

Master's degree in Industrial Engineering

This master's degree, which **qualifies graduates to practise the regulated profession of industrial engineer**, aims to provide multidisciplinary scientific and technical training based on an overview of industrial engineering combined with specialisation in a particular branch of industry.

At the UPC, the **master's degree in Industrial Engineering** and the bachelor's degree in Industrial Technology Engineering form an integrated programme.

More information on [the web page of this master's degree](#).

Specialisations

- Mechanics
- Construction and Structures
- Electrical Engineering
- Thermal Energetics
- Industrial Scheduling
- Fibrous Biomaterials
- Technical Textiles and Multifunctional Structures
- Biomedical Engineering

GENERAL DETAILS

Duration and start date

Two academic years, 120 ECTS credits. Starting September and February

Timetable and delivery

Mornings and afternoons. Face-to-face

Fees and grants

Approximate fees for the master's degree, **excluding other costs** (does not include non-teaching academic fees and issuing of the degree certificate):

€2,215 (€12,662 for non-EU residents).

[More information about fees and payment options](#)

[More information about grants and loans](#)

Language of instruction

Morning classes are taught in Catalan and afternoon classes are taught in Spanish.

Information on [language use in the classroom and students' language rights](#).

Location

[Terrassa School of Industrial, Aerospace and Audiovisual Engineering \(ESEIAAT\)](#)

Official degree

[Recorded in the Ministry of Education's degree register](#)

ADMISSION

General requirements

[Academic requirements for admission to master's degrees](#)

Places

100 september + 100 february

Pre-enrolment

Pre-enrolment closed (consult the new pre-enrolment periods in the [academic calendar](#)).

[How to pre-enrol](#)

Enrolment

[How to enrol](#)

Legalisation of foreign documents

All documents issued in non-EU countries must be [legalised and bear the corresponding apostille](#).

DOUBLE-DEGREE AGREEMENTS

Double-degree pathways at a single school

- Master's degree in Industrial Engineering (ESEIAAT) (any specialisation) / Master's degree in Industrial Scheduling Engineering (blended learning)
- Master's degree in Industrial Engineering (any specialisation) / Master's degree in Automatic Systems Engineering and Industrial Electronics

Further information on [this website](#)

With other Catalan universities

- Bachelor's degree in Industrial Technology Engineering + Master's degree in Industrial Engineering + Bachelor's degree in Business Administration and Management (UOC)
- Bachelor's degree in Industrial Technology Engineering + Master's degree in Industrial Engineering + Bachelor's degree in Economics (UOC)

Double-degree pathways with foreign universities

- Master's degree in Industrial Engineering (ESEIAAT) + Master's degree in industrial Engineering (Cranfield University, Cranfield, UK) (Only ESEIAAT students to Cranfield, not vice versa) (To choose between 40 masters)
- Master's degree in Industrial Engineering (ESEIAAT) + Master's degree in industrial Engineering (Institut Supérieur de l'Aéronautique et de l'Espace (Diplôme d'Ingénieur ISAE SUPAERO), Université Fédérale (Toulouse Midi-Pyrénées), Toulouse, France)
- Master's degree in Industrial Engineering (ESEIAAT) + Master in Management-*Grande École Degree* (MIM) (L'École des Hautes Études Commerciales de Paris (HEC), Paris, France) (Only ESEIAAT students to HEC, not vice versa)
- Master's degree in Industrial Engineering (ESEIAAT) + *Master's degree in industrial Engineering* (Illinois Institute of Technology (IIT), Chicago, USA) (Only ESEIAAT students to IIT, not vice versa) (To choose between 11 masters)
- Master's degree in Industrial Engineering (ESEIAAT) + Master's degree in industrial Engineering (University of California, Irvine, Chicago, USA) (Only ESEIAAT students to Irvine, not vice versa) (To choose between xx masters)
- Master's degree in Industrial Engineering (ESEIAAT) + Master's degree in industrial Engineering (University of Colorado, Boulder, USA) (Only ESEIAAT students to Colorado-Boulder, not vice versa) (To choose between xx masters)
- Master's degree in Industrial Engineering (ESEIAAT) + Graduate Engineer Degree in Electronics and Computer Engineering (all specialization fields) (Institut National Polytechnique de Grenoble, France)
- Master's degree in Industrial Engineering (ESEIAAT) + *Graduate Engineer Degree in Electronics and Computer Engineering* (all specialization fields) (Ecole Nationale Supérieure de l'Electronique et de ses Applications (ENSEA), Cergy, France)

Further information on [this website](#)

PROFESSIONAL OPPORTUNITIES

Professional opportunities

Graduates of this master's degree will acquire a multidisciplinary overview of technology that will enable them to contribute to any kind of industrial endeavour. They will be qualified for employment in engineering firms and in technical, R&D, production and sales departments. Their broad skills will also allow them to work for companies offering consultancy services in the fields of technology, management, industrial plant design and project management. The master's degree enhances the employability of its graduates by making them versatile, flexible and able to develop and lead projects across all sectors of industry. The training they receive in organisation and management techniques prepares them to take on leadership roles in industrial and service company management, project management, public

administration, institutions and multidisciplinary teams.

Competencies

Generic competencies

Generic competencies are the skills that graduates acquire regardless of the specific course or field of study. The generic competencies established by the UPC are capacity for innovation and entrepreneurship, sustainability and social commitment, knowledge of a foreign language (preferably English), teamwork and proper use of information resources.

Specific competencies

On completion of this course, students will be able to:

- Understand, analyse and design electrical energy generation, transport and distribution systems.
- Understand, draft, calculate and design integrated manufacturing systems.
- Design and test machines.
- Analyse and design chemical processes.
- Design and analyse thermal machines and heat engines, hydraulic machines and industrial heat and cold facilities.
- Understand, analyse, use and manage sources of energy.
- Design electronic systems and industrial instrumentation.
- Design and draft automated production systems and advanced control processes.
- Organise and run businesses.
- Work out strategies and plans for a range of organisational structures.
- Understand business and employment law.
- Understand financial and cost accounting.
- Understand information systems for management, industrial organisation, production, logistics and quality management.
- Organise production systems, logistics and quality management systems.
- Organise work and human resource management in keeping with the principles of occupational health and safety.
- Practise integrated project management.
- Manage research, development and technological innovation.
- Design, build and use industrial plants.
- Understand building construction, facilities, infrastructure and urban development for industrial engineering.
- Calculate and design structures.
- Draft and design electrical and fluid facilities, lighting, air conditioning and ventilation, energy saving and efficiency systems, acoustics, communications, home automation and smart buildings, and safety facilities.
- Understand transport and industrial maintenance methods and techniques.
- Check and control facilities, processes and products.
- Draw up certificates, audits, verifications, tests and reports.
- Write, present and defend to university examiners an original, individually authored piece of work consisting of a professional industrial engineering project that displays all of the competencies acquired during the master's degree course.

ORGANISATION: ACADEMIC CALENDAR AND REGULATIONS

UPC school

[Terrassa School of Industrial, Aerospace and Audiovisual Engineering \(ESEIAAT\)](#)

Academic coordinator

[Daniel Garcia Almiñana](#)
[Jasmina Casals Terre](#)

Academic calendar

[General academic calendar for bachelor's, master's and doctoral degrees courses](#)

Academic regulations

[Academic regulations for master's degree courses at the UPC](#)

CURRICULUM

Subjects		ECTS credits	Type
FIRST SEMESTER			
Advanced Automation and Control of Industrial Processes		2.5	Compulsory
Basic Instrumentation		2.5	Compulsory
Design and Behavior of Special Structures		3	Optional
Design and Construction on Industrial Plants and Related Facilities		5	Compulsory
Engineering of Thermal and Fluids Systems		7.5	Compulsory
Machine Design and Manufacturing Technologies		7.5	Compulsory
Operations Management		5	Compulsory
Project Management Key Agreements & Deals		3	Optional
Specialisation in (Eng) Especialitat Biomèdica	Advanced Automation and Control of Industrial Processes	2.5	Compulsory
	Basic Instrumentation	2.5	Compulsory
	Design and Behavior of Special Structures	3	Optional
	Design and Construction on Industrial Plants and Related Facilities	5	Compulsory
	Engineering of Thermal and Fluids Systems	7.5	Compulsory
	Machine Design and Manufacturing Technologies	7.5	Compulsory
	Operations Management	5	Compulsory
	Project Management Key Agreements & Deals	3	Optional
Specialisation in (Eng) Especialitat en Enginyeria Paperera i Gràfica	Advanced Automation and Control of Industrial Processes	2.5	Compulsory
	Basic Instrumentation	2.5	Compulsory
	Design and Behavior of Special Structures	3	Optional
	Design and Construction on Industrial Plants and Related Facilities	5	Compulsory
	Engineering of Thermal and Fluids Systems	7.5	Compulsory
	Machine Design and Manufacturing Technologies	7.5	Compulsory
	Operations Management	5	Compulsory
	Project Management Key Agreements & Deals	3	Optional
Specialisation in (Eng) Muei Especialitat Tèxtil	Advanced Automation and Control of Industrial Processes	2.5	Compulsory
	Basic Instrumentation	2.5	Compulsory
	Design and Behavior of Special Structures	3	Optional
	Design and Construction on Industrial Plants and Related Facilities	5	Compulsory
	Engineering of Thermal and Fluids Systems	7.5	Compulsory
	Machine Design and Manufacturing Technologies	7.5	Compulsory
	Operations Management	5	Compulsory
	Project Management Key Agreements & Deals	3	Optional
Specialisation in (Eng) No Especialitat	Advanced Automation and Control of Industrial Processes	2.5	Compulsory
	Basic Instrumentation	2.5	Compulsory
	Design and Behavior of Special Structures	3	Optional
	Design and Construction on Industrial Plants and Related Facilities	5	Compulsory
	Engineering of Thermal and Fluids Systems	7.5	Compulsory
	Machine Design and Manufacturing Technologies	7.5	Compulsory
	Operations Management	5	Compulsory
	Project Management Key Agreements & Deals	3	Optional
Specialisation in Specialisation in Construction and Structures	Advanced Automation and Control of Industrial Processes	2.5	Compulsory
	Basic Instrumentation	2.5	Compulsory
	Design and Behavior of Special Structures	3	Optional
	Design and Construction on Industrial Plants and Related Facilities	5	Compulsory
	Engineering of Thermal and Fluids Systems	7.5	Compulsory
	Machine Design and Manufacturing Technologies	7.5	Compulsory
	Operations Management	5	Compulsory
	Project Management Key Agreements & Deals	3	Optional

Subjects		ECTS credits	Type
Specialisation in Specialisation in Electrical Engineering	Advanced Automation and Control of Industrial Processes	2.5	Compulsory
	Basic Instrumentation	2.5	Compulsory
	Design and Behavior of Special Structures	3	Optional
	Design and Construction on Industrial Plants and Related Facilities	5	Compulsory
	Engineering of Thermal and Fluids Systems	7.5	Compulsory
	Machine Design and Manufacturing Technologies	7.5	Compulsory
	Operations Management	5	Compulsory
	Project Management Key Agreements & Deals	3	Optional
Specialisation in Specialisation in Fibrous Biomaterials	Advanced Automation and Control of Industrial Processes	2.5	Compulsory
	Basic Instrumentation	2.5	Compulsory
	Design and Behavior of Special Structures	3	Optional
	Design and Construction on Industrial Plants and Related Facilities	5	Compulsory
	Engineering of Thermal and Fluids Systems	7.5	Compulsory
	Machine Design and Manufacturing Technologies	7.5	Compulsory
	Operations Management	5	Compulsory
	Project Management Key Agreements & Deals	3	Optional
Specialisation in Specialisation in Industrial Scheduling	Advanced Automation and Control of Industrial Processes	2.5	Compulsory
	Basic Instrumentation	2.5	Compulsory
	Design and Behavior of Special Structures	3	Optional
	Design and Construction on Industrial Plants and Related Facilities	5	Compulsory
	Engineering of Thermal and Fluids Systems	7.5	Compulsory
	Machine Design and Manufacturing Technologies	7.5	Compulsory
	Operations Management	5	Compulsory
	Project Management Key Agreements & Deals	3	Optional
Specialisation in Specialisation in Mechanics	Advanced Automation and Control of Industrial Processes	2.5	Compulsory
	Basic Instrumentation	2.5	Compulsory
	Design and Behavior of Special Structures	3	Optional
	Design and Construction on Industrial Plants and Related Facilities	5	Compulsory
	Engineering of Thermal and Fluids Systems	7.5	Compulsory
	Machine Design and Manufacturing Technologies	7.5	Compulsory
	Operations Management	5	Compulsory
	Project Management Key Agreements & Deals	3	Optional
Specialisation in Specialisation in Technical Textiles and Multifunctional Structures	Advanced Automation and Control of Industrial Processes	2.5	Compulsory
	Basic Instrumentation	2.5	Compulsory
	Design and Behavior of Special Structures	3	Optional
	Design and Construction on Industrial Plants and Related Facilities	5	Compulsory
	Engineering of Thermal and Fluids Systems	7.5	Compulsory
	Machine Design and Manufacturing Technologies	7.5	Compulsory
	Operations Management	5	Compulsory
	Project Management Key Agreements & Deals	3	Optional
Specialisation in Specialisation in Thermal Energetics	Advanced Automation and Control of Industrial Processes	2.5	Compulsory
	Basic Instrumentation	2.5	Compulsory
	Design and Behavior of Special Structures	3	Optional
	Design and Construction on Industrial Plants and Related Facilities	5	Compulsory
	Engineering of Thermal and Fluids Systems	7.5	Compulsory
	Machine Design and Manufacturing Technologies	7.5	Compulsory
	Operations Management	5	Compulsory
	Project Management Key Agreements & Deals	3	Optional
SECOND SEMESTER			
	Advanced Company Workshops for Industrial Engineering	3	Optional
	Advanced Engineering Data Analysis	3	Optional
	Agile Methodologies and Processes for the Creation of Innovative Solutions	3	Optional
	Analysis and Design of Chemical Processes	5	Compulsory
	Applications of Photonics Technologies	3	Optional
	Architecture of Industrial Plants and Building Services	5	Compulsory
	Biomedical Instrumentation	3	Optional
	Colloids, Interfaces and Nanoscale Engineering	3	Optional

Subjects	ECTS credits	Type
Company Workshops for Industrial Engineering	6	Optional
Computational Modeling for Engineering Processes	3	Optional
Cyber-Physical Systems Scheduling	3	Optional
Data Mining and Machine Learning for Engineers	3	Optional
Demolitions and Soil Preparation	3	Optional
Designing Innovative Products and Business	3	Optional
Dynamic Analysis of Structures	3	Optional
Dynamical Systems in Engineering	3	Optional
Energy Technology	5	Compulsory
Experimental Mechanics of Advanced Materials and Structures	3	Optional
Facilities Management	3	Optional
Fundamentals of Industrial Wireless Communication	3	Optional
Implementation and Testing of Metaheuristics for Optimization Problems	3	Optional
Industrial Fluid Power	3	Optional
Industrial Iot and Cyber-Physical Systems	3	Optional
Industrial Wireless Communication Systems	3	Optional
Infrared Thermography for Building Diagnostics	3	Optional
Introduction to Active Flow Control	3	Optional
Introduction to Metaheuristics for Optimization Problems	3	Optional
Iot Engineering	3	Optional
Management and Operation of Terminal Buildings	3	Optional
Microfluids and Mems for Smarts Sensors and Actuators	3	Optional
Mobile Robots	3	Optional
Nonlinear Time Series Analysis	3	Optional
Photonics Sensors and Laser Technology	3	Optional
Polymers from Renewable Resources for Industrial Applications	3	Optional
Power Generation, Transmission and Distribution	5	Compulsory
Power Transmission Systems (Fluid Power) II	3	Optional
Practical Use of Fem for Structural Analysis with Nastran	3	Optional
Professional Carrer Development in Industrial Engineering	3	Optional
Programming Interfaces and Applications	3	Optional
Project Management	5	Compulsory
Proportional Oil Hydraulics	3	Optional
Relationship with the Company	3	Optional
Research on Fluid Mechanics	3	Optional
Safety Automation Projects for Industry 4.0	3	Optional
Smart Grids & Data Analytics	3	Optional
Smart Sensors and Actuators for Internet of Things (Iot)	3	Optional
Smart Textiles	3	Optional
Theory and Design of Structures	2.5	Compulsory
Tools for Professional Practice	3	Optional
Transportation and Materials Handling Engineering	2.5	Compulsory
Validating and Communicating Disruptive Ideas	6	Optional
Workshop on Fluid Power Transmission Systems	3	Optional
Workshops for Innovation in Automotive Industries	6	Optional

Subjects		ECTS credits	Type
Specialisation in Specialisation in Technical Textiles and Multifunctional Structures	Environmental Management and Sustainability in the Textile Industry	5	Compulsory
	Functional Innovations in Textile Finishes	5	Compulsory
	Advanced Company Workshops for Industrial Engineering	3	Optional
	Advanced Engineering Data Analysis	3	Optional
	Agile Methodologies and Processes for the Creation of Innovative Solutions	3	Optional
	Analysis and Design of Chemical Processes	5	Compulsory
	Applications of Photonics Technologies	3	Optional
	Architecture of Industrial Plants and Building Services	5	Compulsory
	Biomedical Instrumentation	3	Optional
	Colloids, Interfaces and Nanoscale Engineering	3	Optional
	Company Workshops for Industrial Engineering	6	Optional
	Computational Modeling for Engineering Processes	3	Optional
	Cyber-Physical Systems Scheduling	3	Optional
	Data Mining and Machine Learning for Engineers	3	Optional
	Demolitions and Soil Preparation	3	Optional
	Designing Innovative Products and Business	3	Optional
	Dynamic Analysis of Structures	3	Optional
	Dynamical Systems in Engineering	3	Optional
	Energy Technology	5	Compulsory
	Experimental Mechanics of Advanced Materials and Structures	3	Optional
	Facilities Management	3	Optional
	Fundamentals of Industrial Wireless Communication	3	Optional
	Implementation and Testing of Metaheuristics for Optimization Problems	3	Optional
	Industrial Fluid Power	3	Optional
	Industrial Iot and Cyber-Physical Systems	3	Optional
	Industrial Wireless Communication Systems	3	Optional
	Infrared Thermography for Building Diagnostics	3	Optional
	Introduction to Active Flow Control	3	Optional
	Introduction to Metaheuristics for Optimization Problems	3	Optional
	Iot Engineering	3	Optional
	Management and Operation of Terminal Buildings	3	Optional
	Microfluids and Mems for Smarts Sensors and Actuators	3	Optional
	Mobile Robots	3	Optional
	Nonlinear Time Series Analysis	3	Optional
	Photonics Sensors and Laser Technology	3	Optional
	Polymers from Renewable Resources for Industrial Applications	3	Optional
	Power Generation, Transmission and Distribution	5	Compulsory
	Power Transmission Systems (Fluid Power) II	3	Optional
	Practical Use of Fem for Structural Analysis with Nastran	3	Optional
	Professional Carrer Development in Industrial Engineering	3	Optional
	Programming Interfaces and Applications	3	Optional
	Project Management	5	Compulsory
Proportional Oil Hydraulics	3	Optional	
Relationship with the Company	3	Optional	
Research on Fluid Mechanics	3	Optional	
Safety Automation Projects for Industry 4.0	3	Optional	
Smart Grids & Data Analytics	3	Optional	
Smart Sensors and Actuators for Internet of Things (Iot)	3	Optional	
Smart Textiles	3	Optional	
Theory and Design of Structures	2.5	Compulsory	
Tools for Professional Practice	3	Optional	
Transportation and Materials Handling Engineering	2.5	Compulsory	
Validating and Communicating Disruptive Ideas	6	Optional	
Workshop on Fluid Power Transmission Systems	3	Optional	
Workshops for Innovation in Automotive Industries	6	Optional	

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Specialisation in (Eng) Especialitat Biomèdica	Advanced Company Workshops for Industrial Engineering	3	Optional
	Advanced Engineering Data Analysis	3	Optional
	Agile Methodologies and Processes for the Creation of Innovative Solutions	3	Optional
	Analysis and Design of Chemical Processes	5	Compulsory
	Applications of Photonics Technologies	3	Optional
	Architecture of Industrial Plants and Building Services	5	Compulsory
	Biomedical Instrumentation	3	Optional
	Colloids, Interfaces and Nanoscale Engineering	3	Optional
	Company Workshops for Industrial Engineering	6	Optional
	Computational Modeling for Engineering Processes	3	Optional
	Cyber-Physical Systems Scheduling	3	Optional
	Data Mining and Machine Learning for Engineers	3	Optional
	Demolitions and Soil Preparation	3	Optional
	Designing Innovative Products and Business	3	Optional
	Dynamic Analysis of Structures	3	Optional
	Dynamical Systems in Engineering	3	Optional
	Energy Technology	5	Compulsory
	Experimental Mechanics of Advanced Materials and Structures	3	Optional
	Facilities Management	3	Optional
	Fundamentals of Industrial Wireless Communication	3	Optional
	Implementation and Testing of Metaheuristics for Optimization Problems	3	Optional
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	Introduction to Active Flow Control	3	Optional
	Introduction to Metaheuristics for Optimization Problems	3	Optional
	Iot Engineering	3	Optional
	Management and Operation of Terminal Buildings	3	Optional
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	Research on Fluid Mechanics	3	Optional
	Safety Automation Projects for Industry 4.0	3	Optional
	Smart Grids & Data Analytics	3	Optional
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	Theory and Design of Structures	2.5	Compulsory
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	Advanced Engineering Data Analysis	3	Optional
	Agile Methodologies and Processes for the Creation of Innovative Solutions	3	Optional
	Analysis and Design of Chemical Processes	5	Compulsory
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	Biomedical Instrumentation	3	Optional
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	Programming Interfaces and Applications	3	Optional
	Project Management	5	Compulsory
	Proportional Oil Hydraulics	3	Optional
	Relationship with the Company	3	Optional
	Research on Fluid Mechanics	3	Optional
	Safety Automation Projects for Industry 4.0	3	Optional
	Smart Grids & Data Analytics	3	Optional
	Smart Sensors and Actuators for Internet of Things (Iot)	3	Optional
	Smart Textiles	3	Optional
	Theory and Design of Structures	2.5	Compulsory
	Tools for Professional Practice	3	Optional
	Transportation and Materials Handling Engineering	2.5	Compulsory
Validating and Communicating Disruptive Ideas	6	Optional	
Workshop on Fluid Power Transmission Systems	3	Optional	
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	Analysis and Design of Chemical Processes	5	Compulsory
	Applications of Photonics Technologies	3	Optional
	Architecture of Industrial Plants and Building Services	5	Compulsory
	Biomedical Instrumentation	3	Optional
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	Cyber-Physical Systems Scheduling	3	Optional
	Data Mining and Machine Learning for Engineers	3	Optional
	Demolitions and Soil Preparation	3	Optional
	Designing Innovative Products and Business	3	Optional
	Dynamic Analysis of Structures	3	Optional
	Dynamical Systems in Engineering	3	Optional
	Energy Technology	5	Compulsory
	Experimental Mechanics of Advanced Materials and Structures	3	Optional
	Facilities Management	3	Optional
	Fundamentals of Industrial Wireless Communication	3	Optional
	Implementation and Testing of Metaheuristics for Optimization Problems	3	Optional
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	Introduction to Active Flow Control	3	Optional
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	Power Transmission Systems (Fluid Power) II	3	Optional
	Practical Use of Fem for Structural Analysis with Nastran	3	Optional
	Professional Carrer Development in Industrial Engineering	3	Optional
	Programming Interfaces and Applications	3	Optional
	Project Management	5	Compulsory
	Proportional Oil Hydraulics	3	Optional
	Relationship with the Company	3	Optional
	Research on Fluid Mechanics	3	Optional
	Safety Automation Projects for Industry 4.0	3	Optional
	Smart Grids & Data Analytics	3	Optional
	Smart Sensors and Actuators for Internet of Things (Iot)	3	Optional
	Smart Textiles	3	Optional
	Theory and Design of Structures	2.5	Compulsory
	Tools for Professional Practice	3	Optional
	Transportation and Materials Handling Engineering	2.5	Compulsory
Validating and Communicating Disruptive Ideas	6	Optional	
Workshop on Fluid Power Transmission Systems	3	Optional	
Workshops for Innovation in Automotive Industries	6	Optional	

Subjects		ECTS credits	Type
Specialisation in Specialisation in Construction and Structures	Advanced Company Workshops for Industrial Engineering	3	Optional
	Advanced Engineering Data Analysis	3	Optional
	Agile Methodologies and Processes for the Creation of Innovative Solutions	3	Optional
	Analysis and Design of Chemical Processes	5	Compulsory
	Applications of Photonics Technologies	3	Optional
	Architecture of Industrial Plants and Building Services	5	Compulsory
	Biomedical Instrumentation	3	Optional
	Colloids, Interfaces and Nanoscale Engineering	3	Optional
	Company Workshops for Industrial Engineering	6	Optional
	Computational Modeling for Engineering Processes	3	Optional
	Cyber-Physical Systems Scheduling	3	Optional
	Data Mining and Machine Learning for Engineers	3	Optional
	Demolitions and Soil Preparation	3	Optional
	Designing Innovative Products and Business	3	Optional
	Dynamic Analysis of Structures	3	Optional
	Dynamical Systems in Engineering	3	Optional
	Energy Technology	5	Compulsory
	Experimental Mechanics of Advanced Materials and Structures	3	Optional
	Facilities Management	3	Optional
	Fundamentals of Industrial Wireless Communication	3	Optional
	Implementation and Testing of Metaheuristics for Optimization Problems	3	Optional
	Industrial Fluid Power	3	Optional
	Industrial Iot and Cyber-Physical Systems	3	Optional
	Industrial Wireless Communication Systems	3	Optional
	Infrared Thermography for Building Diagnostics	3	Optional
	Introduction to Active Flow Control	3	Optional
	Introduction to Metaheuristics for Optimization Problems	3	Optional
	Iot Engineering	3	Optional
	Management and Operation of Terminal Buildings	3	Optional
	Microfluids and Mems for Smarts Sensors and Actuators	3	Optional
	Mobile Robots	3	Optional
	Nonlinear Time Series Analysis	3	Optional
	Photonics Sensors and Laser Technology	3	Optional
	Polymers from Renewable Resources for Industrial Applications	3	Optional
	Power Generation, Transmission and Distribution	5	Compulsory
	Power Transmission Systems (Fluid Power) II	3	Optional
	Practical Use of Fem for Structural Analysis with Nastran	3	Optional
	Professional Carrer Development in Industrial Engineering	3	Optional
	Programming Interfaces and Applications	3	Optional
	Project Management	5	Compulsory
	Proportional Oil Hydraulics	3	Optional
	Relationship with the Company	3	Optional
	Research on Fluid Mechanics	3	Optional
	Safety Automation Projects for Industry 4.0	3	Optional
	Smart Grids & Data Analytics	3	Optional
	Smart Sensors and Actuators for Internet of Things (Iot)	3	Optional
	Smart Textiles	3	Optional
	Theory and Design of Structures	2.5	Compulsory
	Tools for Professional Practice	3	Optional
	Transportation and Materials Handling Engineering	2.5	Compulsory
Validating and Communicating Disruptive Ideas	6	Optional	
Workshop on Fluid Power Transmission Systems	3	Optional	
Workshops for Innovation in Automotive Industries	6	Optional	

Subjects		ECTS credits	Type
Specialisation in Specialisation in Electrical Engineering	Advanced Company Workshops for Industrial Engineering	3	Optional
	Advanced Engineering Data Analysis	3	Optional
	Agile Methodologies and Processes for the Creation of Innovative Solutions	3	Optional
	Analysis and Design of Chemical Processes	5	Compulsory
	Applications of Photonics Technologies	3	Optional
	Architecture of Industrial Plants and Building Services	5	Compulsory
	Biomedical Instrumentation	3	Optional
	Colloids, Interfaces and Nanoscale Engineering	3	Optional
	Company Workshops for Industrial Engineering	6	Optional
	Computational Modeling for Engineering Processes	3	Optional
	Cyber-Physical Systems Scheduling	3	Optional
	Data Mining and Machine Learning for Engineers	3	Optional
	Demolitions and Soil Preparation	3	Optional
	Designing Innovative Products and Business	3	Optional
	Dynamic Analysis of Structures	3	Optional
	Dynamical Systems in Engineering	3	Optional
	Energy Technology	5	Compulsory
	Experimental Mechanics of Advanced Materials and Structures	3	Optional
	Facilities Management	3	Optional
	Fundamentals of Industrial Wireless Communication	3	Optional
	Implementation and Testing of Metaheuristics for Optimization Problems	3	Optional
	Industrial Fluid Power	3	Optional
	Industrial Iot and Cyber-Physical Systems	3	Optional
	Industrial Wireless Communication Systems	3	Optional
	Infrared Thermography for Building Diagnostics	3	Optional
	Introduction to Active Flow Control	3	Optional
	Introduction to Metaheuristics for Optimization Problems	3	Optional
	Iot Engineering	3	Optional
	Management and Operation of Terminal Buildings	3	Optional
	Microfluids and Mems for Smarts Sensors and Actuators	3	Optional
	Mobile Robots	3	Optional
	Nonlinear Time Series Analysis	3	Optional
	Photonics Sensors and Laser Technology	3	Optional
	Polymers from Renewable Resources for Industrial Applications	3	Optional
	Power Generation, Transmission and Distribution	5	Compulsory
	Power Transmission Systems (Fluid Power) II	3	Optional
	Practical Use of Fem for Structural Analysis with Nastran	3	Optional
	Professional Carrer Development in Industrial Engineering	3	Optional
	Programming Interfaces and Applications	3	Optional
	Project Management	5	Compulsory
	Proportional Oil Hydraulics	3	Optional
	Relationship with the Company	3	Optional
	Research on Fluid Mechanics	3	Optional
	Safety Automation Projects for Industry 4.0	3	Optional
	Smart Grids & Data Analytics	3	Optional
	Smart Sensors and Actuators for Internet of Things (Iot)	3	Optional
	Smart Textiles	3	Optional
Theory and Design of Structures	2.5	Compulsory	
Tools for Professional Practice	3	Optional	
Transportation and Materials Handling Engineering	2.5	Compulsory	
Validating and Communicating Disruptive Ideas	6	Optional	
Workshop on Fluid Power Transmission Systems	3	Optional	
Workshops for Innovation in Automotive Industries	6	Optional	

Subjects		ECTS credits	Type
Specialisation in Specialisation in Fibrous Biomaterials	Advanced Company Workshops for Industrial Engineering	3	Optional
	Advanced Engineering Data Analysis	3	Optional
	Agile Methodologies and Processes for the Creation of Innovative Solutions	3	Optional
	Analysis and Design of Chemical Processes	5	Compulsory
	Applications of Photonics Technologies	3	Optional
	Architecture of Industrial Plants and Building Services	5	Compulsory
	Biomedical Instrumentation	3	Optional
	Colloids, Interfaces and Nanoscale Engineering	3	Optional
	Company Workshops for Industrial Engineering	6	Optional
	Computational Modeling for Engineering Processes	3	Optional
	Cyber-Physical Systems Scheduling	3	Optional
	Data Mining and Machine Learning for Engineers	3	Optional
	Demolitions and Soil Preparation	3	Optional
	Designing Innovative Products and Business	3	Optional
	Dynamic Analysis of Structures	3	Optional
	Dynamical Systems in Engineering	3	Optional
	Energy Technology	5	Compulsory
	Experimental Mechanics of Advanced Materials and Structures	3	Optional
	Facilities Management	3	Optional
	Fundamentals of Industrial Wireless Communication	3	Optional
	Implementation and Testing of Metaheuristics for Optimization Problems	3	Optional
	Industrial Fluid Power	3	Optional
	Industrial Iot and Cyber-Physical Systems	3	Optional
	Industrial Wireless Communication Systems	3	Optional
	Infrared Thermography for Building Diagnostics	3	Optional
	Introduction to Active Flow Control	3	Optional
	Introduction to Metaheuristics for Optimization Problems	3	Optional
	Iot Engineering	3	Optional
	Management and Operation of Terminal Buildings	3	Optional
	Microfluids and Mems for Smarts Sensors and Actuators	3	Optional
	Mobile Robots	3	Optional
	Nonlinear Time Series Analysis	3	Optional
	Photonics Sensors and Laser Technology	3	Optional
	Polymers from Renewable Resources for Industrial Applications	3	Optional
	Power Generation, Transmission and Distribution	5	Compulsory
	Power Transmission Systems (Fluid Power) II	3	Optional
	Practical Use of Fem for Structural Analysis with Nastran	3	Optional
	Professional Carrer Development in Industrial Engineering	3	Optional
	Programming Interfaces and Applications	3	Optional
	Project Management	5	Compulsory
	Proportional Oil Hydraulics	3	Optional
	Relationship with the Company	3	Optional
	Research on Fluid Mechanics	3	Optional
	Safety Automation Projects for Industry 4.0	3	Optional
	Smart Grids & Data Analytics	3	Optional
	Smart Sensors and Actuators for Internet of Things (Iot)	3	Optional
	Smart Textiles	3	Optional
Theory and Design of Structures	2.5	Compulsory	
Tools for Professional Practice	3	Optional	
Transportation and Materials Handling Engineering	2.5	Compulsory	
Validating and Communicating Disruptive Ideas	6	Optional	
Workshop on Fluid Power Transmission Systems	3	Optional	
Workshops for Innovation in Automotive Industries	6	Optional	

