

1. Main knowledge areas and notices

0.65 Electronic Eng. and Telecommunications/ 523 Electronics and automation/ 0714 Electronics and automation (*). Some other areas such as Physics related to Acoustics, Photonics, and related matters can be considered.

We offer courses in five degrees:

1. Code 190. [GITST] *Grado en Ingeniería de Tecnologías y Servicios de Telecomunicación* (Bachelor's Degree in Telecommunications Technology Engineering). It is a 4-year Bachelor degree.
2. Code 194. [GTDM] *Grado en Tecnología Digital y Multimedia* (Bachelor's Degree in Digital and Multimedia Technology). It is a 4-year Bachelor's degree.
3. Code 2234. [MUIT] *Máster Universitario en Ingeniería de Telecomunicación* (Master's Degree in Telecommunication Engineering). Professionally and firm oriented. It is a 2-year Master degree.
4. Code 2179. [MUTSRC] *Máster Universitario en Tecnologías, Sistemas y Redes de Comunicaciones*, (Master's Degree in Communication Technologies, Systems and Networks). Scientific Master that leads to a Ph.D. It is a 1-year Master's degree. You MUST upload your CV and have a strong background in Telecommunications. Please, notice that courses in English are no longer offered in this degree except 30738 and several seminars (check below).
5. Code 2194. [MUISE] *Máster Universitario en Ingeniería de Sistemas Electrónicos* (Master's Degree in Electronic Systems Engineering). Scientific Master that leads to a Ph.D. or professional market. Corresponds to a 1-year Master's degree. You MUST upload your CV and have a strong background in Electronics. There are few places available and deadlines are very strict, [please check this at the end of this document](#).

You can choose freely among all the courses we enlist below, although you should be aware that to take courses on masters you have to be previously accepted by their directors. Please, be well aware that you can only get a Master's degree if your home institution has a double degree agreement with our School and you accomplish the specific academic plan for double degree students.

(*) PLEASE NOTICE THAT WE HAVE NO COURSES ON AUTOMATICS, POWER ELECTRONICS, OR BIOMEDICAL ENG. Those courses are lectured in other schools and their availability is limited to two courses per school. You would only be able to pick them, provided there were free places when you arrive in Valencia.

Please take into account that examinations in the same semester for courses in a different course year could overlap (ie, 3rd-year course "Fundamentos de transmisión" and 4th-year course "Microondas" could have the same examination day or even hour).

Bachelor's and Master's degree Thesis can be written in English and also you can do your dissertation in English. Remember that if you take this thesis, your dissertation MUST BE done in Valencia during your stay. There are different calls to do your dissertation, if you are interested please visit our office.

All courses are read in Spanish unless explicitly stated or written in English in the following tables.

You can check the contents and full details of every course at the link:

<https://aplicat.upv.es/buscasiupv-app/> You only need to feed the search box with a course code.

2. Courses available for exchange students at the Degree 190 “Grado en Ingeniería de Tecnologías y Servicios de Telecomunicación” (GITST)

3rd year

| <u>CODE</u> | <u>COURSE</u> | <u>SEMESTER</u> | <u>LANGUAGE</u> | <u>BRANCH</u> | <u>ECTS Credits</u> |
|-------------|--|-----------------|-----------------|-----------------|---------------------|
| 12448 | Sensores | B | ESP | ELECTRÓNICA | 4,5 |
| 12452 | Fundamentos de VLSI | B | ESP | ELECTRÓNICA | 4,5 |
| 12453 | Aplicaciones de los Microcontroladores | B | ESP | ELECTRÓNICA | 4,5 |
| 12456 | Electrónica Analógica Integrada | B | ESP | ELECTRÓNICA | 4,5 |
| 12465 | Acústica Arquitectónica | B | ESP | IMAGEN Y SONIDO | 6 |
| 12471 | Equipos y Sistemas de Audio | B | ESP | IMAGEN Y SONIDO | 6 |
| 12473 | Sistemas de video | B | ESP | IMAGEN Y SONIDO | 6 |
| 12429 | Comunicaciones digitales | B | ESP | SISTEMAS | 4,5 |
| 14125 | Tratamiento digital de Señales en Comunicaciones | B | ESP | SISTEMAS | 4,5 |
| 12433 | Radiocomunicaciones | B | ESP | SISTEMAS | 4,5 |
| 12434 | Líneas de Transmisión | B | ESP | SISTEMAS | 4,5 |
| 12441 | Redes Públicas de Acceso | B | ESP | TELEMÁTICA | 6 |
| 12447 | Comunicación de Datos | B | ESP | TELEMÁTICA | 6 |
| 14124 | Comunicaciones Multimedia | B | ESP | COMÚN | 4.5 |

4th year

| <u>CODE</u> | <u>COURSE</u> | <u>SEMESTER</u> | <u>LANGUAGE</u> | <u>BRANCH</u> | <u>ECTS CREDITS</u> |
|-------------|---|-----------------|-----------------|---------------|---------------------|
| 12451 | Procesadores Digitales de Señal (DSP) | A | ESP | ELECTRÓNICA | 4,5 |
| 12449 | Instrumentación y Calidad | A | ESP | ELECTRÓNICA | 6 |
| 12455 | Sistemas Electrónicos de Comunicaciones | A | ESP | ELECTRÓNICA | 6 |
| 12454 | Microelectrónica Analógica y Mixta | A | ESP | ELECTRÓNICA | 4,5 |
| 12461 | Instrumentación Biomédica | A | ESP | ELECTRÓNICA | 4,5 |

| CODE | COURSE | SEMESTER | LANGUAGE | BRANCH | ECTS CREDITS |
|-------------|--|-----------------|-----------------|-----------------|---------------------|
| 12462 | Desarrollo de Sistemas Electrónicos | A | ESP | ELECTRÓNICA | 4,5 |
| 12463 | Tratamiento de Imágenes | A | ESP | IMAGEN Y SONIDO | 4,5 |
| 12467 | Proyectos e Instalaciones Audiovisuales | A | ESP | IMAGEN Y SONIDO | 4,5 |
| 12468 | Distribución de Señales Audiovisuales | A | ESP | IMAGEN Y SONIDO | 4,5 |
| 12470 | Producción Audiovisual | A | ESP | IMAGEN Y SONIDO | 4,5 |
| 12472 | Tratamiento Digital de Audio | A | ESP | IMAGEN Y SONIDO | 6 |
| 12466 | Acústica Ambiental | A | ESP | IMAGEN Y SONIDO | 6 |
| 12425 | Radiodeterminación | A | ESP | SISTEMAS | 4,5 |
| 12432 | Tecnologías y Sistemas en Redes de Acceso | A | ESP | SISTEMAS | 4,5 |
| 14121 | Antenas | A | ESP | SISTEMAS | 6 |
| 13173 | Microondas | A | ESP | SISTEMAS | 4,5 |
| 14122 | Comunicaciones Móviles e Inalámbricas | A | ESP | SISTEMAS | 6 |
| 13175 | Comunicaciones Espaciales | A | ESP | SISTEMAS | 4,5 |
| 12437 | Redes Corporativas | A | ESP | TELEMÁTICA | 6 |
| 12440 | Redes Públicas de Transporte | A | ESP | TELEMÁTICA | 4,5 |
| 12445 | Ingeniería de Sistemas Telemáticos | A | ESP | TELEMÁTICA | 4,5 |
| 12438 | Conmutación | A | ESP | TELEMÁTICA | 4,5 |
| 14123 | Sistemas Telemáticos para la Gestión de la Información | A | ESP | TELEMÁTICA | 4,5 |
| 12446 | Seguridad | A | ESP | TELEMÁTICA | 6 |
| 12431 | Sistemas de Comunicaciones Ópticas | B | ESP | OPTATIVAS | 4,5 |
| 12457 | Sistemas complejos Bioinspirados | B | ESP | OPTATIVAS | 4,5 |
| 12421 | Política y Normativa de Telecomunicación | B | ESP | OPTATIVAS | 4,5 |
| 12424 | Inglés para fines Académicos y Profesionales (B2) | B | ESP | OPTATIVAS | 4,5 |
| | | | | | |
| 12483 | Trabajo Fin de Grado/Bachelor Degree Thesis | A-B | ESP/ENG | - | 12 |

3. Courses available for exchange students at the Degree 194 “Bachelor's Degree in Digital and Multimedia Technology” (GTDM)

NOTICE: There are only 5 places available for each course. Assignments in order of arrival.

| <u>CODE</u> | <u>COURSE</u> | <u>SEMESTER</u> | <u>LANGUAGE</u> | <u>BRANCH</u> | <u>ECTS CREDITS</u> |
|-------------|--|-----------------|-----------------|---------------|---------------------|
| 14212 | Seguridad y Gestión de Derechos Digitales | A | ESP | COMMON | 6 |
| 14209 | Interacción, Sensores y Transductores | A | ESP | COMMON | 6 |
| 14195 | Equipos Multimedia | A | ESP | COMMON | 6 |
| 14200 | Codificación de Información | A | ESP | COMMON | 6 |
| 14187 | Dirección y Gestión de proyectos | A | ESP | COMMON | 6 |
| 14213 | Plataformas de Streaming | B | ESP | COMMON | 6 |
| 14196 | Medios de transmisión | B | ESP | COMMON | 6 |
| 14201 | Voz y Audio Digital | B | ESP | COMMON | 6 |
| 14202 | Imagen y Vídeo Digital | B | ESP | COMMON | 6 |
| 14194 | Talleres y seminarios de Tecnologías Emergentes II | B | ESP | COMMON | 6 |

4. Courses available for exchange students at the Degree 2234 “Master’s Degree in Telecommunication Engineering” (MUIT)

NOTICE ACCOMMODATION ISSUES: If you want to take courses only in semester A for the 1st year MUIT, MUTSRC or MUISE: Take into account that the examination period **takes place in February** and probably you will have no accommodation for such a short period. We recommend you stay the whole academic year.

1st year

| <u>CODE</u> | <u>COURSE</u> | <u>SEMESTER</u> | <u>LANGUAGE</u> | <u>BRANCH</u> | <u>ECTS Credits</u> |
|-------------|--|-----------------|-----------------|--|---------------------|
| 33459 | Procesamiento de señal en sistemas de comunicaciones y audiovisuales | A | ESP | SISTEMAS DE TELECOMUNICACIÓN Y AUDIOVISUALES | 6 |
| 33460 | Equipos y subsistemas de comunicaciones | A | ESP | SISTEMAS DE TELECOMUNICACIÓN Y AUDIOVISUALES | 6 |
| 33453 | Codiseño hardware-software | A | ESP | SISTEMAS ELECTRÓNICOS | 6 |
| 33454 | Transductores e instrumentación electrónica | A | ESP | SISTEMAS ELECTRÓNICOS | 6 |
| 33457 | Integración de servicios telemáticos | A | ESP | TELEMÁTICA | 6 |

| CODE | COURSE | SEMESTER | LANGUAGE | BRANCH | ECTS Credits |
|-------------|--|-----------------|-----------------|--|---------------------|
| 33438 | Gestión técnica y económica de proyectos de telecomunicación | B | ESP | GESTIÓN TECNOLÓGICA DE PROYECTOS DE TELECOMUNICACIÓN | 4,5 |
| 33461 | Sistemas y servicios de transmisión por radio | B | ESP | SISTEMAS DE TELECOMUNICACIÓN Y AUDIOVISUALES | 6 |
| 33462 | Redes de transporte y distribución por cable | B | ESP | SISTEMAS DE TELECOMUNICACIÓN Y AUDIOVISUALES | 6 |
| 33455 | Circuitos electrónicos de alta frecuencia | B | ESP | SISTEMAS ELECTRÓNICOS | 6 |
| 33456 | Interconexión de redes de telecomunicación | B | ESP | TELEMÁTICA | 7,5 |

2nd year [THIS YEAR IS READ IN ENGLISH](#)

| CODE | COURSE | SEMESTER | LANGUAGE | BRANCH | ECTS Credits |
|-------------|---|-----------------|-----------------|--|---------------------|
| 33452 | ICT Applications in the Public Health | A | ENG | FORMACIÓN OPTATIVA | 4,5 |
| 33451 | Business Management Skills through Cinecoaching | A | ENG | FORMACIÓN OPTATIVA | 4,5 |
| 33449 | Photonic Integrated Circuits: From Technology to Business | A | ENG | FORMACIÓN OPTATIVA | 4,5 |
| 33447 | Professional Seminars I | A | ENG | FORMACIÓN OPTATIVA | 4,5 |
| 33448 | Professional Seminars II | A | ENG | FORMACIÓN OPTATIVA | 4,5 |
| 33450 | Services Marketing | A | ENG | FORMACIÓN OPTATIVA | 4,5 |
| 33439 | Integración de tecnologías y sistemas en ingeniería de telecomunicación | A | ENG | GESTIÓN TECNOLÓGICA DE PROYECTOS DE TELECOMUNICACIÓN | 7,5 |
| 33458 | Implantación de redes y servicios de telecomunicación | A | ENG | TELEMÁTICA | 4,5 |
| | | | | | |
| 33463 | Trabajo Fin de Máster – Master Degree Thesis | B | ESP/ENG | - | 30 |

5. Courses available for exchange students at the Degree 2179 “Master's Degree in Communication Technologies, Systems, and Networks” (MUTSRC)

NOTICE ACCOMMODATION ISSUES: If you want to take courses only in semester A for the 1st year MUIT, MUTSRC or MUISE. Take into account that the examination period takes place in February and probably you will have no accommodation for such a short period. We recommend you stay the whole academic year.

