

B.S. Goals and Assessment Methods

Acquire and demonstrate a solid foundation of knowledge in physics and/or astrophysics and deeper knowledge of subdivisions of the field related to their interests.

- The content we expect our students to learn is detailed in the syllabi of the courses offered.
 - Detailed syllabi for all courses are posted online on the department web site. These syllabi should contain more detail than the available in the general announcements with the intention of documenting the content we expect the students to learn.
 - The Curriculum committee should review degree requirements, course offerings, and syllabi on (at least) a five-year cycle so as to ensure the content expected of our students is suitable to meet the above goal.
 - Curriculum committee reviews consistency between final exam (or other suitable required work) and course content, as listed in course syllabus, on a five-year cycle.
- Final exams, or other sample material, from all courses are archived annually, together with average student grades for each question (or some other measure of how well students have learned individual topics in the course).
 - Curriculum committee reviews sample course work from each course on a five-year cycle ensuring that students are learning the content.

Build the theoretical, computational, and laboratory skills necessary to succeed in graduate school or in the workplace and become leaders in their chosen discipline.

- Student exit survey to evaluate graduate school and job placements.
- Work on capstone Senior Thesis research periodically reviewed by peer and faculty groups.
- Instructor reviews of student laboratory evaluations.
- Students are surveyed early in the sophomore, junior, and senior years to ascertain their current aspirations, achievements to date, and perceived and actual progress towards the goals of the degree.
 - This will allow us to determine how their goals develop and whether the program encourages them to aspire to high levels of achievement in physics and astrophysics.
 - It should also be used to let us know what fraction of students undertake REUs or other relevant summer employment and what fraction engage in research activity during the academic year.
 - Students should be asked their opinions on whether the courses taken during previous years prepared them for their current classes.

Develop the ability to identify, formulate, and solve challenging scientific and technical problems as encountered in physics and astronomy.

- Curriculum committee will periodically review sample work from different courses.
- Work on Senior Thesis capstone research project periodically reviewed by peer and faculty groups.

Learn basic skills in reading the scientific literature. Be able to communicate scientific results orally and in writing with scientists and the general public.

- In the Sophomore Modern Physics course, students are required to write an article, suitable for the general public, describing current research by a member of the Physics and Astronomy faculty. This will be reviewed for a grade by the instruction of the course and the faculty member whose research is described.
- Other courses require written and oral presentations where appropriate.
- Senior Thesis and presentations on this work reviewed by peer and faculty groups.
 - The final senior thesis research presentation is made in the style of an APS meeting.

Be able to conduct directed research.

- Each student is required to complete senior thesis research