Subjects		ECTS credits	Type
Specialisation in Specialisation in Industrial Scheduling	Advanced Company Workshops for Industrial Engineering	3	Optional
	Advanced Engineering Data Analysis	3	Optional
	Agile Methodologies and Processes for the Creation of Innovative Solutions	3	Optional
	Analysis and Design of Chemical Processes	5	Compulsory
	Applications of Photonics Technologies	3	Optional
	Architecture of Industrial Plants and Building Services	5	Compulsory
	Biomedical Instrumentation	3	Optional
	Colloids, Interfaces and Nanoscale Engineering	3	Optional
	Company Workshops for Industrial Engineering	6	Optional
	Computational Modeling for Engineering Processes	3	Optional
	Cyber-Physical Systems Scheduling	3	Optional
	Data Mining and Machine Learning for Engineers	3	Optional
	Demolitions and Soil Preparation	3	Optional
	Designing Innovative Products and Business	3	Optional
	Dynamic Analysis of Structures	3	Optional
	Dynamical Systems in Engineering	3	Optional
	Energy Technology	5	Compulsory
	Experimental Mechanics of Advanced Materials and Structures	3	Optional
	Facilities Management	3	Optional
	Fundamentals of Industrial Wireless Communication	3	Optional
	Implementation and Testing of Metaheuristics for Optimization Problems	3	Optional
	Industrial Fluid Power	3	Optional
	Industrial Iot and Cyber-Physical Systems	3	Optional
	Industrial Wireless Communication Systems	3	Optional
	Infrared Thermography for Building Diagnostics	3	Optional
	Introduction to Active Flow Control	3	Optional
	Introduction to Metaheuristics for Optimization Problems	3	Optional
	Iot Engineering	3	Optional
	Management and Operation of Terminal Buildings	3	Optional
	Microfluids and Mems for Smarts Sensors and Actuators	3	Optional
	Mobile Robots	3	Optional
	Nonlinear Time Series Analysis	3	Optional
	Photonics Sensors and Laser Technology	3	Optional
	Polymers from Renewable Resources for Industrial Applications	3	Optional
	Power Generation, Transmission and Distribution	5	Compulsory
	Power Transmission Systems (Fluid Power) II	3	Optional
	Practical Use of Fem for Structural Analysis with Nastran	3	Optional
	Professional Carrer Development in Industrial Engineering	3	Optional
	Programming Interfaces and Applications	3	Optional
	Project Management	5	Compulsory
	Proportional Oil Hydraulics	3	Optional
	Relationship with the Company	3	Optional
	Research on Fluid Mechanics	3	Optional
	Safety Automation Projects for Industry 4.0	3	Optional
	Smart Grids & Data Analytics	3	Optional
	Smart Sensors and Actuators for Internet of Things (Iot)	3	Optional
	Smart Textiles	3	Optional
Theory and Design of Structures	2.5	Compulsory	
Tools for Professional Practice	3	Optional	
Transportation and Materials Handling Engineering	2.5	Compulsory	
Validating and Communicating Disruptive Ideas	6	Optional	
Workshop on Fluid Power Transmission Systems	3	Optional	
Workshops for Innovation in Automotive Industries	6	Optional	

Subjects		ECTS credits	Type
Specialisation in Specialisation in Mechanics	Advanced Company Workshops for Industrial Engineering	3	Optional
	Advanced Engineering Data Analysis	3	Optional
	Agile Methodologies and Processes for the Creation of Innovative Solutions	3	Optional
	Analysis and Design of Chemical Processes	5	Compulsory
	Applications of Photonics Technologies	3	Optional
	Architecture of Industrial Plants and Building Services	5	Compulsory
	Biomedical Instrumentation	3	Optional
	Colloids, Interfaces and Nanoscale Engineering	3	Optional
	Company Workshops for Industrial Engineering	6	Optional
	Computational Modeling for Engineering Processes	3	Optional
	Cyber-Physical Systems Scheduling	3	Optional
	Data Mining and Machine Learning for Engineers	3	Optional
	Demolitions and Soil Preparation	3	Optional
	Designing Innovative Products and Business	3	Optional
	Dynamic Analysis of Structures	3	Optional
	Dynamical Systems in Engineering	3	Optional
	Energy Technology	5	Compulsory
	Experimental Mechanics of Advanced Materials and Structures	3	Optional
	Facilities Management	3	Optional
	Fundamentals of Industrial Wireless Communication	3	Optional
	Implementation and Testing of Metaheuristics for Optimization Problems	3	Optional
	Industrial Fluid Power	3	Optional
	Industrial Iot and Cyber-Physical Systems	3	Optional
	Industrial Wireless Communication Systems	3	Optional
	Infrared Thermography for Building Diagnostics	3	Optional
	Introduction to Active Flow Control	3	Optional
	Introduction to Metaheuristics for Optimization Problems	3	Optional
	Iot Engineering	3	Optional
	Management and Operation of Terminal Buildings	3	Optional
	Microfluids and Mems for Smarts Sensors and Actuators	3	Optional
	Mobile Robots	3	Optional
	Nonlinear Time Series Analysis	3	Optional
	Photonics Sensors and Laser Technology	3	Optional
	Polymers from Renewable Resources for Industrial Applications	3	Optional
	Power Generation, Transmission and Distribution	5	Compulsory
	Power Transmission Systems (Fluid Power) II	3	Optional
	Practical Use of Fem for Structural Analysis with Nastran	3	Optional
	Professional Carrer Development in Industrial Engineering	3	Optional
	Programming Interfaces and Applications	3	Optional
	Project Management	5	Compulsory
	Proportional Oil Hydraulics	3	Optional
	Relationship with the Company	3	Optional
	Research on Fluid Mechanics	3	Optional
	Safety Automation Projects for Industry 4.0	3	Optional
	Smart Grids & Data Analytics	3	Optional
	Smart Sensors and Actuators for Internet of Things (Iot)	3	Optional
	Smart Textiles	3	Optional
Theory and Design of Structures	2.5	Compulsory	
Tools for Professional Practice	3	Optional	
Transportation and Materials Handling Engineering	2.5	Compulsory	
Validating and Communicating Disruptive Ideas	6	Optional	
Workshop on Fluid Power Transmission Systems	3	Optional	
Workshops for Innovation in Automotive Industries	6	Optional	

