

# ASTROBIOLOGY

## Degree Requirements

Requirements listed here are in addition to requirements listed in GCAC-208 Dual-Title Graduate Degree Programs (<https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-200/gcac-208-dual-titles/>).

To qualify for a dual-title degree, students must satisfy the requirements of the major graduate program in which they are enrolled, in addition to the minimum requirements of the Astrobiology program. The minimum requirements for the Astrobiology program include 3 credits of coursework in each of five different areas, specified as follows:

Code	Title	Credits
<b>Required Courses</b>		
3 credits of 500-level coursework related to the origin and evolution of life on Earth (GEOSC 502 Evolution of the Biosphere, or approved substitute)		3
3 credits of 500-level coursework related to planetary formation, evolution, and exploration (ABIOL 574 Planetary Habitability, or approved substitute)		3
3 credits of 500-level coursework related to the astronomical search for life (ABIOL 576/ASTRO 576 The Search for Extraterrestrial Intelligence, ASTRO 577 Exoplanets, or approved substitute)		3
3 credits of ABIOL 590 Astrobiology seminar. The seminar course may include fieldwork, when such an option is offered.		3
3 credits of 400, 500, or 800 level, astrobiology-related coursework in field outside the student's major or 3 credits of 500-level coursework within their major (through consultation with their adviser). A list of pre-approved courses is available from the Program Coordinator; other courses must be approved by him/her.		3
<b>Total Credits</b>		<b>15</b>

The Qualifying Examination in the major area alone will satisfy the Qualifying Exam requirement for the dual-title program.

In addition to the general Graduate Council requirements for Ph.D. committees (<http://gradschool.psu.edu/graduate-education-policies/gcac/gcac-600/phd-dissertation-committee-formation/>), the Ph.D. committee of an Astrobiology dual-title doctoral degree student must include at least one member of the Astrobiology Graduate Faculty. Faculty members who hold appointments in both programs' Graduate Faculty may serve in a combined role. If the chair of the Ph.D. committee is not also a member of the Graduate Faculty in Astrobiology, the member of the committee representing Astrobiology must be appointed as co-chair. The Astrobiology representative on the student's Ph.D. committee will develop questions for and participate in the evaluation of the comprehensive examination.

Students in the dual-title program are required to write and orally defend a dissertation on a topic that is approved in advance by their Ph.D. committee and reflects their original research and education in both their primary graduate program and Astrobiology. Upon completion of the doctoral dissertation, the candidate must pass a final oral examination (the dissertation defense) to earn the Ph.D. degree. The dissertation must be accepted by the Ph.D. committee, the head of the graduate program, and the Graduate School.