



Astronomy

1208 Physical Sciences Complex

(301) 405-3001

<http://www.astro.umd.edu/undergrad/>

College of Computer, Mathematical, & Natural Sciences

Key Features of a Major in Astronomy

- Gain a strong foundation in astronomy, physics, and mathematics as preparation for both astronomy and non-astronomy related careers.
- Pursue cutting-edge research via several programs that allow undergraduates to obtain first-hand experience developing computational tools, studying the origins and evolution of galaxies, and creating dynamic models of the solar system.
- Participate in off-campus research opportunities with such organizations as the National Science Foundation, NASA, and the Carnegie Institute.

Career Options and Salaries for an Astronomy Major

Astronomers use the principles of physics and mathematics to learn about the fundamental nature of the universe and its components, including the sun, moon, planets, stars, and galaxies. As such, astronomy is sometimes considered a subfield of physics. They also apply their knowledge to solve problems in navigation, space flight, and satellite communications and develop the instrumentation and techniques used to observe and collect astronomical data.

Almost all astronomers do research including some theoreticians who work on the laws governing the structure and evolution of astronomical objects. Others analyze large quantities of data gathered by observatories and satellites and write scientific papers or reports on their findings. Some astronomers actually operate large space-based or ground-based telescopes, usually as part of a team.

A small number of astronomers work in museums housing planetariums. These astronomers develop and revise programs presented to the public and may direct planetarium operations.

As of May 2015, the median salary for physicists and astronomers was \$110,980. Median annual wages for astronomers working for the Federal Government were \$144,220 in May 2015.

Career and salary information taken from Occupational Outlook Handbook.

<http://www.bls.gov/ooh/life-physical-and-social-science/physicists-and-astronomers.htm>

Advising

If you are considering declaring Astronomy as a major, you can easily meet with an undergraduate advisor in the department:

- Melissa Hayes-Gehrke (mhayesge@umd.edu)
- 1208C Physical Sciences Complex
- (301) 405-1562

General questions regarding the CMNS majors may be sent to cmnsque@umd.edu. You can also use walk-in advising hours at the CMNS Student Services Office in 1300 Symons Hall Mondays – Fridays, 10:00 am to 12:00 pm and 2:00 pm to 4:00 pm. You may also call for an appointment at (301) 405-2080.

Declaring an Astronomy Major

Astronomy is not a Limited Enrollment Program (LEP). If you have decided to major in this field, you can declare immediately!

Make an appointment with the undergraduate advisor in the Department of Astronomy to talk about your interests in the major or to declare if you are certain (see contact information above). The advisor will review the requirements for the major and familiarize you to the department. You will be given a [change of major form](#) at this meeting to submit to the CMNS Dean's Office which will be used to officially change your major. A major change is not complete until the CMNS Dean's Office has approved it and it will be processed within 24-48 hours after the approval. If the request is denied (e.g. needs Dean's Exception[s] to policy) the student will be notified via email and/or phone.

Four-Year Plan-GENED

First Year:

ASTR 120 DSNS	3
MATH 140	4
ENGL 101	3
GenEd SCIS	3
GenEd DSHS	3
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	16 credits

ASTR 121 DSNL	4
MATH 141	4
PHYS 171	3
PHYS 174	1
GenEd SCIS	3
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	15 credits

Second Year:

ASTR 310 DSSP	4
MATH 241	4
PHYS 272	3
PHYS 275	2
GenEd FSOC	3
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	16 credits

PHYS 273	3
PHYS 274	3
PHYS276	2
GenEd DSUP	3
Elective	3
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	14 credits

Third Year:

PHYS 165	3
PHYS 371	3
PHYS373	3
Elective	3
GenEd DSHU	3
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	15 credits

ASTR 320	3
PHYS 401	4
ENGL 393/390	3
GenEd DSUP/CC	3
Elective	3
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	16 credits

Fourth Year:

ASTR4xx	3
PHYS 404	3
GenEd DSSP	3
GenEd DSHU	3
Elective	3
	<hr/>
	15 credits

ASTR4xx	3
GenEd DSHS	3
Elective	3
Elective	3
Elective	3
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	15 credits

TOTAL = 120 credits

Four-Year Plan-CORE

First Year:

ASTR 120	3
MATH 140	4
ENGL 101	3
CORE	3
CORE	3
	<hr/>
	16 credits

ASTR 121	4
MATH 141	4
PHYS 171	3
PHYS 174	1
CORE	3
	<hr/>
	15 credits

Second Year:

ASTR 310	3
MATH 241	4
PHYS 272	3
PHYS 275	2
CORE	3
	<hr/>
	15 credits

PHYS 273	3
PHYS 276	2
MATH 246	3
CORE	3
CORE	3
ASTR 288M (optional)	1
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	15-16 credits

Third Year:

MATH 240 or 461	3-4
PHYS 374	4
ASTR 4xx	3
Elective	3
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	13-14 credits

ASTR 320	3
PHYS 404	3
CORE ADV	3
ENGL 393	3
Elective	3
	<hr/>
	15 credits

Fourth Year:

ASTR 4xx	3
PHYS 401	4
CORE DIV	3
Elective	3
Elective	3
	<hr/>
	16 credits

CORE ADV	3
Elective	3
Elective	3
Elective	3
Elective	3
	<hr/>
	15 credits

TOTAL = 120 credits

Q & A

How can I add a Physics minor?

Students majoring in Astronomy are not eligible to complete the Physics minor due to the large number of overlapping course requirements, as per 2016-2017 Undergraduate Catalog.

Why can't I find PHYS374 listed as a course?

PHYS374, Intermediate Theoretical Methods, has been phased out as a course and students will instead take PHYS373, Mathematical Methods for Physics II. Courses requiring a prerequisite of PHYS374 will also have that prerequisite satisfied by PHYS373.