Subjects		ECTS credits	Type
Specialisation in Specialisation in Thermal Energetics	Advanced Company Workshops for Industrial Engineering	3	Optional
	Advanced Engineering Data Analysis	3	Optional
	Agile Methodologies and Processes for the Creation of Innovative Solutions	3	Optional
	Analysis and Design of Chemical Processes	5	Compulsory
	Applications of Photonics Technologies	3	Optional
	Architecture of Industrial Plants and Building Services	5	Compulsory
	Biomedical Instrumentation	3	Optional
	Colloids, Interfaces and Nanoscale Engineering	3	Optional
	Company Workshops for Industrial Engineering	6	Optional
	Computational Modeling for Engineering Processes	3	Optional
	Cyber-Physical Systems Scheduling	3	Optional
	Data Mining and Machine Learning for Engineers	3	Optional
	Demolitions and Soil Preparation	3	Optional
	Designing Innovative Products and Business	3	Optional
	Dynamic Analysis of Structures	3	Optional
	Dynamical Systems in Engineering	3	Optional
	Energy Technology	5	Compulsory
	Experimental Mechanics of Advanced Materials and Structures	3	Optional
	Facilities Management	3	Optional
	Fundamentals of Industrial Wireless Communication	3	Optional
	Implementation and Testing of Metaheuristics for Optimization Problems	3	Optional
	Industrial Fluid Power	3	Optional
	Industrial Iot and Cyber-Physical Systems	3	Optional
	Industrial Wireless Communication Systems	3	Optional
	Infrared Thermography for Building Diagnostics	3	Optional
	Introduction to Active Flow Control	3	Optional
	Introduction to Metaheuristics for Optimization Problems	3	Optional
	Iot Engineering	3	Optional
	Management and Operation of Terminal Buildings	3	Optional
	Microfluids and Mems for Smarts Sensors and Actuators	3	Optional
	Mobile Robots	3	Optional
	Nonlinear Time Series Analysis	3	Optional
	Photonics Sensors and Laser Technology	3	Optional
	Polymers from Renewable Resources for Industrial Applications	3	Optional
	Power Generation, Transmission and Distribution	5	Compulsory
	Power Transmission Systems (Fluid Power) II	3	Optional
	Practical Use of Fem for Structural Analysis with Nastran	3	Optional
	Professional Carrer Development in Industrial Engineering	3	Optional
	Programming Interfaces and Applications	3	Optional
	Project Management	5	Compulsory
	Proportional Oil Hydraulics	3	Optional
	Relationship with the Company	3	Optional
	Research on Fluid Mechanics	3	Optional
	Safety Automation Projects for Industry 4.0	3	Optional
	Smart Grids & Data Analytics	3	Optional
	Smart Sensors and Actuators for Internet of Things (Iot)	3	Optional
	Smart Textiles	3	Optional
Theory and Design of Structures	2.5	Compulsory	
Tools for Professional Practice	3	Optional	
Transportation and Materials Handling Engineering	2.5	Compulsory	
Validating and Communicating Disruptive Ideas	6	Optional	
Workshop on Fluid Power Transmission Systems	3	Optional	
Workshops for Innovation in Automotive Industries	6	Optional	
THIRD SEMESTER			
Acoustics		3	Optional
Applied Robotics		3	Optional
Business Management		5	Compulsory

Subjects		ECTS credits	Type
Chemical Technology		3	Optional
Design of Experiments		3	Optional
Electrical Technology		3	Optional
Electronic Technology		3	Optional
Fundamentals of Nuclear Engineering		3	Optional
Fundamentals of Structural Calculation		3	Optional
Game Theory		3	Optional
Geotechnical Engineering		3	Optional
Quality Management		3	Optional
Railway Systems		3	Optional
Research Seminars		3	Optional
Science and Technology Communication Through Media		3	Optional
Structures of New Generation Materials		3	Optional
Surface Engineering		3	Optional
Theory of Machines		3	Optional
Thermal Turbomachinery and Combustion		3	Optional
Specialisation in (Eng) Especialitat Biomèdica	Advanced Biomedical Instrumentation	5	Compulsory
	Biomechanics	5	Compulsory
	Biomedical Image Processing	5	Compulsory
	Biomedical Signal Processing	5	Compulsory
	Biosystems and Biomaterials Modelling	5	Compulsory
	Acoustics	3	Optional
	Applied Robotics	3	Optional
	Business Management	5	Compulsory
	Chemical Technology	3	Optional
	Design of Experiments	3	Optional
	Electrical Technology	3	Optional
	Electronic Technology	3	Optional
	Fundamentals of Nuclear Engineering	3	Optional
	Fundamentals of Structural Calculation	3	Optional
	Game Theory	3	Optional
	Geotechnical Engineering	3	Optional
	Quality Management	3	Optional
	Railway Systems	3	Optional
	Research Seminars	3	Optional
	Science and Technology Communication Through Media	3	Optional
	Structures of New Generation Materials	3	Optional
	Surface Engineering	3	Optional
	Theory of Machines	3	Optional
	Thermal Turbomachinery and Combustion	3	Optional

