summary of the review team’s impressions. The department is currently in the enviable position of having demand for its graduates increase dramatically in recent years, of seeing increased federal funding of its research, of having a unique facility for industry-supported training, and of being strategically positioned nationally and regionally to meet the demand. Details are in the appendix.

Based on a concern that the faculty were stretched to the limit, growth of the graduate programs in NE & RHP--for which demand is extremely strong--required additional faculty hires. In the past three years, three new faculty members were hired, a 50% increase in FTE for the program. The positions are partly funded by an agreement with Idaho National Labs and the Oregon Engineering and Technology Industry Council. This has allowed for reduction in teaching loads from 4 to 3 courses per year per faculty member, with provisions for buyout for faculty with heavy research loads. In addition, two retired professors are being paid to teach some courses, the Department is developing an instructor pool of recent PhD graduates and a few graduate students with interests in teaching skills are being utilized as teaching assistants with faculty oversight. All of these developments are extremely healthy and should help the program to grow in numbers and further in stature. However, one difficulty that the department faces is that salaries in the private sector far outstrip academic salary offerings to potential faculty.

The program appears to be maintaining and furthering a very productive research agenda with $3.5 million in grants and contracts this year, up from $3 million in 2006, and a further $10 million expected by the department chair.
Graduate student enrollment has increased from 75 to 91 students in three years. The previous review suggested that the pool of qualified applicants to the program was very deep and expansion of the program was desirable. Of interest, approximately half of these students utilize the distance learning opportunities provided by the program. The department is currently conducting an assessment of the distance program to evaluate its effectiveness in training and satisfaction compared to the Corvallis based program. The department should share these results with the next review team.

A new graduate program in Medical Physics is accepting applications and expects to enroll 6 to 8 students in fall 2009, having survived the Category I approval process. Agreements with OHSU for the logistics of the joint program are moving forward. Applications for this program, to which students will be expected to be tuition-paying and self-supporting, are already arriving prior to any advertising.

The department is securing funding to allow the nuclear test facilities on campus to provide more academic training. A contract with China State Nuclear Power Technology company will bring in engineers to train on the APEX test facility. The department is also applying for an NRC curriculum grant to run the APEX facility for teaching purposes.

As recommended, the department has instituted a program requiring all students to submit annually for external fellowships. At least 6 students are now externally funded in the program. The department has also instituted ethics training into its new student orientation and utilizes the seminar program to bring in speakers on internship and scholarship opportunities for graduate students. In response to the question regarding monitoring of adequate student progress, the department noted that all students prepare quarterly reports on academic and research progress that are reviewed by faculty. This is commendable.

The one final item that the review team noted was a need to develop a diversity action plan at the department level. This item is awaiting further guidance from College-level diversity support personnel.