

Course guide

300303 - RPT-OT - Telecommunications Policy and Regulation

Last modified: 01/06/2023

Unit in charge: Castelldefels School of Telecommunications and Aerospace Engineering
Teaching unit: 739 - TSC - Department of Signal Theory and Communications.

Degree: BACHELOR'S DEGREE IN NETWORK ENGINEERING (Syllabus 2009). (Optional subject).
BACHELOR'S DEGREE IN TELECOMMUNICATIONS SYSTEMS ENGINEERING (Syllabus 2009). (Optional subject).

Academic year: 2023 **ECTS Credits:** 6.0 **Languages:** Catalan, Spanish

LECTURER

Coordinating lecturer: Definit a la infoweb de l'assignatura.

Others: Definit a la infoweb de l'assignatura.

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Transversal:

1. 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.
2. TEAMWORK. Being able to work as a team player, either as a member or as a leader. Contributing to projects pragmatically and responsibly, by reaching commitments in accordance to the resources that are available.
3. EFFECTIVE USE OF INFORMATION RESOURCES. Managing the acquisition, structure, analysis and display of information from the own field of specialization. Taking a critical stance with regard to the results obtained.
4. SELF-DIRECTED LEARNING. Detecting gaps in one's knowledge and overcoming them through critical self-appraisal. Choosing the best path for broadening one's knowledge.
5. TEAMWORK - Level 3. Managing and making work groups effective. Resolving possible conflicts, valuing working with others, assessing the effectiveness of a team and presenting the final results.
6. ENTREPRENEURSHIP AND INNOVATION - Level 3. Using knowledge and strategic skills to set up and manage projects. Applying systemic solutions to complex problems. Devising and managing innovation in organizations.

TEACHING METHODOLOGY

LEARNING OBJECTIVES OF THE SUBJECT

STUDY LOAD

| Type | Hours | Percentage |
|-------------------|-------|------------|
| Self study | 84,0 | 56.00 |
| Hours large group | 66,0 | 44.00 |

Total learning time: 150 h

CONTENTS

Engineering, fundamentals and functions. Telecommunication Engineering and ICT Engineering.

Description:

- Brief view of social evolution from the point of view of engineering.
- The Information Society
- Technological convergence, convergence of services
- Professional profiles and areas of work of TC engineering. The search for talent.
- Engineering work methods for problem solving and design of products and services.
- The information. Access and Interpretation.
- The System-Environment relationship in engineering design procedures.
- Society and Services of Electronic Communications. The evolution of telecommunication networks.
- The New Economy
- Sustainability.
- Information society services, new generation telecommunications networks, Internet, 5G, "Cloud" "Edge", AI, IoT, biotechnology, ...
- Situation of Catalonia and Spain in the Global Digital Economy.

Specific objectives:

Understanding of the role of engineering in the social evolution of humanity.

Particularization of the role of ICT Engineering in the current sociological moment called "Information Society", its contribution to the new economy and social cohabitability.

Acquire a general vision of the professional profiles currently required for ICT engineering.

Presentation of the engineering work methodology and of the current systems and services of the Information Society.

Panoramic view of the local situation (Spain and Catalonia) in telecommunication systems and services.

Related activities:

1. - ANALYSIS AND DISCUSSION OF THE EUROPEAN INDEXES OF THE ECONOMY AND DIGITAL SOCIETY AND REGIONAL DEVELOPMENT
4. - ANALYSIS AND DISCUSSION OF REPORTS ON THE REALIZATIONS SECTOR BY STATE, SUPRANATIONAL AND PRIVATE ORGANIZATIONS ON PROSPECTS, EVOLUTION, FORECASTS AND ANALYSIS OF THE TELECOMMUNICATIONS SECTOR.

Related competencies :

06 URI. EFFECTIVE USE OF INFORMATION RESOURCES. Managing the acquisition, structure, analysis and display of information from the own field of specialization. Taking a critical stance with regard to the results obtained.

07 AAT. SELF-DIRECTED LEARNING. Detecting gaps in one's knowledge and overcoming them through critical self-appraisal. Choosing the best path for broadening one's knowledge.

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.

Full-or-part-time: 22h

Theory classes: 14h

Self study : 8h

The Telecommunications Business.

Description:

- Brief notes on Macroeconomics.
- Economic and social environment of Spain. (INE economic and social statistics)
- ICT and GDP industrial sector
- Electronic Communications Sector
- Evolution of the Electronic Communications Systems and Services market.
- Network Neutrality.
- The new Services
 - The Cloud.
 - The Internet of Things (IoT)
 - Digital identities
 - ...
- Systems and Services Operating Companies.
- Statistics of the Information Society in Spain and the World.
- Global data from the Telecom sector and Media

Specific objectives:

Understanding of the main macroeconomic concepts.

Familiarity in handling statistics from the INI and other sources.

The study of the role of telecommunications networks and services and their contribution to the country's economy.

The acquisition of a general vision of the economic sector of the networks, services and contents of the ICT sector.

Related activities:

2. - ANALYSIS AND DISCUSSION OF THE EUROPEAN INDEXES OF THE DIGITAL ECONOMY AND SOCIETY AND REGIONAL DEVELOPMENT
3. - INTERNATIONAL COMPARATIVE ANALYSIS OF IMPLEMENTATION POLICIES, CAPITAL COSTS AND DEPLOYMENT OF TELECOMMUNICATION SERVICES AND FORECAST INFRASTRUCTURES, AND ANALYSIS OF THE TELECOMMUNICATIONS SECTOR.
4. - ANALYSIS AND DISCUSSION OF REPORTS ON THE SECTOR CARRIED OUT BY STATE, SUPRESTATE AND PRIVATE BODIES ON THE FORECAST, EVOLUTION, FORECASTS AND ANALYSIS OF THE TELECOMMUNICATIONS SECTOR.

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07 AAT. SELF-DIRECTED LEARNING. Detecting gaps in one's knowledge and overcoming them through critical self-appraisal. Choosing the best path for broadening one's knowledge.

05 TEQ N3. TEAMWORK - Level 3. Managing and making work groups effective. Resolving possible conflicts, valuing working with others, assessing the effectiveness of a team and presenting the final results.

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Full-or-part-time: 16h

Theory classes: 8h

Self study : 8h

The Audiovisual and Multimedia Sector

Description:

- New Generation Televisions
- New television business models.
- Audiovisual media in Spain and in the world. Leading content operators and producers.
- Audience statistics.
- Online audio. The new broadcast.
- Digital Advertising
- The Video Game Sector.
- E-sports.

Specific objectives:

Detailed introduction to the multimedia content sector, its production and distribution, as well as the important economic business they represent.

Approach to new forms of audiovisual entertainment.

Related activities:

1. - ANALYSIS AND DISCUSSION OF EUROPEAN DIRECTIVES
2. - ANALYSIS AND DISCUSSION OF THE EUROPEAN INDEXES OF THE DIGITAL ECONOMY AND SOCIETY, AND REGIONAL DEVELOPMENT

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Full-or-part-time: 16h

Theory classes: 8h

Self study : 8h

ICT Regulation

Description:

- The powers of the state.
- The European Union and the Treaties.
- The Regulatory function
- EU Regulation, Guidelines.
- Regulation in Spain. Regulatory frameworks and Evolution.
- Enabling titles. Licenses, Authorizations, ...
- Market Analysis.
 - Identification and definition of markets.
 - Definition of Relevant Market
 - Market size
 - Domain Positions. Significant Market Power
 - SSNIP (Small but Significant Non-Transitory Increase in Price) Test
 - Replacements of Supply and Demand
 - Collapsed barriers and costs.
 - Specifics
- The Regulatory Authorities in Spain.
- Evolution
- The concept of Independent Regulator
- Functions and Competences.

Specific objectives:

Study and understanding of the powers of the State and the transfer of sovereignty to the European Union.

Knowledge of the role of Regulation in a market economy and the mechanisms to analyzing the level of competition in the different ICT markets.

Knowledge of the qualifying titles to operate in the Telecom sector, and description of the regulatory authorities and their functions and powers.

Related activities:

1. - ANALYSIS AND DISCUSSION OF EUROPEAN DIRECTIVES
4. - ANALYSIS AND DISCUSSION OF REPORTS ON THE SECTOR CARRIED OUT BY STATE, SUPRESTATE AND PRIVATE BODIES ON THE FORECAST, EVOLUTION, FORECASTS AND ANALYSIS OF THE TELECOMMUNICATIONS SECTOR.

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Full-or-part-time: 16h

Theory classes: 8h

Self study : 8h

Regulatory Tools

Description:

- Access
- Numbering
- Portability
- The Interconnection.
- Regulated Wholesale Offers

Specific objectives:

Description and understanding of the main instruments with which the Regulatory Authorities can apply, coerce, the companies operating networks and Electronic Communications services to maintain and/or establish, where appropriate, competition in the ICT markets.

Related activities:

1. - ANALYSIS AND DISCUSSION OF DIRECTRIUS EUROPEES
2. - ANALYSIS AND DISCUSSION OF THE EUROPEAN INDEXES OF THE ECONOMY AND DIGITAL SOCIETY AND REGIONAL DEVELOPMENT
3. - INTERNATIONAL COMPARATIVE ANALYSIS OF IMPLEMENTATION POLICIES, CAPITAL COSTS AND DEPLOYMENT OF TELECOMMUNICATION SERVICES AND INFRASTRUCTURES

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Full-or-part-time: 16h

Theory classes: 8h

Self study : 8h

Radio Spectrum Management.

Description:

- Antennas and electromagnetic radiation. Concept Review.
- The radio spectrum
- Mobile Telephony and Health
- Regular spectrum
- Free spectrum
- Primary and secondary markets for the radio spectrum
- Frequency allocation tables (Spanish CNAF)
- ...

