ASTRONOMY, PHD

for the degree of Doctor of Philosophy in Astronomy

For additional details and requirements refer to the department's Graduate Programs (http://www.astro.illinois.edu/academics/graduate/programs/) and the Graduate College Handbook (http://www.grad.illinois.edu/gradhandbook/).

Astronomy, PhD

Entering with approved M.A./M.S. degree

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTR 501</td>
<td>Radiative Processes</td>
<td>8</td>
</tr>
<tr>
<td>&amp; ASTR 502</td>
<td>and Astrophysical Dynamics</td>
<td></td>
</tr>
</tbody>
</table>

Students entering with an approved M.A. or M.S. degree may proficiency out of these with departmental approval. Other 500-level ASTR graduate courses must be taken in the unit for substitute credit hours. Demonstrated Proficiency in Astronomy: A maximum of 8 hours of these courses may be applied to the degree (See details below.)

Research/Project/Independent Study Hours (e.g. ASTR 590 min/max applied toward degree): 4-24

ASTR 599 Thesis Research (min/max applied toward degree) 32-52

Total Hours 64

Other Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Description</th>
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<tbody>
<tr>
<td>Other requirements may overlap</td>
<td></td>
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<tr>
<td>Students may add a graduate concentration in Astrochemistry.</td>
<td></td>
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<tr>
<td>Qualifying Exam Required</td>
<td>No</td>
</tr>
<tr>
<td>Preliminary Exam Required</td>
<td>Yes</td>
</tr>
<tr>
<td>Final Exam/Dissertation Defense Required</td>
<td>Yes</td>
</tr>
<tr>
<td>Dissertation Deposit Required</td>
<td>Yes</td>
</tr>
<tr>
<td>Minimum GPA:</td>
<td>3.0</td>
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</tbody>
</table>

Demonstrated Proficiency in Astronomy: Students must show proficiency in ASTR 404, ASTR 405, ASTR 406 and ASTR 414 by one of the following options:

- Pass the appropriate section of the placement exam (four sections aligned to the four courses), which is offered at the start of every Fall semester. A student can petition to take the exam once more the following year. The decision on petition approval by the graduate advisor will depend on the student's background and proficiency plan.

- Pass the course with a B grade or better.

- Students who have had an equivalent course at another institution (B grade or better) may petition for those courses to count as proficiency.

Entering with approved B.A./B.S. degree

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Demonstrated Proficiency in Astronomy: A maximum of 8 hours of these courses may be applied to the degree (See details below.)

Additional formal coursework (excluding thesis research, non-thesis research and independent study credit hours, e.g., ASTR 599, ASTR 590) 24

- Of the additional formal coursework, 8 is the minimum number of hours in the unit (excluding thesis research, non-thesis research, and independent study credit hours)

- Of the additional formal coursework, 8 (with 4 in the unit) is the minimum number of 500-level hours (excluding thesis research, non-thesis research, and independent study credit hours)

Research/Project/Independent Study Hours (e.g. ASTR 590 min/max applied toward degree): 4-32

Information listed in this catalog is current as of 05/2022
Other requirements may overlap.

**Demonstrated Proficiency in Astronomy:** In the first year students must show proficiency in ASTR 404, ASTR 405, ASTR 406 and ASTR 414 by one of the following options:

- Pass the appropriate section of the placement exam (four sections aligned to the four courses), which is offered at the start of every Fall semester. A student can petition to take the exam once more the following year. The decision on petition approval by the graduate advisor will depend on the student's background and proficiency plan.

- Pass the course with a B grade or better.

- Students who have had an equivalent course at another institution (B grade or better) may petition for those courses to count as proficiency.

**Students may add a graduate concentration in Astrochemistry.**

**First Summer Research Project (4 hours)**

During the first summer in residence, each student will enroll in ASTR 590 (independent Study) and will complete a research project with an Astronomy Department faculty member. A paper reporting the results is required, which must be prepared in scientific journal style and approved by the faculty member.

**Master’s Degree Required Before Admission to PhD?**

No

**Qualifying Exam Required**

No

**Preliminary Exam Required**

Ph.D. Preliminary Examination consists of a written preliminary paper on the Ph.D. research topic and an oral examination. It must be passed by the end of the third year of study.

**Final Exam/Dissertation Defense Required**

Completion of an original research project culminating in a dissertation thesis publishable in whole or in part is required. The final examination is a defense of the doctoral dissertation.

**Dissertation Deposit Required**

Yes

**Minimum GPA:**

3.0