

Academic Year/course: 2022/23

26932 - Astronomy and Astrophysics

Syllabus Information

Academic Year: 2022/23

Subject: 26932 - Astronomy and Astrophysics

Faculty / School: 100 - Facultad de Ciencias

Degree: 447 - Degree in Physics

ECTS: 5.0

Year:

Semester: First semester

Subject Type: Optional

Module:

1. General information

1.1. Aims of the course

The aims of the course are aligned with the following Sustainable Development Goals (SDGs):

- Goal 4: Quality Education
- Goal 5: Gender Equality

2. Learning goals

3. Assessment (1st and 2nd call)

4. Methodology, learning tasks, syllabus and resources

4.1. Methodological overview

The methodology followed in this course is oriented towards achievement of the learning objectives. A wide range of teaching and learning tasks are implemented, such as lectures, case-based learning, problems, field work and reports.

Students are expected to participate actively in the class throughout the semester.

4.2. Learning tasks

The course includes the following learning tasks:

- **Lectures** (30 ECTS). Acquisition of the main concepts of the course.
- **Practice session** (15 ECTS). Solving problems related to the contents of the course.
- **Field work**. Acquisition of the following skills for astronomical observation:
 - Familiarization with the celestial sphere and different coordinate systems: horizontal, equatorial and galactic systems. Constellations crossing the celestial equator, the ecliptic, and the galactic equator.
 - Familiarization with the arms of The Galaxy
 - Familiarization with open and globular clusters

4.3. Syllabus

The course will address the following topics:

- Topic 1. Positions, motions and distances of the stars (2 h lectures, 1 h practice session)
- Topic 2. Structure and kinematics of the stellar system (2 h + 2 h)
- Topic 3. Astronomic photometry (2 h lectures)
- Topic 4. Stellar structure and evolution (12 h + 8 h)
- Topic 5. The Sun and the solar system (2 h lectures)
- Topic 6. The interstellar medium (6 h + 4 h)
- Topic 7. The Milky Way constituents (2 h lectures)
- Topic 8. Normal galaxies and active galaxies (2 h lectures)

*Hours are estimated

4.4. Course planning and calendar

Further information concerning the timetable, classroom, assessment dates and other details regarding this course, will be provided on the first day of class or please refer to the Faculty of Sciences website.

4.5. Bibliography and recommended resources

<http://psfunizar10.unizar.es/br13/egAsignaturas.php?codigo=26932>