320164 - MCS - Modelisation, Complexity and Sustainability

**Coordinating unit:** 205 - ESEIAAT - Terrassa School of Industrial, Aerospace and Audiovisual Engineering
**Teaching unit:** 724 - MMT - Department of Heat Engines
**Academic year:** 2019

**Degree:**
- BACHELOR'S DEGREE IN INDUSTRIAL TECHNOLOGY ENGINEERING (Syllabus 2010). (Teaching unit Optional)
- BACHELOR'S DEGREE IN AEROSPACE TECHNOLOGY ENGINEERING (Syllabus 2010). (Teaching unit Optional)
- BACHELOR'S DEGREE IN AEROSPACE VEHICLE ENGINEERING (Syllabus 2010). (Teaching unit Optional)
- BACHELOR'S DEGREE IN INDUSTRIAL DESIGN AND PRODUCT DEVELOPMENT ENGINEERING (Syllabus 2010). (Teaching unit Optional)
- BACHELOR'S DEGREE IN INDUSTRIAL ELECTRONICS AND AUTOMATIC CONTROL ENGINEERING (Syllabus 2009). (Teaching unit Optional)
- BACHELOR'S DEGREE IN ELECTRICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional)
- BACHELOR'S DEGREE IN MECHANICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional)
- BACHELOR'S DEGREE IN CHEMICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional)
- BACHELOR'S DEGREE IN AUDIOVISUAL SYSTEMS ENGINEERING (Syllabus 2009). (Teaching unit Optional)
- BACHELOR'S DEGREE IN TEXTILE TECHNOLOGY AND DESIGN ENGINEERING (Syllabus 2009). (Teaching unit Optional)

**ECTS credits:** 6

**Teaching languages:** Catalan, Spanish

**Teaching staff**

**Coordinator:** Rosas Casals, Marti

**Others:** Martinez Magaña, Juan

**Learning objectives of the subject**

**Study load**

<table>
<thead>
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<th>Total learning time: 150h</th>
<th>Hours large group:</th>
<th>30h</th>
<th>20.00%</th>
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<td>Hours medium group:</td>
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<td></td>
<td>Self study:</td>
<td>90h</td>
<td>60.00%</td>
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### Content

<table>
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<tr>
<th>Tema</th>
<th>Learning time</th>
<th>Theory classes</th>
<th>Self study</th>
</tr>
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<tbody>
<tr>
<td>(ENG) Tema 3: INTRODUCCIÓ A LA COMPLEXITAT</td>
<td>25h</td>
<td>10h</td>
<td>15h</td>
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<tr>
<td>(ENG) Tema 2: DINÀMICA DE SISTEMES</td>
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<td>14h</td>
<td>21h</td>
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<tr>
<td>(ENG) Tema 4: MODELITZACIÓ DE SISTEMES SOCIO-ECOLÒGIS</td>
<td>50h</td>
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<td>30h</td>
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### Planning of activities

<table>
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<th>Activity</th>
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<th>Theory classes</th>
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<tr>
<td>(ENG) PROVA PARCIAL</td>
<td>3h</td>
<td>3h</td>
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<tr>
<td>(ENG) EXAMEN FINAL</td>
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<td>3h</td>
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</table>
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Bibliography

Basic:


Others resources:

Those suggested as the course goes on