Observations:

- Slides: the language of slides
 - Exam writing: You can write your exam in ENG/ESP
 - Exam wording: The wording of the exam is in ENG/ESP
 - Classes: ESP: Spanish even if all the students understand English
- ENG*: English if all the students agree on it**

Courses in Spanish:

| <u>CODE</u> | <u>COURSE TITLES IN ENGLISH</u> | <u>Slides</u> | <u>Exams writing</u> | <u>Exams wording</u> | <u>Classes</u> | <u>SEMESTER</u> | <u>ECTS Credits</u> |
|-------------|---|---------------|----------------------|----------------------|----------------|-----------------|---------------------|
| 30733 | Digital communication Systems (SCD) | ESP | ENG | ENG | ESP | A | 3 |
| 30738 | Mobile and wireless communication systems (SCM) | ENG | ENG | ENG | ENG* | A | 3 |
| 30739 | Space-based communication systems (SCE) | ENG | ENG | ENG | ENG* | A | 3 |
| 30740 | Photonic technologies for communications and sensing in B5G networks (TEFB5G) | ENG | ENG | ENG | ENG* | A | 3 |
| 30742 | Digital image analysis and artificial vision (ADIVA) | ESP/ENG | ENG | ESP | ESP | A | 3 |
| 30743 | Nanophotonics (N) | ENG | ENG | ENG | ENG* | A | 3 |
| 30744 | Optical signal processing in optical networks (POR) | ENG | ENG | ENG | ENG* | A | 3 |
| 30747 | Traffic management and quality of service (GTCS) | ESP/ENG | ENG | ESP | ENG* | A | 3 |
| 30748 | Network architecture and protocols for mobile communications (RCMAP) | ESP/ENG | ENG | ESP | ESP | A | 3 |
| 30750 | Cyberintelligence and security in applications (C) | ESP | ESP | ESP | ESP | A | 3 |
| 30752 | Internet of Things Interoperability (IIT) | ENG | ENG | ENG | ENG* | A | 3 |
| 30734 | Signal processing in next-generation communication systems (PSCNG) | ESP | ENG | ENG | ESP | A | 3 |
| 30741 | Data and signal optimal processing (POSD) | ENG | ENG | ENG | ESP | A | 3 |
| 30751 | Multimedia communications and quality of experience (CMCE) | ESP | ESP | ESP | ESP | A | 3 |

| | | | | | | | |
|-------|--|---------|-----|-----|-----|---|---|
| 30754 | Telecommunications economics and regulation (ERTEL) | ENG | ENG | ENG | ESP | A | 3 |
| 30737 | High-frequency applications beyond radar technology Aplicaciones de las altas frecuencias más allá de la tecnología radar (AAFR) | ESP/ENG | ENG | ENG | ENG | A | 3 |
| 30735 | Simulation of high frequency systems (SSAF) | ESP/ENG | ENG | ENG | ENG | A | 3 |
| 30746 | Modeling and evaluation of communications networks (MERC) | ENG | ENG | ESP | ENG | A | 3 |
| 30745 | Dimensioning and analysis of mobile communication networks (ARCM) | ENG | ENG | ESP | ENG | A | 3 |

Seminars:

The Seminar classes are lectured from mid-February to late-April.

