

URV Engineering School (ETSE) – Course 2022-23 –

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, 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. Each study has a link to a web page with extensive information about it, including the Program of Studies and the Teaching Guide, which contains detailed information about each course.

Mathematical and Physics Engineering – GEMiF

COMBINATORICS AND PROBABILITY	Fall	6	17274102
CLASSICAL MECHANICS	Fall	6	17274106
THERMODYNAMICS	Spring	6	17274112
QUANTUM PHYSICS	Spring	6	17274108
NUMERICAL METHODS	Spring	6	17274109

Electronic and Automation Engineering-GEEliA

TECHNICAL ENGLISH	Spring	6	17204102
EMBEDDED SYSTEMS	Fall	3	17204206

Electrical Engineering-GEE

TECHNICAL ENGLISH	Spring	6	17214102
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Computer Engineering – GEI

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

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

TECHNICAL ENGLISH	Spring	6	17244102
INNOVATION AND ENTREPRENEURSHIP	Spring	6	17244131
EMBEDDED SYSTEMS	Spring	3	17244212

Courses common to all bachelor degrees

BACHELOR'S THESIS (12 ECTS)

URV Engineering School (ETSE) – Course 2022-23

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

LINEAR ALGEBRA	Fall	7.5	17274001
MATHEMATICAL ANALYSIS I	Fall	7.5	17274002
PHYSICS I	Fall	9	17274003
SCIENTIFIC PROGRAMMING	Fall	6	17274004
MATHEMATICAL ANALYSIS II	Spring	7.5	17274005
DIFFERENTIAL EQUATIONS I	Spring	6	17274006
PHYSICS II	Spring	9	17274007
GEOMETRY	Spring	7.5	17274008
ELECTROMAGNETISM	Fall	6	17274104
ALGEBRAIC COMPUTATION	Fall	6	17274103
DIFFERENTIAL EQUATIONS II	Spring	6	17274105
STATISTICS	Spring	6	17274107
GRAPH THEORY	Spring	6	17274111

Electronic and Automation Engineering-GEEIIA

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

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

Computer Engineering – GEI

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

Techniques for Developing Web and Mobile Applications – GTDAWIM

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

Biomedical Engineering-GEB

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

Telecommunication Systems and Services Engineering-GESST

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