Degree: **M.Sc. in Astrophysics (PO von 2006)**

Module No.:	astro890
Credit Points (CP):	4
Category:	Elective
Semester:	8.

Fachgruppe
Physik und Astronomie
Universität Bonn

Module: Seminar

Module Elements:

Nr.	Course Title	Number	CP	Type	Workload	Sem.
1.	Seminar on Cosmology	astro891	4	seminar	120 hrs	WT/ST
2.	Seminar on Radio Astronomy	astro892	4	seminar	120 hrs	WT/ST
3.	Seminar on Stellar Systems: "Star Clusters and Dwarf Galaxies"	astro893	4	seminar	120 hrs	WT/ST
4.	Specialized Seminars	astro894	4	seminar	120 hrs	WT/ST

Requirements:

Preparation:

Content:
Modern developments in astrophysics are discussed using recent literature

Aims/Skills:
These seminars will introduce the student for the first time into professional research in astrophysics. Active participation will furnish the student with the skill to read and present modern research topics

Form of Testing and Examination:
Talk

Length of Module: 1 semester

Maximum Number of Participants: ca. 100

Registration Procedure:
s. https://basis.uni-bonn.de u. http://bamawww.physik.uni-bonn.de

Module: Seminar

Module No.: astro890

Course: Seminar on Cosmology

Course No.: astro891

Category	Type	Language	Teaching hours	CP	Semester
Elective	Seminar	English	2	4	WT/ST

Requirements:

Preparation:
astro812 (Cosmology)

Form of Testing and Examination:
Talk

Length of Course:
1 semester

Aims of the Course:
The students will be introduced to the newest state of knowledge in cosmology. They will familiarize themselves with open questions and acquire knowledge on the newest methods in research

Contents of the Course:
The newest literature (in particular using papers from the astro-ph preprint server) relevant to the research on cosmology will be presented in short talks and will be reviewed

Recommended Literature:

Module: Seminar

Module No.: astro890

Course: Seminar on Radio Astronomy

Course No.: astro892

Category	Type	Language	Teaching hours	CP	Semester
Elective	Seminar	English	2	4	WT/ST

Requirements:

Preparation:
astro841 (Radio Astronomy: Tools, Applications, Impacts)

Form of Testing and Examination:
Talk

Length of Course:
1 semester

Aims of the Course:
The participating students will learn in depth how the radio-astronomical tools can be utilized in practice to scrutinize a wide range of astrophysical phenomena. Technically, this will cover the whole radioastronomical band, from meter-wavelengths to the sub-mm regime

Contents of the Course:
The students will give oral presentations on a selected subject from the recent literature (refereed journals and proceedings). These will cover both, scientific advancements made with radio-astronomical techniques as well as technical developments. The presentations will be prepared by the students with support by the supervisor(s)

Recommended Literature:

Module: Seminar

Module No.: astro890

Course: Seminar on Stellar Systems: "Star Clusters and Dwarf Galaxies"

Course No.: astro893

Category	Type	Language	Teaching hours	CP	Semester
Elective	Seminar	English	2	4	WT/ST

Requirements:

Preparation:
astro811 (Stars and Stellar Evolution), astro821 (Astrophysics of Galaxies)

Form of Testing and Examination:
Talk

Length of Course:
1 semester

Aims of the Course:
The students will be introduced to the newest state of knowledge in the field of Star Clusters. They will familiarize themselves with open questions and acquire knowledge on the newest methods in research

Contents of the Course:
The newest literature (in particular using papers from the astro-ph preprint server) relevant to the research on stellar populations, star clusters and dwarf galaxies will be presented in short talks and discussed

Recommended Literature:

Module: Seminar

Module No.: astro890

Course: Specialized Seminars

Course No.: astro894

Category	Type	Language	Teaching hours	CP	Semester
Elective	Seminar	English	2	4	WT/ST

Requirements:

Preparation:
Good results in the first Semester of the M.Sc. in Astrophysics programme

Form of Testing and Examination:
Talk

Length of Course:
1 semester

Aims of the Course:
Students will gain insight in special fields and their most recent developments. Knowledge about the newest methods and newest results will be acquired

Contents of the Course:
The newest literature from preprints, reviews and other up-to-date material on specialised topics, chosen based on the most recent developments in special areas of astrophysics, will be presented in short talks and discussed. The main theme will vary from semester to semester

Recommended Literature: