

URV Engineering School (ETSE) – Course 2021-22 –

Subjects offered in English (Bachelor Degrees)

General information for incoming mobility students is available [here](#).

The tables in this document show, from left to right, the name of the course (with a link to a web page with more detailed information about the content and evaluation of the course), the semester in which it is offered (*Fall*- September to January, *Spring*-February to June), the number of ECTS and the code of the course.

Mathematical and Physics Engineering – GEMiF

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|--|--------|-----|----------|
| SCIENTIFIC PROGRAMMING | Fall | 6 | 17274004 |
| MATHEMATICAL ANALYSIS II | Spring | 7.5 | 17274005 |

Electronic and Automation Engineering-GEEliA

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|-----------------------------------|--------|---|----------|
| TECHNICAL ENGLISH | Spring | 6 | 17204102 |
| EMBEDDED SYSTEMS | Fall | 3 | 17204206 |

Electrical Engineering-GEE

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|-----------------------------------|--------|---|----------|
| TECHNICAL ENGLISH | Spring | 6 | 17214102 |
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Computer Engineering – GEI

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|--|--------|---|----------|
| TECHNICAL ENGLISH | Spring | 6 | 17234102 |
| MOBILE AND EMBEDDED APPLICATIONS | Fall | 6 | 17234125 |

Techniques for Developing Web and Mobile Applications – GTDAWIM

No courses offered in English.

Biomedical Engineering-GEB

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|---|--------|-----|----------|
| OMICS TECHNOLOGY AND DATA HANDLING | Fall | 4.5 | 17254112 |
| BIOMEDICAL IMAGE PROCESSING | Spring | 4.5 | 17254119 |
| COMPUTATIONAL BIOLOGY AND ANALYSIS OF BIOMEDICAL DATA | Spring | 4.5 | 17254115 |
| BIOMATERIALS ENGINEERING AND TISSUE REGENERATION I | Spring | 3 | 17254116 |
| BIOMECHANICS II | Fall | 4.5 | 17254123 |
| MANAGEMENT OF HEALTH INFRASTRUCTURES | Fall | 6 | 17254124 |
| INNOVATION AND ENTREPRENEURSHIP | Spring | 4.5 | 17254128 |
| COMPUTATIONAL AND EXPERIMENTAL BIOMECHANICS | Spring | 3 | 17254220 |
| SMART HEALTH | Spring | 3 | 17254209 |
| NANOTECHNOLOGIES APPLIED TO BIOMEDICINE | Spring | 3 | 17254208 |

Telecommunication Systems and Services Engineering-GESST

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|---|--------|---|----------|
| TECHNICAL ENGLISH | Spring | 6 | 17244102 |
| INNOVATION AND ENTREPRENEURSHIP | Spring | 6 | 17244131 |
| EMBEDDED SYSTEMS | Spring | 3 | 17244212 |
| HISTORY OF ENGINEERING | Fall | 6 | 17244209 |

Courses common to all bachelor degrees

BACHELOR'S THESIS (12 ECTS)

URV Engineering School (ETSE) – Course 2020-21

Subjects offered in Catalan/Spanish in which the lecturers provide personalized tutoring services in English (course material, personalized learning support, exercises, exams, etc.)

Note: ERASMUS students are advised to check the availability of the English tutoring service in the subjects in which they are interested before starting the mobility process, by sending a message to the [mobility coordinator](#) of the degree.

Mathematical and Physics Engineering-GEMiF

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|---|--------|-----|----------|
| <u>LINEAR ALGEBRA</u> | Fall | 7.5 | 17274001 |
| <u>MATHEMATICAL ANALYSIS I</u> | Fall | 7.5 | 17274002 |
| <u>PHYSICS I</u> | Fall | 9 | 17274003 |
| <u>DIFFERENTIAL EQUATIONS I</u> | Spring | 6 | 17274006 |
| <u>PHYSICS II</u> | Spring | 9 | 17274007 |
| <u>GEOMETRY</u> | Spring | 7.5 | 17274008 |

