Course guide
295108 - 295II023 - Management of Technology

Unit in charge: Barcelona East School of Engineering
Teaching unit: 732 - OE - Department of Management.
Degree: MASTER'S DEGREE IN INTERDISCIPLINARY AND INNOVATIVE ENGINEERING (Syllabus 2019). (Compulsory subject).
MASTER'S DEGREE IN MATERIALS SCIENCE AND ADVANCED MATERIALS ENGINEERING (Syllabus 2019). (Compulsory subject).
Academic year: 2022
ECTS Credits: 6.0
Languages: English

LECTURER

Coordinating lecturer: Jordi Olivella Nadal
Others: Jordi Olivella Nadal
Silvia Rodriguez Donaire
Oriol Cuatrecases Arbós

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
CEMCEAM-07. (ENG) Gestionar la Investigación, Desarrollo e Innovación Tecnológica, atendiendo a la transferencia de tecnología y los derechos de propiedad y de patentes.
CEMUEII-05. Apply predictive analytics to identify risks and opportunities for innovation in different areas of the company, planning and managing a project to create a new technological product and its business model.
CEMUEII-07. Identify and evaluate internal and external technologies, both consolidated and emerging, and propose management actions in accordance with the company's strategy. Plan and manage RDI projects and recognize the procedures to obtain public-private financing for the mentioned projects.

General:
CGMUEII-02. To manage, plan and supervise multidisciplinary teams according to technological creativity, business opportunity, social impact and sustainable development.
CGMUEII-03. Analyze the economic, social and environmental impact of technical solutions to base strategic decisions on criteria of objectivity, transparency and professional ethics.
CGMUEII-04. Transfer technological solutions in the form of products, services, processes or facilities in an efficient and sustainable manner, with an attitude of leadership and entrepreneurial spirit.

Transversal:
01 EIN. ENTREPRENEURSHIP AND INNOVATION: Knowing about and understanding how businesses are run and the sciences that govern their activity. Having the ability to understand labor laws and how planning, industrial and marketing strategies, quality and profits relate to each other.
02 SCS. SUSTAINABILITY AND SOCIAL COMMITMENT. Being aware of and understanding the complexity of social and economic phenomena that characterize the welfare society. Having the ability to relate welfare to globalization and sustainability. Being able to make a balanced use of techniques, technology, the economy and sustainability.
03 TLG. THIRD LANGUAGE. Learning a third language, preferably English, to a degree of oral and written fluency that fits in with the future needs of the graduates of each course.

TEACHING METHODOLOGY

The teaching of the course is based on different methodologies (Master classes, seminars, workshops, projects) prioritizing active learning and "learning by doing" through exercises and team projects.
LEARNING OBJECTIVES OF THE SUBJECT

Upon completion of the course, the student should be able to:
- Inventorate and evaluate internal and external, consolidated and emerging technologies, and make a proposal for their management.
- Plan and manage RDI projects.

STUDY LOAD

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self study</td>
<td>96.0</td>
<td>64.00</td>
</tr>
<tr>
<td>Hours large group</td>
<td>34.0</td>
<td>22.67</td>
</tr>
<tr>
<td>Hours small group</td>
<td>20.0</td>
<td>13.33</td>
</tr>
</tbody>
</table>

Total learning time: 150 h

CONTENTS

**Technology evaluation**

Description:
Level of development; Comparison of alternatives; Technology forecasting; Possible customers and uses

Full-or-part-time: 12h
Theory classes: 12h

**Business models**

Description:
Project Management concepts; Phase-gate methods; Standard project management; Agile methods

Full-or-part-time: 11h
Theory classes: 11h

**Technology project management**

Description:
Project Management concepts; Phase-gate methods; Standard project management; Agile methods

Full-or-part-time: 11h
Theory classes: 11h

GRADING SYSTEM

Class assignments of blocks 1, 2 and 3: 20% each
Course project: 40%
BIBLIOGRAPHY

Basic:

Complementary: