

**Información del Plan Docente**

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| <b>Academic Year</b>   | 2016/17  |
| <b>Academic center</b> | 179 - Centro Universitario de la Defensa - Zaragoza              |
| <b>Degree</b>          | 563 - Bachelor's Degree in Industrial Organisational Engineering |
| <b>ECTS</b>            | 4.5  |
| <b>Course</b>          | 3  |
| <b>Period</b>          | Second semester  |
| <b>Subject Type</b>    | Compulsory   |
| <b>Module</b>          | ---  |

**1.Basic info****1.1.Recommendations to take this course****1.2.Activities and key dates for the course****2.Initiation****2.1.Learning outcomes that define the subject****2.2.Introduction****3.Context and competences****3.1.Goals****3.2.Context and meaning of the subject in the degree****3.3.Competences****3.4.Importance of learning outcomes****4.Evaluation****5.Activities and resources****5.1.General methodological presentation**

The learning process is based on interactive methodologies and classroom-based classes. Lectures and seminars comprehend the basic knowledge of the curse.

In small groups, the students co-operate with their fellow students to accomplish the assessments (essays, case studies, project reports, etc.) proposed by the teacher. They provide an adequate balance between theory and practice to enhance the learning competences.

A specific assessment is the research about a technology with interest for security and defence sector -or a dual-use technology- that they have chosen and confirmed with the teacher not only the viability, but also the size group. Guidance about the overall assessment process will be provided in Moodle.

The independent study is attended by teacher under request.

At the end of the semester, an exam will be required in order to check if the students have gained an understanding of all aspects of the relevant core modules.

## **5.2.Learning activities**

- Lectures
- Seminars
- Teamwork in essays, case studies, project reports and technology analysis
- Independent study
- Written exam

## **5.3.Program**

1. Introduction to innovation, firm's innovation strategy and management teams for innovation
2. Technology audit, Foresight and Technological Prospective
3. Appropriating Innovation - Managing Industrial property
4. Research and Development Project Management
5. Technology transfer and cooperation
6. Innovation systems

## **5.4.Planning and scheduling**

Moodle is an e-learning facility that allows for the uploading of documents and notices about the planning and scheduling. The activities, lectures and cases will be announced in advance during class.

The official web site announces the written exam dates.

## **5.5.Bibliography and recommended resources**

- Escorsa Castells, Pere. Tecnología e innovación en la empresa / Pere Escorsa Castells, Jaume Valls Pasola . - 1<sup>a</sup> ed., 1<sup>a</sup> reimpr. Barcelona : Edicions UPC, 2004
- Barba Ibáñez, Enric. Cómo gestionar la innovación / Enric Barba, José Ramón Magarzo. 1<sup>a</sup> edición Lleida: Dobllerre, 2013.
- Hidalgo Nuchera, Antonio. La gestión de la innovación y la tecnología en las organizaciones / Antonio Hidalgo Nuchera, Gonzalo León Serrano, Julián Pavón Morote Madrid : Pirámide, 2002
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- Gestión económica de la I+D empresarial y de la innovación. COTEC, 2011 [Disponible en la página web de la fundación COTEC, previo registro]
- PMBOK &reg;, Project Management Institute. 2015.
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- Estrategia de Tecnología e Innovación para la Defensa, ETID, Madrid. Disponible en la página web del Ministerio. Madrid: Ministerio de Defensa, 2015.
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- F. Cauzic, H. Colas, N. Leridon, S. Lourimi, and E. Waelbroeck-Rocha. A comprehensive analysis of emerging

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  - Riola Rodríguez, J. M. ?La política de I+D en Defensa: Metas y retos tecnológicos? En: Las Tecnologías de Doble Uso: La Investigación y el desarrollo al Servicio de la Sociedad Civil y Militar. I Jornadas, 2011, pp. 13?22.
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