

Summary of Physics Graduate program PhD Assessment report, Oct. 2015

Ph.D. students who have completed at least two years continue on to do well at making progress on an original research project and disseminating this work. Evidence for this is the many papers published by each Ph.D. student in refereed journals. The first author of most of these papers is the Ph.D. student.

Currently approximately 70% of the students admitted to our Ph.D. program complete a Ph.D. There is strong evidence nationally indicating that involving undergraduate (UG) students in research early in their UG program leads to improved UG student retention and learning. This is also likely true for graduate programs. We feel that learning of the nature of research was not occurring early enough in our Ph.D. program. Thus we have re-organized our departmental requirements to allow students to participate in research projects during their first summer in graduate school. We will examine GPAs and retention statistics in the coming years to determine how well this works.

Expanded learning in Optics and in Biophysics were identified as important areas of improvement. This was not determined by any assessments but rather by changes in research focus over the last 8 years. A class on biophysics was developed as a special topics course to improve student learning at the boundary of physics and biology (Phys775). A class on Optics was developed as a special topics course to improve student learning in optics and eventually established as Phys652. Students will often take the Phys651, Phys652 optics sequence. All of these courses are also available to M.S. students to broaden their education.