Specific objectives:

Study of the Electromagnetic spectrum as a public asset of high economic value.
Exploitation and efficient use of the Electromagnetic spectrum.
Understanding of the safety regulations in the use of the Electromagnetic spectrum.
Electromagnetic spectrum management

Related activities:

1. - ANALYSIS AND DISCUSSION OF EUROPEAN DIRECTIVES
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Full-or-part-time: 10h

Theory classes: 5h

Self study : 5h

The Universal Telecommunication Service

Description:

- Concept and legal and economic foundations of the Universal Service
- The universal voice and data service
- Valuation of intangibles, effects on competition
- Designation of the Universal Service Provider.
- European Comparison of Universal Service
- The European Digital Agenda

Specific objectives:

Understanding of one of the most socially progressive regulatory mechanisms, the Universal Service, the minimum benefits to which every citizen, by virtue of being a citizen, is entitled to have them.

Benefits included in the Universal Service

How Universal Service is managed in a competitive market.

European forecasts in this regard.

Related activities:

1. - ANALYSIS AND DISCUSSION OF DIRECTRIUS EUROPEES
4. - ANALYSIS AND DISCUSSION OF REPORTS ON THE REALITZATS SECTOR BY STATE, SUPRASTATE AND PRIVATE ORGANIZATIONS ON PROSPECTS, EVOLUTION, FORECASTS AND ANALYSIS OF THE TELECOMMUNICATIONS SECTOR.

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Full-or-part-time: 6h

Theory classes: 3h

Self study : 3h

ACTIVITIES

(ENG) ANÀLISI I DISCUSIÓ DE DIRECTRIUS EUROPEES

Description:

The main European Directives on the market for electronic and audiovisual communications will be discussed in class after preparation at home by students

Specific objectives:

Understand the legal and administrative language of the EU, and understand the importance of each Directive both in terms of the market and the social objectives that the Directive seeks to achieve

Material:

European Directives location address

Delivery:

Proportional to the final grade

Full-or-part-time: 12h

Theory classes: 3h

Self study: 9h

(ENG) ANALYSIS AND DISCUSSION OF THE EUROPEAN INDEXES OF THE ECONOMY& DIGITAL SOCIETY AND REGIONAL DEVELOPMENT

Description:

Study the evolution of European digital indicators in a comparative way between the 28 markets and 263 regions of the European Union

Specific objectives:

Understanding the technological, economic and social factors that influence digital development

Material:

<https://ec.europa.eu/digital-single-market/en/desi>

Delivery:

Proportional to the final grade

Full-or-part-time: 12h

Theory classes: 3h

Self study: 9h

(ENG) ANALYSIS COMPARED TO INTERNATIONAL LEVEL OF IMPLANTATION POLICIES, CAPITAL COSTS AND DEVELOPMENT OF TELECOMMUNINFRASTRUCTURES

Specific objectives:

Approach the complexity and understand how to make technical and legal reports for the deployment of telecommunications services and infrastructures

Full-or-part-time: 12h

Theory classes: 3h

Self study: 9h

(ENG) ANÀLISI I DISCUSSIÓ D'INFORMES SOBRE EL SECTOR REALITZATS PER ORGANISMES ESTATALS, SUPRAESTATALS I PRIVATS SOBRE PROSPECTIVA, EVOLUCIÓ, PREVISIONS I ANÀLISIS DEL SECTOR DE LES TELECOMUNICACIONS.

Description:

Learn how to report on different topics in the telecommunications sector

Specific objectives:

Learn how to make technical, legal, foresight reports, etc. on the Telecommunications sector

Full-or-part-time: 12h

Theory classes: 3h

Self study: 9h

GRADING SYSTEM

BIBLIOGRAPHY

Basic:

- Plaza, Crisanto. Ensayo sobre la regulación tecnológica : la era digital en Europa. Barcelona: Taurus, 2015. ISBN 9788430617159.
- Alabau Muñoz, Antonio. La Unión Europea y su política para la sociedad de la información : en el umbral de una nueva gobernanza europea. [s.l.]: Ed. Fundación Airtel Vodafone, 2001. ISBN 8493029882.

Complementary:

- Pérez Chuliá, Begoña. El régimen jurídico del sector audiovisual y de las telecomunicaciones: un desafío para Europa. Ed. Comares, 2002. ISBN 9788484446279.
- Beneyto Pérez, Jose Maria. Regulacion y competencia en telecomunicaciones. Ed. Dykinson S.L., 2003. ISBN 9788497721165.
- Montero Pascual, Juan José. Derecho de las telecomunicaciones. Valencia: Ed. Tirant lo Blanch, 2007. ISBN 9788484569886.

RESOURCES

Hyperlink:

- Boletín Oficial del Estado (BOE)
- Diari Oficial de la Unió Europea (DOUE)
- Diari Oficial de la Generalitat de Catalunya (DOG)
- Pàgina web de la Comisión Nacional de Mercados y Competencia (CNMC)