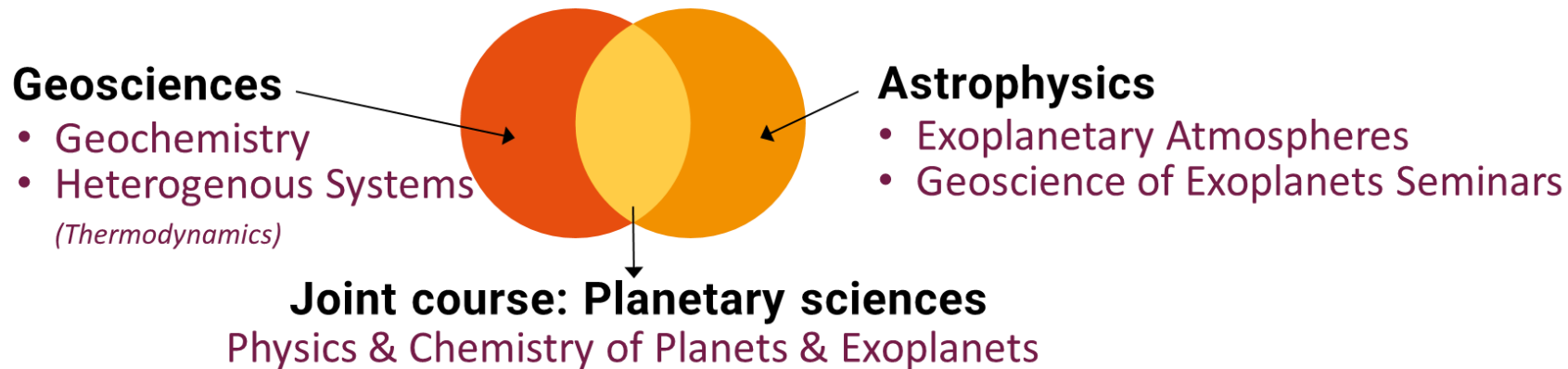


Exoplanet Science specialization

- Interdisciplinary course, cross-faculty expertise & comprehensive learning
- Astrophysics training; specialized training in Exoplanet Science; focused learning in Planetary- and Earth Sciences
- Strong emphasis on interdisciplinarity - related tools, techniques & methods



mandatory components of the specialization (total 30 ECTS)

Overview of the Exoplanet Science specialization within the MSc Astrophysics curriculum

	1 st Semester	2 nd Semester	3 rd Semester	4 th Semester
Astrophysics	Introduction to advanced Astrophysics (Lecture) P1 – 9 ECTS	2) Choose from variety of Astrophysics Courses WP15-28 – 30 ECTS from: Lectures (6 or 9 ECTS) Lab course (9 ECTS) Seminar (3 ECTS)	3)	Elective Lecture WP29-35 – 6 ECTS
	Lab Course: Basics of Astrophysics P2 – 9 ECTS		4)	Scientific Working Methods** WP36/37 – 12 ECTS
	Methods and Tools of advanced Astrophysics (choose from Lecture pool) P3 – 6 ECTS			Scientific Project Planning** WP38/39 – 12 ECTS
Master's Thesis				Master's Thesis** WP40/41 – 30 ECTS
Supplement Courses	Lecture in Modern Physics (choose from lecture pool of LMU Physics-related Master programs*) WP1-14 – 6 ECTS			

mandatory components of the specialization

elective components of the specialization

Overview of the Exoplanet Science specialization within the MSc Astrophysics curriculum

	1 st Semester	2 nd Semester	3 rd Semester	4 th Semester
Astrophysics	Introduction to advanced Astrophysics (Lecture) P1 – 9 ECTS Lab Course: Basics of Astrophysics P2 – 9 ECTS Methods and Tools of advanced Astrophysics (choose from Lecture pool) P3 – 6 ECTS	2) Choose from variety of Astrophysics Courses WP15-28 – 30 ECTS from: Lectures (6 or 9 ECTS) Lab course (9 ECTS) Seminar (3 ECTS)	3) Elective Lecture WP29-35 – 6 ECTS 4) Scientific Working Methods** WP36/37 – 12 ECTS Scientific Project Planning** WP38/39 – 12 ECTS	Master's Thesis** WP40/41 – 30 ECTS
Master's Thesis				
Supplement Courses	Lecture in Modern Physics (choose from lecture pool of LMU Physics-related Master programs*) WP1-14 – 6 ECTS			

