COLUMBIA UNIVERSITY
IN THE CITY OF NEW YORK

Astronomy and Astrophysics

Majoring in Astronomy or Astrophysics

The astrophysics major is designed as preparation for graduate study and consists of a standard physics major sequence; a yearlong introduction to astrophysics; and two required courses covering advanced topics in astronomy. Research, in the form of summer internships and/or term-time independent projects, which can lead to a senior thesis, is strongly encouraged.

The astronomy major provides a basis for further study in the field, but is also designed to be compatible with a liberal arts curriculum for students who pursue other careers and those wishing to combine astronomy with related sciences other than physics. It requires only two physics courses beyond the introductory sequence and can be completed easily if begun in the sophomore year.

Frequently Asked Questions

What classes do I need to take in my first two years at Columbia?	Our general advice is to start on the Calculus Sequence and the basic Physics Introductory Sequence as soon as you can. Request a sample four-year track if you are interested.
Can I work on research projects?	Yes, you can, and in fact, we encourage you to do so. You can register for the 3000-level Independent Research course, and get credit towards the major requirements. You can also pursue research over the Summer (this is strongly suggested for those intending to pursue graduate school).
What kind of research projects do undergraduate students work on?	Students have pursued, and are pursuing, original research on almost every topic in astronomy and astrophysics, from the study of exoplanets, stars, galaxies, to cosmology; observational, theoretical, and instrumentation based. Most projects involve some basic programming skills.
Can I study abroad?	Yes. Science is an inherently international pursuit, and you can spend a semester taking classes and possibly doing research at a number universities around the world. Visit http://bulletin.columbia.edu/columbia-college/study-abroad/
Does the major prepare me for graduate school?	Yes. Many students successfully go on to graduate studies, at a wide variety of universities in the US and Canada (and sometimes further away).
What other positions do students move on to after graduation?	Students have pursued jobs in private industry (nanoscale semiconductor fabrication, applied math in finance), data science, law school, education, etc..
Who can I contact for more information?	Contact the Director of Undergraduate Studies, Professor Frits Paerels (frits@astro.columbia.edu) Visit our website: www.astro.columbia.edu Sign up to our Undergraduate mailing list: send email to listserv@lists.columbia.edu and include this line in the body (not the subject line) of the message: subscribe astro-ugs (your first name) (your last name). Consider joining the society of undergraduate students in astronomy: https://blueshift.astro.columbia.edu. Sign up to their mailing list: send email to listserv@lists.columbia.edu and include this line in the body of the message: subscribe blueshift (your first name) (your last name). To visit them on FaceBook: https://www.facebook.com/CUBlueShift/

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reverse, credits:Galactic tidal debris in simulations (courtesy Emily Sandford), the Andromeda galaxy in UV (courtesy David Schiminovich), observing in NYC; Columbia astronomer at the VLT, Cerro Paranal, Chile (courtesy Emily Sandford)