




Universität Potsdam

A vibrant space-themed background featuring a variety of celestial objects. In the upper left, there's a large, glowing red and yellow nebula. The rest of the sky is filled with numerous stars of different colors (yellow, white, blue) and sizes, some with prominent diffraction spikes. A bright yellow star is particularly prominent on the right side. In the lower left, a portion of the planet Saturn with its rings is visible. The overall scene is a rich, colorful representation of the universe.

ASTROPHYSICS

Master of Science

A detailed view of a classical building facade, likely the main entrance of the University of Potsdam. The building features a grand portico with tall, fluted columns supporting a heavy entablature. The architecture is highly ornate, with intricate carvings and a central dome visible in the background. The lighting is bright, highlighting the textures of the stone.



Program Content

The research-oriented master's degree program in astrophysics conveys comprehensive knowledge about the structure and evolution of the Universe and its constituents. You will gain a profound understanding of the many complex physical processes that provide the foundation to explain cosmic phenomena. You will also develop a methodological toolkit that enables you to explore and analyze these phenomena. Subject-specific competences in the program include the discipline's core fields (stars, stellar evolution, galaxies, cosmology) and a variety of more specialized topics (for example: galaxy clusters and large-scale structures, interstellar and intergalactic gas, stellar winds, solar physics, cosmic magnetic fields, planetary science, astroparticle physics, gravitational waves, astronomical instrumentation and observation methods, computer simulations, and others).

Program Objective and Future Career Options

As a graduate of the master's degree in astrophysics you will be able to independently plan and conduct research projects in the field of astrophysics. You will be able to identify subject-specific problems, find appropriate methods to address them, and present the results of your work in an appropriate form.

Career prospects for our graduates include scientific institutions and universities, high-tech and information technology, knowledge transfer and the media. Your analytical training and solid English skills will qualify you for numerous, internationally oriented professions.

Program Structure and Curriculum

This four-semester master's degree program requires the completion of 120 credit points (CP). The following overview provides information about the weighting of individual modules and types of courses.

Modules	
Mandatory modules	60 CPs
Astrophysics I	12 CPs
Astrophysics II	6 CPs
Advanced Physics	12 CPs
Methods of Modern Astrophysics	12 CPs
Topics in Advanced Astrophysics	12 CPs
Supplementary Topics	6 CPs
Preparatory Phase for the Master's Thesis	30 CPs
Introductory Project	18 CPs
Research Training	12 CPs
Master's Thesis	30 CPs
Total	120 CPs

For additional information, please consult the subject-specific Degree Regulations: www.uni-potsdam.de/en/studium/studying/legalfoundations/studyregulations



Research Environment

Potsdam is one of Germany's centers of astrophysical research. There is a broad range of astrophysical topics covered in on-going research projects at the Department of Physics and Astronomy at the University of Potsdam, the Leibniz Institute for Astrophysics Potsdam (AIP), the Deutsches Elektronen-Synchrotron (DESY), and the Max Planck Institute for Gravitational Physics.

As a student in the master's degree program in astrophysics you are involved in current research questions from the very beginning. You have the latest means of working with scientific data at your disposal, for example for comprehensive spectral analyses or state-of-the art computer simulations. You also have access to an international network that facilitates the use of large telescopes and observational data from spacecraft missions. This means that teaching and research are right on the cutting edge. More than 20 lecturers at the University of Potsdam offer courses in all of the subfields of modern astrophysics, and as a graduate in the master's degree in astrophysics you can particularly benefit from this comprehensive range of courses.

Furthermore, your studies at the University of Potsdam give you an outstanding advantage in terms of location: thanks to an exemplary network of nationally active research institutions and a modern university campus you are in a great position to develop your academic interests and pursue them in a goal-oriented way.

Entry Requirements

Important prerequisites for the master's degree program include a solid foundation in physics and mathematics and a deep interest in astrophysical phenomena and topics.

In general, the prerequisite for master's studies at the University of Potsdam is an academic degree, such as a bachelor's degree. Your first degree should be in a subject that is relevant to your course of study, for example in physics. You should be able to provide documentation of at least 60 credit points in physics and mathematics. Furthermore, you should have completed at least 6 credit points in astrophysics.

Because this degree program is taught in English, we expect good English skills that correspond at least to the C1 level of the Common European Reference Framework for Languages.

You can learn more about the subject-specific admission requirements in the respective Admission Regulations: www.uni-potsdam.de/en/studium/studying/legalfoundations/zulassungsordnungen-fuer-master

Application and Enrollment

Have you decided to study the English-language master's degree in Astrophysics at the University of Potsdam? Then you should take the next step and get more information about the current application and enrollment procedures at the application website: www.uni-potsdam.de/en/studium/application-enrollment/application-master

The course of study starts (1st semester) in summer or winter semester.

Further Information

Degree and Examination Regulations:

www.uni-potsdam.de/en/studium/studying/legalfoundations/studyregulations

The Faculty Page:

www.uni-potsdam.de/en/mnfakul

Consultation & Contact

Departmental Student Advisor

The Student Advisory Service is there for you.

You can find our current contact information here:

www.uni-potsdam.de/en/studium/advising-and-services/index-a-z/physik



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