Explanatory boxes for Elective components:

- Exoplanetary Atmospheres**
WP 18/20 - 9 ECTS

Geoscience of Exoplanets Seminar
WP 15 - 3 ECTS
- 3 Lectures on Geo- and Planetary Sciences** (6 ECTS each)
WP 22, 27 and 28 - total 18 ECTS
(winter semester only)
- Elective Course from Astrophysics, AI in Physics or Philosophy †**
WP 29/30/31/35 - 6 ECTS
- Masters Thesis Project focused on Exoplanet Science**

mandatory components
elective components

Program / Module Structure Overview

Course catalogue (WiSe 2026/27)

- ❶ Vorlesungsverzeichnis
- ❷ Faculty of Physics
- ❸ Master
- ❹ Astrophysics (Master)
- ❺ Specialization in Exoplanet Science
 - ❶ Mandatory courses (MSc Astrophysics)
 - ❷ Supplemental courses (MSc Astrophysics)
 - ❸ **Mandatory components (Exoplanet Science specialization)**
 - ❹ **Elective components (Exoplanet Science specialization)**

Important:

Requirements for the Exoplanet Science specialization are **in addition** and **complementary** to the mandatory requirements of the Master of Astrophysics curriculum!

Registrations for students possible **until 2. Nov 2026**

MASTER OF ASTROPHYSICS

with **Exoplanet Science Specialization certificate**

Module Structure Overview

P1	Lecture: Introduction to Advanced Astrophysics	9 ECTS
P2	Astrophysical Basic Lab	9 ECTS
P3	Lecture: Basic Research Methods and Tools	6 ECTS
WP 1-14	Physics Lecture Choose one from the list "Physics lectures" in the LSF	6 ECTS
Mandatory components of Exoplanet Science Specialization Certificate		
WP 15	Geoscience of Exoplanets Seminar	3 ECTS
WP 18/20	Lecture: Exoplanetary Atmospheres 3 Lectures in Geo- and Planetary sciences* :	9 ECTS
WP 22	Physics and Chemistry of Planets and Exoplanets	6 ECTS
WP 27	Geochemistry	6 ECTS
WP 28	Heterogenous Systems	6 ECTS
Elective Lecture[†] from the following topics. Choose one in the LSF		6 ECTS
i.	The Origin of Stars and Planets (WP 29/31)	
ii.	An Introduction to Planetary Science (WP 29/30/35)	
iii.	Protoplanetary Disks and Planet Formation (WP 30/35)	
iv.	'AI in Physics' Specialization curriculum (WP 35)	
v.	'Logic and Philosophy of Science' curriculum (WP 35)	
WP 36/37	Research Project Module: Scientific Working Methods	12 ECTS
WP 38/39	Research Project Module: Scientific Project Planning	12 ECTS
WP 40/41	Final Module: Master's Thesis[§]	30 ECTS

* 3 lectures of 6 ECTS each offered by the Faculty of Geosciences **only every Winter Semester**. **Note:** The registration deadlines for these courses may differ. Also note that most courses are offered only in specific semesters, not every semester.

[†] Elective lecture of 6 ECTS from the given list can be chosen. These are offered by the Faculty of Astrophysics / Physics / Philosophy.

[§] focused on Exoplanet Science. The modules WP 36–41 are part of the Master's Thesis project

Exoplanet Science Specialization

Webpage: www.physik.lmu.de/en/studies/study-programs/msc-astrophysics/specialization-exoplanet-science.html

LSF Page: [Specialization in Exoplanet Science](#)

Program Structure: Explains the structure & lists the mandatory and elective components you have to take within the specialization: https://cms-cdn.lmu.de/media/17-physik/17-observatory/downloads/260401_master-plan2026_exoplanet-science-specialization-certificate.pdf

Program Coordinator:

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Scientific Coordinator
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Courses & Specialization

Exoplanet Science

Specialization in exoplanet science within the LMU Astrophysics MSc program

EXOPLANET SCIENCE SPECIALIZATION

within the M.Sc. Astrophysics
program at LMU



A structured and interdisciplinary learning program to provide you with a unified and specialized understanding of techniques, tools & methods necessary to address questions in both astrophysics and exoplanet science.