Each seminar has 1 ECTS.

| <u>CODE</u> | <u>COURSE</u> | <u>LANGUAGE</u> | <u>SEMESTER</u> | <u>ECTS Credits</u> |
|-------------|--|-----------------|-----------------|---------------------|
| 31214 | Simulation of Communication Systems (SCS) | ENG | B | 1 |
| 31674 | Caracterización teórica y experimental del canal radio móvil (CCRM) | ESP | B | 1 |
| 31684 | Comunicaciones en Industria 4.0 | ESP | B | 1 |
| 34478 | Modern antennas for vehicles and mobile devices (MAVB) | ENG | B | 1 |
| 31969 | Nuevas Tecnologías para Redes Vehiculares y Servicios para Entornos Inteligentes (NTRV) | ESP | B | 1 |
| 31970 | Next-generation Optical Networks and Energy Efficiency (NGOPEE) | ENG | B | 1 |
| 31971 | Redes de acceso ópticas: FTTH (RAO) | ESP | B | 1 |
| 33024 | Routing Protocols and Algorithms (PE) | ENG | B | 1 |
| 33025 | Practical design of antennas for wireless devices using commercial electromagnetic simulation software (PDA) | ENG | B | 1 |
| 34477 | Object localization with focus on RFID-based systems | ENG | B | 1 |

Final degree Thesis

The Master's Thesis comprises 24 ECTS and consists of a presentation and defense of an original exercise carried out individually before a university tribunal, involving a novel research project in one of the areas contemplated. In order to defend the Master's Thesis, the student must have passed all the credits of the study plan.

The Framework Document of the UPV establishes the relationship between the ECTS and the number of hours of face-to-face and non-face-to-face work that the student must endure. For all training activities, it is assumed that 1 ECTS is equivalent to 10 hours of face-to-face work and between 15 and 20 hours of non-face-to-face work (student's personal work).

The Master's Thesis can be defended in July or in September face-to-face or videoconferencing.

| <u>CODE</u> | |
|-------------|--|
| 32748 | Final degree thesis of Master in Telecommunication Technologies, Systems and Networks (24 ECTS, summer term) |

6. Courses available for exchange students at the Degree 2291 “Master's Degree in Electronic Systems Engineering” (MUISE)

Usually, Laboratory and Practices take place during mornings and Theory lessons during evenings.

NOTICE 1: DEADLINES: The students who want to apply for the Master’s Degree in Electronic Systems Engineering courses must apply and upload all the required documents in the AIRE system **before July, 1st, 2021** taking into account that the following will be used for their selection in the courses.

- CV
- Transcript of Records (ToR)
 - If you are a BSc student, ToR of the BSc
 - If you are an MSc student, ToR of the previous BSc as well as ToR of the MSc level enclosed in a single pdf.

Students will know whether they are accepted or not around 24th July 2021.

NOTICE 2: LIMITED PLACES: Please check the number of places available for every course.

NOTICE 3: ACCOMMODATION ISSUES: If you want to take courses only in semester A for the: 1st-year MUIT, MUTSRC, or MUISE, please take into account that the examination period takes place in February and probably you will have no accommodation for such a short period.

| <u>CODE</u> <u>(* could change)</u> | <u>COURSE</u> | <u>SEMESTER</u> | <u>LANGUAGE</u> | <u>ECTS Credits</u> | <u>Places available</u> |
|--|--|-----------------|-----------------|---------------------|-------------------------|
| 34940 | Sistemas Digitales Programables | A | ESP | 4,5 | 3 |
| 34939 | Procesado de señal en sistemas electrónicos | A | ESP | 4,5 | 3 |
| 34944 | Sistemas Embebidos | A | ESP | 4,5 | 3 |
| 34941 | Convertidores Electrónicos de Potencia | A | ESP | 6 | 3 |
| 34942 | Diseño Térmico y Compatibilidad Electromagnética en Productos Electrónicos | A | ESP | 6 | 3 |
| 34943 | Diseño de Circuitos Impresos | B | ESP | 4,5 | 3 |
| 34945 | Control electrónico de accionamientos y sistemas de tracción | B | ESP | 6 | 2 |
| 34946 | Sistemas Digitales de Control de Potencia | B | ESP | 6 | 2 |
| 34947 | Sistemas de generación en energías renovables | B | ESP | 6 | 2 |
| 34948 | Sistemas Integrados Digitales | B | ESP | 6 | 5 |
| 34949 | Electrónica de Equipos Audiovisuales | B | ESP | 6 | 5 |

| | | | | | |
|-------|--|-----|---------|----|----------|
| 34950 | Procesado Digital de la Señal en FPGA | B | ESP | 6 | 5 |
| 34951 | Diseño Microelectrónico | A | ESP | 6 | 1 |
| 34952 | Instrumentación en red y comunicaciones industriales | A | ESP | 6 | 1 |
| 34953 | Seminarios Profesionales y Conferencias | B | ESP | 6 | 5 |
| 34954 | Trabajo de Fin de Máster | A/B | ESP/ENG | 12 | No limit |