Electronic and Automation Engineering-GEEIIA

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|---|---------------|-------|---------------------|
| CHEMICAL FUNDAMENTALS OF ENGINEERING | Fall | 6 | 17204010 |
| CIRCUIT THEORY I / CIRCUIT THEORY II | Fall / Spring | 6 / 5 | 17204105 / 17204106 |
| STATISTICS AND TRANSFORMED METHODS | Fall | 6 | 17204009 |
| THERMODYNAMICS AND HYDRAULICS | Fall | 6 | 17204117 |
| FUNDAMENTALS OF ELECTRICAL INSTALLATIONS | Spring | 5 | 17204116 |
| FUNDAMENTALS OF ELECTRICAL MACHINES | Spring | 5 | 17204115 |
| FUNDAMENTALS OF ELECTRONICS | Spring | 5 | 17204107 |
| MACHINES AND MECHANISMS | Spring | 5 | 17204121 |
| SCIENCE AND RESISTANCE OF MATERIALS | Spring | 5 | 17204122 |
| ANALOGUE ELECTRONICS | Fall | 6 | 17204109 |
| DIGITAL ELECTRONICS | Fall | 6 | 17204108 |
| INDUSTRIAL COMPUTER SCIENCE I /INDUSTRIAL COMPUTER SCIENCE II | Fall / Fall | 6 / 6 | 17204119 / 17204120 |
| POWER ELECTRONICS | Fall | 6 | 17204110 |
| AUTOMATIC CONTROL | Spring | 6 | 17204123 |
| ELECTRONIC EQUIPMENT | Spring | 6 | 17204112 |
| INSTRUMENTATION | Spring | 6 | 17204113 |
| MICROCONTROLLERS | Spring | 6 | 17204111 |
| AUTOMATION | Fall | 6 | 17204103 |
| ELECTRONIC POWER SYSTEMS | Fall | 6 | 17204114 |
| SYSTEMS MODELLING AND PROCESS CONTROL | Fall | 6 | 17204124 |
| FINAL PROJECT | Spring | 3 | 17204126 |
| INDUSTRIAL ORGANISATION | Spring | 6 | 17204118 |
| ROBOTIZED SYSTEMS | Spring | 6 | 17204104 |
| AUDITING OCCUPATIONAL RISK PREVENTION | Fall | 3 | 17204214 |
| CONTROL OF ELECTRICAL MACHINES | Fall | 6 | 17204231 |
| OPTOELECTRONIC MECHANISMS AND SYSTEMS | Fall | 3 | 17204258 |
| AUTOMATION PERIPHERALS | Spring | 3 | 17204260 |
| INTRODUCTION TO MOBILE ROBOTS | Spring | 3 | 17204210 |
| MANAGING THE POWER OF ELECTRIC VEHICLES | Spring | 3 | 17204208 |
| PROJECT MANAGEMENT | Spring | 3 | 17204212 |
| RENEWABLE ENERGIES | Spring | 6 | 17204223 |

Electrical Engineering-GEE

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|---|---------------|-------|------------------------|
| <u>CHEMICAL FUNDAMENTALS OF ENGINEERING</u> | Fall | 6 | 17214010 |
| <u>CIRCUIT THEORY I / CIRCUIT THEORY II</u> | Fall / Spring | 6 / 5 | 17214105 / 17214106 |
| <u>STATISTICS AND TRANSFORMED METHODS</u> | Fall | 6 | 17214009 |
| <u>THERMODYNAMICS AND HYDRAULICS</u> | Fall | 6 | 17214117 |
| <u>FUNDAMENTALS OF ELECTRICAL MACHINES</u> | Spring | 5 | 17214115 |
| <u>FUNDAMENTALS OF ELECTRONICS</u> | Spring | 5 | 17214107 |
| <u>SCIENCE AND RESISTANCE OF MATERIALS</u> | Spring | 5 | 17214122 |
| <u>ELECTRICAL MACHINES</u> | Fall | 6 | 17214120 |
| <u>POWER ELECTRONICS</u> | Fall | 6 | 17214110 |
| <u>DESIGN OF ELECTRICAL MACHINES</u> | Spring | 6 | 17214123 |
| <u>FUNDAMENTALS OF AUTOMATIC CONTROL</u> | Spring | 6 | 17214104 |
| <u>RENEWABLE ENERGIES</u> | Spring | 6 | 17214109 |
| <u>AUTOMATION</u> | Fall | 6 | 17214103 |
| <u>CONTROL OF ELECTRICAL MACHINES</u> | Fall | 6 | 17214124 |
| <u>LIGHTING ENGINEERING</u> | Fall | 3 | 17214113 |
| <u>ENVIRONMENTAL TECHNOLOGIES</u> | Spring | 3 | 17214112 |
| <u>INDUSTRIAL ORGANISATION</u> | Spring | 6 | 17214118 |
| <u>POWER STATIONS</u> | Fall | 6 | 17214108 |

Computer Engineering – GEI

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|---|--------|---|----------|
| <u>PROGRAMMING</u> | Fall | 6 | 17234114 |
| <u>DISCRETE MATHEMATICS II</u> | Spring | 6 | 17234010 |
| <u>COMPUTER STRUCTURE</u> | Spring | 6 | 17234108 |
| <u>ANALYSIS AND DESIGN OF APPLICATIONS</u> | Spring | 6 | 17234105 |
| <u>COMPUTER ARCHITECTURE</u> | Fall | 6 | 17234109 |
| <u>FORMAL LANGUAGES</u> | Spring | 6 | 17234110 |
| <u>ARTIFICIAL INTELLIGENCE</u> | Fall | 6 | 17234128 |
| <u>COMPILERS</u> | Fall | 6 | 17234127 |
| <u>REAL-TIME SYSTEMS</u> | Fall | 6 | 17234124 |
| <u>COMPUTERIZED VISION</u> | Spring | 6 | 17234130 |
| <u>ELECTRONIC COMMERCE SYSTEMS</u> | Spring | 6 | 17234121 |
| <u>INFORMATION SYSTEMS IN ORGANIZATIONS</u> | Spring | 6 | 17234122 |
| <u>NETWORK SECURITY</u> | Spring | 6 | 17234120 |
| <u>DATA NETWORKS</u> | Fall | 6 | 17234118 |

Techniques for Developing Web and Mobile Applications – GTDAWIM

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|---|--------|---|----------|
| <u>PROGRAMMING</u> | Fall | 6 | 17264114 |
| <u>ANALYSIS AND DESIGN OF APPLICATIONS</u> | Spring | 6 | 17264105 |
| <u>NETWORK APPLICATION ARCHITECTURES</u> | Fall | 6 | 17264122 |
| <u>WEBSITE ENGINEERING</u> | Fall | 6 | 17264125 |
| <u>MOBILE APPLICATIONS AND SERVICES</u> | Spring | 6 | 17264106 |
| <u>NETWORK SECURITY</u> | Spring | 6 | 17264123 |
| <u>DATA NETWORKS</u> | Fall | 6 | 17264118 |
| <u>ADVANCED PROGRAMMING OF MOBILE DEVICES</u> | Fall | 6 | 17264138 |
| <u>ADVANCED DEVELOPMENT OF WEB APPLICATIONS</u> | Fall | 6 | 17264121 |

Biomedical Engineering-GEB

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|---|---------------|-------|------------------------|
| <u>PROGRAMMING</u> | Fall | 6 | 17254013 |
| <u>FUNDAMENTALS OF COMMUNICATION I / FUNDAMENTALS OF COMMUNICATION II</u> | Fall / Spring | 6 / 6 | 17254015 / 17254106 |
| <u>ANALYSIS OF LINEAR CIRCUITS AND SYSTEMS</u> | Fall | 6 | 17254014 |
| <u>DATA ANALYSIS AND BIOSTATISTICS</u> | Fall | 6 | 17254105 |
| <u>BIOFLUID MECHANICS</u> | Fall | 6 | 17254010 |
| <u>PHYSIOLOGY</u> | Spring | 7.5 | 17254107 |
| <u>ANALOGUE ELECTRONICS</u> | Spring | 4.5 | 17254109 |
| <u>BIOCHEMISTRY</u> | Spring | 6 | 17254011 |
| <u>BIOPHYSICS</u> | Spring | 6 | 17254012 |
| <u>DIGITAL ELECTRONICS</u> | Fall | 6 | 17254108 |
| <u>DIGITAL TREATMENT OF BIOSIGNALS</u> | Fall | 6 | 17254113 |
| <u>DATA NETWORKS AND INTERNET</u> | Fall | 6 | 17254114 |
| <u>PHYSIOPATHOLOGY</u> | Fall | 4.5 | 17254111 |
| <u>ADVANCED MEDICAL PHYSICS</u> | Fall | 3 | 17254110 |
| <u>SENSORS AND INSTRUMENTS FOR BIOMEDICINE</u> | Spring | 4.5 | 17254120 |
| <u>BIOMECHANICS I</u> | Spring | 3 | 17254117 |
| <u>TECHNOLOGIES FOR SENSOR NETWORKS, THE IOT AND SMART CITIES</u> | Spring | 4.5 | 17254121 |
| <u>BIG DATA INFRASTRUCTURES</u> | Spring | 6 | 17254118 |
| <u>BIOMATERIALS ENGINEERING AND TISSUE REGENERATION II</u> | Fall | 3 | 17254122 |
| <u>SENSORS AND MOBILE TECHNOLOGIES LABORATORY FOR BIOENGINEERING</u> | Fall | 3 | 17254125 |
| <u>MEDICAL ROBOTICS</u> | Fall | 4.5 | 17254126 |
| <u>TELEMEDICINE</u> | Spring | 4.5 | 17254129 |
| <u>EQUIPMENT FOR MONITORING, DIAGNOSIS AND THERAPY</u> | Spring | 3 | 17254127 |

