230804 - AIR - Astronomy & Radioastronomy

Coordinating unit: 230 - ETSETB - Barcelona School of Telecommunications Engineering
Teaching unit: 748 - FIS - Department of Physics
Academic year: 2017
Degree:
- BACHELOR’S DEGREE IN AUDIOVISUAL SYSTEMS ENGINEERING (Syllabus 2009). (Teaching unit Optional)
- BACHELOR’S DEGREE IN ELECTRONIC SYSTEMS ENGINEERING (Syllabus 2009). (Teaching unit Optional)
- BACHELOR’S DEGREE IN TELECOMMUNICATIONS TECHNOLOGIES AND SERVICES ENGINEERING (Syllabus 2015). (Teaching unit Optional)
- BACHELOR’S DEGREE IN NETWORK ENGINEERING (Syllabus 2010). (Teaching unit Optional)
- BACHELOR’S DEGREE IN TELECOMMUNICATIONS SCIENCE AND TECHNOLOGY (Syllabus 2010). (Teaching unit Optional)
- BACHELOR’S DEGREE IN TELECOMMUNICATIONS SYSTEMS ENGINEERING (Syllabus 2010). (Teaching unit Optional)

ECTS credits: 6
Teaching languages: English

Teaching staff
Coordinator: Garcia-Berro Montilla, Enrique
Others: Garcia-Berro Montilla, Enrique
Torres Gil, Santiago

Prior skills
Basic Mathematics and Physics

Requirements
None

Learning objectives of the subject
- To provide an introduction to astronomy and astrophysics.
- To apply the basic concepts of physics to studying the universe.
- To provide an introduction to a general knowledge of astronomy and space science.
- Basic contents of the course are: Observational and computational techniques in astronomy.
## Study load

<table>
<thead>
<tr>
<th>Total learning time: 150h</th>
<th>Hours large group: 52h</th>
<th>34.67%</th>
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</thead>
<tbody>
<tr>
<td>Self study:</td>
<td>98h</td>
<td>65.33%</td>
</tr>
</tbody>
</table>

**Total learning time:** 150h

**Total hours:** 248h

- **Large group:** 52h (34.67%)
- **Self study:** 98h (65.33%)
## Content

1. **Spherical astronomy**
   - Degree competences to which the content contributes:

2. **Observational techniques: optical and radioastronomy**
   - Degree competences to which the content contributes:

3. **Celestial mechanics**
   - Degree competences to which the content contributes:

4. **Observational properties of stars**
   - Degree competences to which the content contributes:

5. **Stellar evolution**
   - Degree competences to which the content contributes:

6. **Binary systems**
   - Degree competences to which the content contributes:

7. **The Milky Way**
   - Degree competences to which the content contributes:

8. **Galaxies**
   - Degree competences to which the content contributes:

9. **Origin and evolution of the Universe: the Big Bang**
   - Degree competences to which the content contributes:
Qualification system

- Final examination 80%
- Practical applications 20%

Bibliography

Basic:


Complementary:


Others resources: