

Course guides

295108 - 295II023 - Management of Technology

Last modified: 30/06/2021

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: 2021 **ECTS Credits:** 6.0 **Languages:** English

LECTURER

Coordinating lecturer: Jordi Olivella Nadal

Others: Jordi Olivella Nadal
Silvia Rodriguez Donaire
Oriol Cuatrecasas 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

Generical:

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:

- Inventoriate and evaluate internal and external, consolidated and emerging technologies, and make a proposal for their management.
- Plan and manage RDI projects.

STUDY LOAD

Type	Hours	Percentage
Self study	96,0	64.00
Hours large group	34,0	22.67
Hours small group	20,0	13.33

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:

- Nicholas, John M.; Steyn, Herman. Project management for engineering, business and technology. 5th ed. Abingdon, Oxon: Routledge, 2017. ISBN 1138937347.
- Kotter, John. Leading change. Boston: Harvard Business Review, cop. 2012. ISBN 9781422186435.

Complementary:

- Çetindamar, Dilek; Phaal, Robert; Probert, David. Technology management : activities and tools. London: Palgrave, [2017]. ISBN 9781137431851.
- Armstrong, Paul. Disruptive technologies : understand, evaluate, respond. London: Kogan Page, [2017]. ISBN 9780749477288.
- Hiatt, Jeffrey M.; Creasey, Timothy J. Change management : the people side of change : an introduction to change management from the editors of the Change Management Learning Center. 2nd ed. Loveland: Prosci Learning Center, [2012]. ISBN 193088561X.
- Flanding, Jens P.; Grabman, Genevieve M.; Cox, Sheila Q. The technology takers : leading change in the digital era. Bingley: Emerald Publishing, [2019]. ISBN 9781787694644.