

Degree	Type	Year	Semester
4313797 Telecommunications Engineering	OB	1	2

Contact

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Use of languages

Principal working language: english (eng)

Prerequisites

No previous requisites

Objectives and Contextualisation

This course aims to provide:

1. Systematic tools for planning, directing and managing projects in the field of Telecommunication Engineering
2. Knowledge, understanding and ability to apply the necessary legislation in the exercise of the profession of Telecommunications Engineering
3. An overview of the role that information and communication technologies can play in management and entrepreneurship.

Skills

- "Capacity for the elaboration, direction, coordination and technical and economical management of projects about: systems, networks, infrastructures and telecommunication services, including the supervision and coordination of partial projects of coordinación of part of its accompanying work projects; common telecommunications infrastructures in buildings or residential areas, including digital home projects; telecommunications infrastructure in transport and environment; with corresponding energy supply facilities and evaluation of electromagnetic emissions and electromagnetic compatibility."
- Students should know how to apply the knowledge they have acquired and their capacity for problem solving in new or little known fields within wider (or multidisciplinary) contexts related to the area of study
- Students should know how to communicate their conclusions, knowledge and final reasoning that they hold in front of specialist and non-specialist audiences clearly and unambiguously

Learning outcomes

1. Apply the principles of resource and project management as well as telecommunications legislation, regulation and normalisation.
2. Direct research, development and innovation projects in companies and technology centres
3. Direct telecommunications systems projects ensuring that the regulation in force is complied with to ensure the quality of the service.
4. Students should know how to apply the knowledge they have acquired and their capacity for problem solving in new or little known fields within wider (or multidisciplinary) contexts related to the area of study

- Students should know how to communicate their conclusions, knowledge and final reasoning that they hold in front of specialist and non-specialist audiences clearly and unambiguously

Content

- Organizational structure and integrated project management
- Planning and monitoring techniques
- Quality Assurance
- Management methodologies for information and communication technologies
- The role of information and communication technologies in new bussiness models
- Projects in the field of telecommunications: legislation, development, implementation and certification

Methodology

Guided activities:

- In the class: explanation of theoretical contents with application examples
- In the lab: presentation and development of planned activities

Autonomous activities:

- Individual study of the subject
- Preparation of lab activities, reports and presentations
- Work group: development of the proposed projects

Supervised activities:

- Individual or group meetings to clarify concepts, advise on the development of the course or attend other specific issues.

Activities

Title	Hours	ECTS	Learning outcomes
Type: Directed			
Lab classes	15	0.6	1, 2, 3, 4, 5
Theory classes	30	1.2	1, 2, 3, 4, 5
Type: Supervised			
Supervision meetings	15	0.6	1, 2, 3, 4, 5
Type: Autonomous			
Group work	45	1.8	1, 2, 3, 4, 5
Personal work	25	1	1, 2, 3, 4, 5

Evaluation

Evaluation activities

Final exam (30%): theoretical concepts explained along the course. Minimum required qualification (score ≥ 4 over 10).

2 projects in group (35% + 35 %). Both projects have the same weight. In the evaluation of each project the following aspects will be taken into consideration:

- Subjective assessment by the teacher of the contribution of each student to the project (5%)
- Oral presentation of the project (10%)
- Written report of the project (20%)

The qualification "not evaluated " will be only granted if the student does not participate in any of the evaluation activities.

It is mandatory to pass all the evaluation activities (score ≥ 5 over 10) to pass the course.

Evaluation activities

Title	Weighting	Hours	ECTS	Learning outcomes
Activity developed in tutorial and practical sessions	10%	2	0.08	1, 2, 3, 4, 5
Final exam	30%	3	0.12	1, 2, 3, 4, 5
Oral presentation of a project developed in a group	20%	3	0.12	1, 2, 3, 4, 5
Report of a project developed in a group	40%	12	0.48	1, 2, 3, 4, 5

Bibliography

References:

W.R. Duncan, A Guide to the Project Management Body of Knowledge, Project Management Institute. Four Campus Boulevard. PA, 2000.

T.C. Belanger, How to plan a project, Sterling Planning Group, 1999

C. Romero López, Técnicas de Programación y Control de Proyectos, Ediciones Pirámide, 1988

Tim Williams, "EMC. Control y Limitación de Energía Electromagnética", Editorial Paraninfo, 1996.

Alexander Osterwalder & Yves Pigneur, Business Model Generation, John Wiley & Sons, Inc., New Jersey, 2010

A. Carlidge et al., An introductory view to ITIL v3, itSMF Ltd, 2007

Links:

Legislación básica de telecomunicaciones en España:

<http://www.minetur.gob.es/telecomunicaciones/es-ES/Paginas/index.aspx>

Instituto para la Diversificación y Ahorro de la energía: <http://www.idae.es>

Colegio oficial de ingenieros de telecomunicación: <http://www.coit.es>

Col·legi d'Enginyers de Telecomunicació de Catalunya - Associació Catalana de Ingenieros de Telecomunicación: <http://www.telecos.cat>