**Graduate Degree Assessment Plans 2018**

The Department of Physics offers both Applied and Academic Masters degree tracks along with a Ph.D. program. In general assessment takes the forms of successful completion of course work, oral exams, interviews, production of research dissertations and their defense. The UO Graduate School has a requirement that any graduate student maintain a GPA of 3.0 or better (averaged) while in a program. Those falling below this benchmark are required to submit a plan of improvement developed in conjunction with their graduate advisor.

**Applied Master’s Student Assessments and Plans:**

The Applied Masters is coordinated through the Masters Industrial Internship Program (MIIP), and includes:

**Recruitment:** Applied Masters students are recruited from a national pool and selection is based primarily upon academic merit and research experience through transcripts, statements and letters of recommendation. Almost all recruits make a visit to campus as part of this process.

**Assessment Steps:** Applied Masters students undertake an intensive summer training regime involving lectures, labs and seminars and workshops to develop communications and interview skills and a professional CV. During this time the following evaluative steps occur:

**Academic Progress:** Student course work is actively monitored for academic problems. Those finding the course work to be challenging meet with MIIP staff to form improvement plans.

**Term Paper:** Papers are written in a journal style format and are typically a literature review. These are evaluated by MIIP staff and associated instructors.

**Professional Skills Development:** Students are given feedback on practice talks, ‘elevator speeches,’ and draft CVs as part of summer ‘soft skills’ workshops.

**Induction into Industrial Internships:** At the end of the summer training students are interviewed by technical industrial partners and selected into a 9 month paid internship with a partner.

**Placement Tracking and Feedback Activities:** An internship evaluation is conducted once a student is 4-7 months into the internship. This evaluation consists of feedback by both the student’s supervisor/mentor and the student. The type of feedback solicited includes:

* Academic preparation of student
* Work performance of student
* Company’s performance in providing a relevant and challenging work environment
* Company’s performance in providing adequate mentorship
* Programmatic strengths and opportunities for improvement

**Reference:** https://internship.uoregon.edu/

**Academic Master’s Student Assessments and Plans:**

**Recruitment:** Academic Masters students are admitted from a national applicant pool and selection is based primarily upon academic merit and research experience through transcripts, statements and letters of recommendation.

**Assessment Steps:** Academic Masters students can achieve a degree either: a) through satisfactory completion of coursework or; b) completion of less coursework and production of a research thesis and its defense. Assessment steps during this process include:

**both a) and b):** completion of 45 graduate credits, of which 32 or more must be in physics, and 30 credits earned through UO courses. These courses include the ‘graduate core’ comprising three (quarter) term sequences each of electricity and magnetism; quantum physics; and a combination of theoretical mechanics and statistical physics.

**a):** this option includes completion of 40 UO graduate, graded credits in physics, and requires 6 (of 9) ‘core’ courses be completed for a B- grade or better. Students may retake those courses where they failed to meet these criteria in order to achieve a satisfactory grade.

**a):** students following this track are required to complete 12 credit hours of laboratory or related courses.

**b):** students following this track are required to: secure a thesis advisor; form a 3-faculty advisory committee; meet and propose a thesis project that the committee will judge on its proposed scope and novelty; complete 9 or more hours of research credit while undertaking their project; present a short oral defense of the thesis to their advisory committee; and submit the thesis to the Graduate School. Assessment and feedback occur: during the proposal presentation; while the student is undertaking their research project, and; at the oral defense.

**Placement Tracking and Feedback Activities:** Physics sends a request for graduating students to complete a Qualitrics exit survey that gathers information about their future career plans and their feedback about program efficacy. Some don’t complete this survey, especially when degree completion takes place during summer, fall and winter terms (when we hold no graduation ceremony). Physics sometimes tracks non-respondents by asking for help from students’ research advisors. In the future we plan to follow up formally with all advisors of student non-respondents, asking them both for information they know about student plans and for their help in encouraging the students to take the exit survey.

**Reference:** https://physics.uoregon.edu/3299-2/

**Ph.D. Student Assessments and Plans:**

**Recruitment:** Ph.D. students are admitted from a national and international applicant pool. Selection is based primarily upon academic merit and research experience through transcripts, statements, letters of recommendation and (non-mandatory) GRE scores, including the physics subject score.

**Assessment Steps:** Progress through the Ph.D. program entails the following steps, with assessments noted for each:

**Graduate Core Course Completion**: students complete the 9-course graduate core, the same as is outlined above for the Academic Masters track. They must pass each course with a B- grade or better. They can retake those courses where they fail to meet this criterion. Assessment is embedded in the coursework in the form of homework sets and exams.

**Research group engagement processes:** students engage with research groups by: talking to potential research advisors; asking question of more senior graduate students; attending research group meetings; attending weekly, topical research seminars; and attending the mid-fall term ‘research speed dating’ event staffed by faculty and senior graduate students. Students report on progress via these activities briefly during fall and more formally during winter term. These reports are reviewed the Physics Graduate Studies Committee (GSC) and, during winter, each student answers sub-committee questions briefly.

**The Comprehensive Exam:** students engaged with research groups undertake preliminary research with their advisor. With his/her help they form a Comprehensive Exam Committee (CEC) that will serve also as the core of their Dissertation Committee (DC). Sometime during their second or third year in the program they take their oral, comprehensive exam with the CEC. The chair of the CEC (not their research advisor) makes a short report to the Director of Graduate Studies (DGS) and Department Head. Examined students are given feedback as to how to improve their proposed research project.

**A Talk:** Students give a research talk, typically during years 3, 4 or 5, to either an internal or external (meeting) audience. Their advisor and research group give them feedback on their talk during its preparation, and those attending the talk also give feedback.

**Dissertation Defense:** Students develop a research dissertation with feedback from their research group. Students typically give ‘practice defense talks to other Physics graduate students. A defense committee comprising a small expansion of the CEC attend the defense and give feedback. The DC typically suggests corrections to the dissertation before it is formally submitted to the Graduate School.

**Placement Tracking and Feedback Activities:** Physics sends a request for graduating students to complete a Qualitrics exit survey that gathers information about their future career plans and their feedback about program efficacy. Some don’t complete this survey, especially when degree completion takes place during summer, fall and winter terms (when we hold no graduation ceremony). Physics sometimes tracks non-respondents by asking for help from students’ research advisors. In the future we plan to follow up formally with all advisors of student non-respondents, asking them both for information they know about student plans and for their help in encouraging the students to take the exit survey.

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