



20026 - TELECOMMUNICATIONS REGULATIONS AND SERVICES (2018-19)

General

Code: 20026

Lecturer responsible:

PEREZ MOLINA, MANUEL

Credits ECTS:	6
Theoretical credits:	1,2
Practical credits:	1,2
Distance-base hours:	3,6

Departments involved

- **Dept:** PHYSICS, ENGINEERING SYSTEMS AND SIGNAL THEORY
Area: SIGNAL THEORY AND COMMUNICATIONS
Theoretical credits: 1,2
Practical credits: 1,2
 This Dept. is responsible for the course.
 This Dept. is responsible for the final mark record.

Study programmes where this course is taught

- DEGREE IN SOUND AND IMAGE IN TELECOMMUNICATION ENGINEERING
 Course type: COMPULSORY (Year: 3)
- UNIVERSITY MASTER'S DEGREE IN TELECOMMUNICATION ENGINEERING
 Course type: COMPLEMENTARY TRAINING (Year: 1)
 Course type: COMPLEMENTARY TRAINING (Year: 9)

Competencies and objectives

Course context for academic year 2018-19

In the subject Regulations and Services of Telecommunication pretends that the student gets the knowledge, understanding and necessary capacity to be able to apply the pertinent legislation during the development of the profession, as well as the ease in the handle of specifications, regulations and normative of forced fulfillment by means of concrete applications to be able to develop and explode networks, services and applications of telecommunications.

To study the subject it is recommendable to have previously studied the following subjects:

20022 - Networks

20014 - Signals and Systems

20015 - Communication Theory

Course content (verified by ANECA in official undergraduate and Master's degrees)

UA Basic Transversal Competences

- **CT11** : Capacity to learn and apply new concepts and methods in an autonomous and interdisciplinary fashion.
- **CT12** : Capacity to assimilate and adapt to the permanent evolution of technology when developing one's professional career.
- **CT13** : Capacity to adopt the scientific method when planning and carrying out different academic and professional tasks.
- **CT14** : Capacity for self-criticism needed to analyse and improve the quality of projects.

Basic Transversal Competences

- **CT2** : Students should know how to apply their knowledge to their job or vocation in a professional manner and should possess those skills that are usually reflected when preparing and defending arguments and solving problems in their field of study.
- **CT3** : Students should have the ability to gather and interpret relevant data (normally within their field of study) to give opinions that include a reflection on important, social, scientific, ethical matters, etc.
- **CT4** : Students should be able to transmit information, ideas, problems and solutions to both specialist and non-specialist audiences.

Specific Competences: >> Competences Common to the Telecommunications Branch

- **C13** : Capacity to differentiate the concepts of access and transport networks, circuit and packet switching networks, fixed and mobile networks, as well as distributed network systems and applications, voice, data, audio, video, interactive and multimedia services.
- **C15** : Understand the standards and regulations of telecommunications in Spain, Europe and Internationally.
- **C3** : Capacity to use computer tools to find bibliographic resources and information related to telecommunications and electronics.
- **C6** : Capacity to conceive, deploy, organise and manage telecommunications networks, systems, services and infrastructures in residential (home, urban and digital communities), business and institutional contexts, as well as understanding their economic and social impact.

Exclusive skill taught in this course

No data

Learning outcomes (Training objectives)

No data

Specific objectives stated by the academic staff for academic year 2018-19

Acquire the knowledge on the concept of System of Telecommunication of generic form. Know the rule to apply in the juridical frame Spanish, as well as the distinct organisations of existent standardisation to world-wide level.

Acquire the necessary knowledges to comprise, develop and explode Systems of Television in their several types.

Know the technologies and relative matters to the systems of fixed and mobile Telephony, as well as develop those skills that capacite the student for the learning of new methods and future technologies.

Acquire the concepts related with the distinct Accesses to broadband Internet in their different versions.

Acquire ease in the handle of specifications related with Passive Optical Networks.

Know the technologies of wireless networks.

Acquire the capacity to work in multidisciplinary teams knowing the specifications, regulations and norms of forced fulfillment in Systems of Telecommunication.

Content and bibliography

Content for academic year 2018-19

1: Basic Concepts of Telecommunications

Systems of Telecommunication. Services of Telecommunication. Spanish Juridical framework. Normalisation organisms. Segments of access. New Generation Networks.: C13-CT11-CT3-CT4.

2: Television

Digital Terrestrial Television (DTT). Satellite Television. Cable Television (CATV). IP Television. Regulation and Normative.: C13-C15-C3-C6-CT11-CT12-CT13-CT14-CT2-CT3-CT4.

3: Telephony

Fixed Telephony. Mobile Telephony (GSM, GPRS, UMTS/WCDMA/CDMA2000, HSDPA/HSUPA, LTE). Voice over IP. Regulation and Normative.: C13-C15-C3-C6-CT11-CT12-CT13-CT14-CT2-CT3-CT4.

4: Internet Broadband Access

Internet Broadband Access. xDSL. Cable-modem. PLC. Optical fibre. Ethernet to the home. Hardware and types of cables. Protocols and historical evolution. GPON. EPON. Installation in outdoor plant. Regulation and Normative.: C13-C15-C3-C6-CT11-CT12-CT13-CT14-CT2-CT3-CT4.

Assessment

Assessment procedures and criteria 2018-19

ORDINARY ANNOUNCEMENT

A grade of four points in the final theory exam as well as in the laboratory practices is required in order to pass the subject.

FINAL SCORE OF ORDINARY ANNOUNCEMENT: 20.5 % objective test of theory sessions + 25% problem reports + 25% laboratory activities + 29.5 % final theory exam.

The subject will be passed if the final evaluation is EQUAL or UPPER to 5.

In case that the evaluation is LESS than 5 the students will be able to go to the extraordinary announcement.

EXTRAORDINARY ANNOUNCEMENT

The extraordinary announcement will include the possibility of doing a final theoretical exam (encompassing all the units of theory) as well as an exam of laboratory practices. In the extraordinary announcements, a minimum score of 4 will be required both in theory and laboratory practices, and the assessment will be done as follows:

FINAL SCORE (EXTRAORDINARY ANNOUNCEMENT) = 50% (FINAL THEORY EXAM) + 25% (LABORATORY EXAM) + 25% (SCORE IN THE PROBLEMS PREVIOUSLY OBTAINED DURING THE SEMESTER).

The students who had obtained a score equal to or above 5 points in the final theory exam of the ordinary announcement may opt to preserve such score in the final theory exam of the extraordinary announcement. *In case of having obtained a score below 5 in the final theory exam of the ordinary announcement, the scores of the tests previously done during the semester are no longer valid for the final theory exam of the extraordinary announcement, which will encompass all the units of theory.*

The students who had obtained a score equal to or above 5 points in the laboratory practices previously done during the semester (ordinary announcement) may opt to preserve such score in the laboratory exam of the extraordinary announcement.

Description	Criteria	Type	Weighting system
PROBLEMS SESSIONS	Problem sessions will be evaluated by problem reports that the student will finish at weeks 3, 7, 11 and 15. These activities are not recoverable since several of them consist of participating in debates as well as using software and searching bibliography in the Internet.	ACTIVITIES OF EVALUATION DURING THE SEMESTER	25
THEORY SESSIONS	There will be 4 objective proofs or test at the weeks 3, 7, 11 and 15. These activities are recoverable in the extraordinary announcement.	ACTIVITIES OF EVALUATION DURING THE SEMESTER	20,5

LABORATORY SESSIONS	Laboratory sessions will be evaluated by 4 lab reports that the student will finish at weeks 2, 6, 10 and 15, which will constitute 60 % of the global score of laboratory practices. The last week of the course, an exam about the laboratory sessions will be carried out with a weight of the remaining 40 % of the global score of laboratory practices. The minimum required score in the laboratory practices will be of 4 points. These activities are recoverable in the extraordinary announcement.	ACTIVITIES OF EVALUATION DURING THE SEMESTER	25
FINAL THEORY EXAM	A final theory exam encompassing all the theoretical topics of the 4 tests done during the semester will be carried out. If the score of a certain test previously done during the semester is equal or greater than 6.5 (over 10 points), the student may opt to preserve such score in the corresponding test of the final exam without the obligation of doing such test. On the contrary, if the score of a certain test previously done during the semester is smaller than 6.5 (over 10 points), it will be mandatory to do such test in the final exam. A necessary condition to pass the subject is that the average score of all the tests done in the final exam is equal or greater than 4 points. This activity is recoverable in the extraordinary announcement.	FINAL TEST	29,5

Official exam dates for academic year 2018-19

Exam session	Date	Time	Group - Classroom(s) allocated	Comments
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(C3) Periodo ordinario para asignaturas de segundo semestre y anuales	07/06/2019	Laboratorio con ordenadores de la EPS con el Sw de la asignatura
(C3) Periodo ordinario para asignaturas de segundo semestre y anuales	07/06/2019	Laboratorio con ordenadores de la EPS con el Sw de la asignatura
	07/06/2019	Laboratorio con ordenadores de la EPS con el Sw de la asignatura
(C4) Pruebas extraordinarias para asignaturas de grado y máster	05/07/2019	Laboratorio con ordenadores de la EPS con el Sw de la asignatura
(C4) Pruebas extraordinarias para asignaturas de grado y máster	05/07/2019	Laboratorio con ordenadores de la EPS con el Sw de la asignatura
	05/07/2019	Laboratorio con ordenadores de la EPS con el Sw de la asignatura

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