

# Catalogue des cours - Observatoire astronomique

## Catalogue des cours M2 Physique - Astrophysics and Data Science

### Candidater

Pour connaître les modalités de candidature, consultez la page dédiée sur le site de l'Université de Strasbourg.

<https://www.unistra.fr/formation/admission-inscription-et-scolarite/conditions-dadmission>

Composante	• <a href="#">Observatoire astronomique</a>
Niveau d'entrée	BAC +3
Durée	2 ans
ECTS	120
Stage	Non prévu
Stage à l'étranger	Non prévu
Alternance	Non

### Droits de scolarité

Pour connaître les droits de scolarité, consultez la page dédiée sur le site de l'Université de Strasbourg.

<https://www.unistra.fr/formation/admission-inscription-et-scolarite/inscription-a-luniversite/droits-dinscription>

# Programme des enseignements

## Catalogue des cours M2 Physique - Astrophysics and Data Science

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Semestre 3				
	CM	TD	TP	CI
UE 1 - Semestre 3 - Astrophysical objects and theories	12 ECTS	-	-	-
Introduction to astrophysics	12h	-	-	-
Cosmology	16h	-	-	-
Galaxies	18h	2h	2h	-
Stellar Physics	16h	-	-	-
Interstellar Medium	8h	2h	-	-
UE 2 - Semestre 3 - Data analysis	6 ECTS	-	-	-
Statistics, Inference and Machine Learning	20h	-	-	-
Databases	8h	-	12h	-
UE 3 - Semestre 3 - Numerical physics and astrophysical medium modeling	6 ECTS	-	-	-
Introduction to programming	-	26h	-	-
Plasmas and MHD	18h	2h	-	-
Numerical methods and simulations	4h	-	26h	-
UE 4 - Semestre 3 - Option (1 to choose among)	3 ECTS	-	-	-
Liste UE 4 - choisir 1 parmi 4				
Inverse problem theory and advanced data analysis	20h	-	-	-
High Energy Astrophysics	20h	-	-	-
Galaxy evolution	20h	-	-	-
External (planetary science, telescope and instrumentation, solar physics)	20h	-	-	-
UE 5 - Semestre 3 - Option (1 to choose among)	3 ECTS	-	-	-
Liste UE 5 - choisir 1 parmi 4				
Inverse problem theory and advanced data analysis	20h	-	-	-
High Energy Astrophysics	20h	-	-	-
Galaxy evolution	20h	-	-	-
External (planetary science, telescope and instrumentation, solar physics)	20h	-	-	-
UE 6 - Semestre 3 - Option (1 to choose among)	3 ECTS	-	-	-
Liste UE 6 - choisir 1 parmi 4				
Inverse problem theory and advanced data analysis	20h	-	-	-
High Energy Astrophysics	20h	-	-	-
Galaxy evolution	20h	-	-	-
External (planetary science, telescope and instrumentation, solar physics)	20h	-	-	-

Semestre 4				
	CM	TD	TP	CI
UE 1 - Semestre 4 - Bibliographical and observationnal projects <span style="float: right;">6 ECTS</span>	-	-	-	-
Observation mission at Observatoire de Haute Provence	4h	-	40h	-
Observation project at 2T36 telescope	-	4h	-	-
UE 2 - Semestre 4 - Professional integration <span style="float: right;">3 ECTS</span>	-	-	-	-
Seminars, professional forum, and Internship host institute projects	2h	2h	2h	-
UE 3 - Semestre 4 - Internship <span style="float: right;">21 ECTS</span>	-	-	-	-
Internship	-	-	-	-
Liste UE facultative <b>Facultatif</b>				
Optional	-	-	-	-
Voluntary internship	-	-	-	-