



## Course guides

### 230716 - TELMKT - Telecommunication Markets

**Last modified:** 06/05/2019

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

**Degree:** MASTER'S DEGREE IN TELECOMMUNICATIONS ENGINEERING (Syllabus 2013). (Optional subject).  
MASTER'S DEGREE IN ELECTRONIC ENGINEERING (Syllabus 2013). (Optional subject).  
MASTER'S DEGREE IN ADVANCED TELECOMMUNICATION TECHNOLOGIES (Syllabus 2019). (Optional subject).

**Academic year:** 2019    **ECTS Credits:** 5.0    **Languages:** English

#### LECTURER

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**Coordinating lecturer:** Jofre Roca, Luis

**Others:** Elías Fuste, Antonio

#### PRIOR SKILLS

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Knowledge on Telecommunications Sciences and Technologies

#### DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

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**Transversal:**

CT1a. ENTREPRENEURSHIP AND INNOVATION: Being aware of and understanding how companies are organised and the principles that govern their activity, and being able to understand employment regulations and the relationships between planning, industrial and commercial strategies, quality and profit.

CT4. EFFECTIVE USE OF INFORMATION RESOURCES: Managing the acquisition, structuring, analysis and display of data and information in the chosen area of specialisation and critically assessing the results obtained.

CT5. FOREIGN LANGUAGE: Achieving a level of spoken and written proficiency in a foreign language, preferably English, that meets the needs of the profession and the labour market.

#### TEACHING METHODOLOGY

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- Lectures with Class Discussions
- Applied Exercises Based on Class Discussions
- Individual and/or Homework (distance)
- Problem Solving Oriented Mid and Final Term Exercises

## LEARNING OBJECTIVES OF THE SUBJECT

To understand and manage the main technological challenges and economic parameters of the relevant Telecommunication (Telecom) markets in the framework of the more general Information and Communication Technologies (ICT). Specific aspects to be developed are:

- Ability to apply the knowledge of the general and differential technological and business characteristics of the Telecom & ICT sectors
- Ability to analyze the critical parameters and challenges of the European and worldwide major Telecom& ICT players
- Ability to understand and manage the strategy and evolution of the Telecom & ICT sector in terms of existing and emerging technologies and markets
- Ability to practically approach and forecast some of the more relevant transversal Telecom& ICT sectors and vertical markets

## STUDY LOAD

Type	Hours	Percentage
Hours large group	39,0	31.20
Self study	86,0	68.80

**Total learning time:** 125 h

## CONTENTS

### Part I. Telecom and Information and Communication Technology Markets

**Description:**

1. Introduction to the Telecom and ICT sectors.
2. Significant worldwide global Telecom and ICT companies:
3. The European Telecom and ICT sector: value added, employment and R&D

**Full-or-part-time:** 36h

Theory classes: 12h

Self study : 24h

### Part III. Telecom and ICT Industry

**Description:**

4. Telecom and ICT Business Strategy
5. Enabling Technologies.
6. Competition, Structures and Regulations
7. Networks operation, strategy and economics
8. Costumers and marketing

**Full-or-part-time:** 60h

Theory classes: 20h

Self study : 40h



### Part III. Case Study of Selected Existing and Emerging Telecom and ICT Relevant Areas

**Description:**

9. Transversal topics: Cybersecurity, xG technology, IoT, Big Data, Cloud Computing, Artificial Intelligence, Blockchain, Virtual Reality

10. Vertical Markets: Smart Cities, Connected Vehicles, Financial Services/Banking, Industry 4.0, Healthcare

**Full-or-part-time:** 29h

Theory classes: 7h

Self study : 22h

### GRADING SYSTEM

- Applied In-class Exercises Based on Class Discussions: 20%
- Homework Exercises: 40%
- Problem Solving Oriented Mid and Final Term Exercises: 40%

### BIBLIOGRAPHY

**Basic:**

- Eurostat. "ICT sector: value added, employment and R&D". Statistics explained [on line]. [Consultation: 20/02/2019]. Available on: [https://ec.europa.eu/eurostat/statistics-explained/index.php/ICT\\_sector\\_-\\_value\\_added,\\_employment\\_and\\_R%26D](https://ec.europa.eu/eurostat/statistics-explained/index.php/ICT_sector_-_value_added,_employment_and_R%26D).
- Valdar, A.; Morfett, I. Understanding telecommunications business [on line]. London: The Institution of Engineering and Technology, 2015 [Consultation: 01/03/2019]. Available on: <https://ebookcentral.proquest.com/lib/upcatalunya-ebooks/detail.action?docID=4085375>. ISBN 9781849197458.
- Varian, H.R. Intermediate microeconomics: a modern approach. 9th ed., int. stud. ed. New York: W.W. Norton & Company, 2014. ISBN 978-0393920772.
- Dodd, A.Z. The essential guide to telecommunications. 5th. Upper Saddle River, NJ: Prentice Hall PTR, 2012. ISBN 978-0137058914.