

Academic Program Assessment Plan
M.S. and Ph.D. degrees in Space and Planetary Sciences (SPACMS; SPACPH)
Submitted by John Dixon, Program Director
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Program Goals

(Program goals are broad general statements of what the program intends to accomplish and describes what a student will be able to do after completing the program. The program goals are linked to the mission of the university and college.)

1. To prepare graduates to successfully pursue careers in space and planetary sciences in academia, government and industry.
2. To prepare graduates to approach problems in space and planetary sciences from an interdisciplinary perspective.
3. To produce graduates who will become leaders in space and planetary sciences.

Student Learning Outcomes

(Student learning outcomes are defined in terms of the knowledge, skills, and abilities that students will know and be able to do as a result of completing a program. These student learning outcomes are directly linked to the accomplishment of the program goals.)

- 1 Assimilate literature, refereed and unrefereed, to understand the state of previous work in a given area.
- 2 Design experiments to prove or disprove hypotheses.
- 3 To build and operate experimental equipment to be used in that assessment.
- 4 Understand the information that can be gained from common analytical equipment and instruments.
- 5 Defend the analysis of obtained data in a logical, detached manner.
- 6 Understand how an understanding of the universe and the exploration of space benefits society and use skills obtained from the program to promote this interaction.

Assessment of Student Learning

(A process must be defined and documented to regularly assess student learning and achievement of student learning outcomes. The results of the assessment must be utilized as input for the improvement of the program.)

Direct Methods

Successful completion of qualifying exam (student learning outcomes one, four, five and six)
Presentation and defense of thesis at Masters level and presentation and defense of dissertation at doctoral level (all learning outcomes)
Submission of completed thesis or dissertation to Graduate School (all learning outcomes)

Indirect Methods

Placement rates of graduates into appropriate career positions (program goals one, two and three; will demonstrate all learning outcomes)

Placement rates of graduates into postdoctoral positions (program goals one, two, and three; will demonstrate all learning outcomes)

Student presentations at conferences and workshops (all program goals, will demonstrate all learning outcomes)

Publication of student research in peer reviewed scientific journals (all learning outcomes)

Honors, Awards, Fellowships and scholarships earned by students (program goals one, two and three; will demonstrate all learning outcomes)

Research Grants awarded to students (all program goals; will demonstrate all learning outcomes)

Exit interviews of graduating students (all program goals)

Timelines for Data Collection and Analysis

(Specific timeline for collection and analysis of assessment data.)

Direct methods of student learning are collected for each student as they progress through the program.

Indirect methods are collected annually.

Use of Results

Student performance is continuously reviewed by the program administration both to assess individual performance and to review the requirements of the program. Results are reported to the Graduate School for the annual report of the program and are used for the seven-year program review.

Assessment of Student learning 2015-16. Space and Planetary Sciences Graduate Programs

Direct Methods:

1. Successful completion of doctoral qualifying exam (1 student)
2. Presentation and defense of thesis at the Masters level (2 student) and dissertation at the doctoral level (5 students)
3. Submission of completed theses (1 student) and doctoral dissertations (4 students) to the Graduate School.

Indirect Methods:

1. Placement rates of graduates into appropriate career positions (6 graduates/alumni)
2. Placement rates of graduates into post-doctoral positions (3)
3. Student presentations at conferences and workshops (14)
4. Publication of student research in peer-reviewed scientific journals (7 students)
5. Honors, awards, Fellowships, Scholarships received (2 newly awarded, 4 continuing)
6. Research Grants awarded to students (0).