Telecommunication Systems and Services Engineering-GESST

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|--|---------------|-------|------------------------|
| <u>PROGRAMMING</u> | Fall | 6 | 17244010 |
| <u>ANALYSIS OF CIRCUITS AND LINEAR SYSTEMS</u> | Fall | 6 | 17244009 |
| <u>FUNDAMENTALS OF COMMUNICATION I / FUNDAMENTALS OF COMMUNICATION II</u> | Fall / Spring | 6 / 6 | 17244103 / 17244108 |
| <u>DIGITAL ELECTRONICS</u> | Fall | 6 | 17244105 |
| <u>DATA NETWORKS AND THE INTERNET</u> | Fall | 6 | 17244104 |
| <u>INFRASTRUCTURES FOR BIG DATA</u> | Spring | 6 | 17244106 |
| <u>ANALOGUE ELECTRONICS</u> | Spring | 5 | 17244107 |
| <u>WAVE TRANSMISSION AND PROPAGATION</u> | Spring | 5 | 17244110 |
| <u>RADIO-FREQUENCY ENGINEERING</u> | Spring | 5 | 17244111 |
| <u>TELECOMMUNICATIONS LABORATORY</u> | Spring | 3 | 17244109 |
| <u>DIGITAL SIGNAL PROCESSING</u> | Fall | 6 | 17244113 |
| <u>DIGITAL COMMUNICATIONS</u> | Fall | 6 | 17244112 |
| <u>EMITTERS AND RECEIVERS</u> | Fall | 6 | 17244116 |
| <u>ANTENNAS AND RADIOPROPAGATION</u> | Fall | 6 | 17244119 |
| <u>MICROCONTROLLERS AND EMBEDDED SYSTEMS</u> | Fall | 6 | 17244117 |
| <u>TECHNOLOGIES FOR SENSOR NETWORKS, THE INTERNET OF THINGS AND SMART CITIES</u> | Spring | 4.5 | 17244121 |
| <u>TELEPHONY AND MOBILE COMMUNICATIONS</u> | Spring | 6 | 17244120 |
| <u>SENSORS AND INSTRUMENTATION</u> | Spring | 4.5 | 17244118 |
| <u>TELECOMMUNICATION PROJECTS</u> | Fall | 6 | 17244128 |
| <u>BROADBAND AND OPTICAL COMMUNICATIONS</u> | Fall | 6 | 17244134 |
| <u>MOBILE SENSORS AND TECHNOLOGIES LABORATORY</u> | Fall | 3 | 17244132 |
| <u>INDUSTRIAL TELECOMMUNICATIONS AND ELECTROMAGNETIC COMPATIBILITY</u> | Spring | 3 | 17244135 |
| <u>TELEMEDICINE</u> | Spring | 3 | 17244219 |
| <u>NETWORK MANAGEMENT</u> | Spring | 6 | 17244136 |
| <u>MOBILE APPLICATIONS AND SERVICES LABORATORY</u> | Fall | 3 | 17244228 |
| <u>ADVANCED PROGRAMMING OF MOBILE DEVICES</u> | Fall | 6 | 17244138 |
| <u>ENERGY MANAGEMENT IN TELECOMMUNICATION SYSTEMS</u> | Fall | 3 | 17244129 |
| <u>NETWORK DESIGN / NETWORK SECURITY</u> | Fall / Spring | 6 / 6 | 17244130 / 17244123 |
| <u>DISTRIBUTED TELEMATIC SYSTEMS</u> | Spring | 6 | 17244223 |
| <u>NETWORK APPLICATION ARCHITECTURES</u> | Fall | 6 | 17244213 |
| <u>NETWORK MODELLING</u> | Fall | 6 | 17244124 |
| <u>WEBSITE ENGINEERING</u> | Fall | 6 | 17244125 |
| <u>MOBILE APPLICATIONS AND SERVICES</u> | Spring | 6 | 17244115 |
| <u>MULTIMEDIA SERVICES</u> | Spring | 6 | 17244114 |