Subjects		ECTS credits	Type
Specialisation in (Eng) Especialitat en Enginyeria Paperera i Gràfica	Analysis of Paper Properties	5	Compulsory
	Paper Fibers Obtaining Technology	5	Compulsory
	Paper Manufacturing Technology	5	Compulsory
	Print Technology	5	Compulsory
	Processes to Improve the Physicomechanical Properties of Paper	5	Compulsory
	Acoustics	3	Optional
	Applied Robotics	3	Optional
	Business Management	5	Compulsory
	Chemical Technology	3	Optional
	Design of Experiments	3	Optional
	Electrical Technology	3	Optional
	Electronic Technology	3	Optional
	Fundamentals of Nuclear Engineering	3	Optional
	Fundamentals of Structural Calculation	3	Optional
	Game Theory	3	Optional
	Geotechnical Engineering	3	Optional
	Quality Management	3	Optional
	Railway Systems	3	Optional
	Research Seminars	3	Optional
	Science and Technology Communication Through Media	3	Optional
Structures of New Generation Materials	3	Optional	
Surface Engineering	3	Optional	
Theory of Machines	3	Optional	
Thermal Turbomachinery and Combustion	3	Optional	
Specialisation in (Eng) Muei Especialitat Tèxtil	Advances in Dyeing and Printing of Fabrics	5	Compulsory
	Advances in Fibers and Threads	5	Compulsory
	Advances in Knitted and Openwork Fabrics	5	Compulsory
	Advances in Textile Finishes and Dressings	5	Compulsory
	Sustainability in the Textile Industry	5	Compulsory
	Acoustics	3	Optional
	Applied Robotics	3	Optional
	Business Management	5	Compulsory
	Chemical Technology	3	Optional
	Design of Experiments	3	Optional
	Electrical Technology	3	Optional
	Electronic Technology	3	Optional
	Fundamentals of Nuclear Engineering	3	Optional
	Fundamentals of Structural Calculation	3	Optional
	Game Theory	3	Optional
	Geotechnical Engineering	3	Optional
	Quality Management	3	Optional
	Railway Systems	3	Optional
	Research Seminars	3	Optional
	Science and Technology Communication Through Media	3	Optional
Structures of New Generation Materials	3	Optional	
Surface Engineering	3	Optional	
Theory of Machines	3	Optional	
Thermal Turbomachinery and Combustion	3	Optional	

Subjects		ECTS credits	Type
Specialisation in (Eng) No Especialitat	Advanced Biomedical Instrumentation	5	Optional
	Advanced Instrumentation	2.5	Optional
	Advanced Machining Systems	5	Optional
	Advanced Structures	5	Optional
	Advances in Dyeing and Printing of Fabrics	5	Optional
	Advances in Fibers and Threads	5	Optional
	Advances in Knitted and Openwork Fabrics	5	Optional
	Advances in Textile Finishes and Dressings	5	Optional
	Analysis of Paper Properties	5	Optional
	Applied Statistics in Industrial Engineering	5	Optional
	Biomechanics	5	Optional
	Biomedical Image Processing	5	Optional
	Biomedical Signal Processing	5	Optional
	Biosystems and Biomaterials Modelling	5	Optional
	Concrete Structures	5	Optional
	Control of Electrical Machines	5	Optional
	Control, Management and Monitoring of Processes	2.5	Optional
	Design of Electric Systems with Renewable Energy	5	Optional
	Design of Electrical Machines and Actuators	5	Optional
	Electrical Power Systems	5	Optional
	Fluid Systems Design	5	Optional
	Heat and Mass Transfer	5	Optional
	Heat Engines Technology	7.5	Optional
	Machine Design and Mechanical Vibrations	5	Optional
	Management Control and Cost	5	Optional
	Management of Construction Projects	5	Optional
	Paper Fibers Obtaining Technology	5	Optional
	Paper Manufacturing Technology	5	Optional
	Power Transmission Systems	10	Optional
	Print Technology	5	Optional
	Processes to Improve the Physicomechanical Properties of Paper	5	Optional
	Quantitative Methods in Industrial Scheduling	5	Optional
	Refrigeration and Air Conditioning	5	Optional
	Renewable Energy	7.5	Optional
	Smart Buildings	5	Optional
	Steel Structures	5	Optional
	Supply Chain Management	5	Optional
	Sustainability in the Textile Industry	5	Optional
	Tools for Decision Analysis	5	Optional
	Acoustics	3	Optional
	Applied Robotics	3	Optional
	Business Management	5	Compulsory
	Chemical Technology	3	Optional
	Design of Experiments	3	Optional
	Electrical Technology	3	Optional
	Electronic Technology	3	Optional
	Fundamentals of Nuclear Engineering	3	Optional
	Fundamentals of Structural Calculation	3	Optional
	Game Theory	3	Optional
	Geotechnical Engineering	3	Optional
	Quality Management	3	Optional
	Railway Systems	3	Optional
	Research Seminars	3	Optional
	Science and Technology Communication Through Media	3	Optional
	Structures of New Generation Materials	3	Optional
	Surface Engineering	3	Optional
	Theory of Machines	3	Optional
	Thermal Turbomachinery and Combustion	3	Optional

Subjects		ECTS credits	Type
Specialisation in Specialisation in Construction and Structures	Advanced Structures	5	Compulsory
	Concrete Structures	5	Compulsory
	Management of Construction Projects	5	Compulsory
	Smart Buildings	5	Compulsory
	Steel Structures	5	Compulsory
	Acoustics	3	Optional
	Applied Robotics	3	Optional
	Business Management	5	Compulsory
	Chemical Technology	3	Optional
	Design of Experiments	3	Optional
	Electrical Technology	3	Optional
	Electronic Technology	3	Optional
	Fundamentals of Nuclear Engineering	3	Optional
	Fundamentals of Structural Calculation	3	Optional
	Game Theory	3	Optional
	Geotechnical Engineering	3	Optional
	Quality Management	3	Optional
	Railway Systems	3	Optional
	Research Seminars	3	Optional
	Science and Technology Communication Through Media	3	Optional
	Structures of New Generation Materials	3	Optional
Surface Engineering	3	Optional	
Theory of Machines	3	Optional	
Thermal Turbomachinery and Combustion	3	Optional	
Specialisation in Specialisation in Electrical Engineering	Advanced Instrumentation	2.5	Compulsory
	Control of Electrical Machines	5	Compulsory
	Control, Management and Monitoring of Processes	2.5	Compulsory
	Design of Electric Systems with Renewable Energy	5	Compulsory
	Design of Electrical Machines and Actuators	5	Compulsory
	Electrical Power Systems	5	Compulsory
	Acoustics	3	Optional
	Applied Robotics	3	Optional
	Business Management	5	Compulsory
	Chemical Technology	3	Optional
	Design of Experiments	3	Optional
	Electrical Technology	3	Optional
	Electronic Technology	3	Optional
	Fundamentals of Nuclear Engineering	3	Optional
	Fundamentals of Structural Calculation	3	Optional
	Game Theory	3	Optional
	Geotechnical Engineering	3	Optional
	Quality Management	3	Optional
	Railway Systems	3	Optional
	Research Seminars	3	Optional
	Science and Technology Communication Through Media	3	Optional
Structures of New Generation Materials	3	Optional	
Surface Engineering	3	Optional	
Theory of Machines	3	Optional	
Thermal Turbomachinery and Combustion	3	Optional	

Subjects		ECTS credits	Type
Specialisation in Specialisation in Fibrous Biomaterials	Fibrous Materials for Lignocellulosic Products Manufacturing	5	Compulsory
	Paper Manufacturing Technology and Derivatives	5	Compulsory
	Physical Characterization of Biomaterials and Paper Products	5	Compulsory
	Printing and Converting Technologies of Paper Products	5	Compulsory
	Simulation and Physicochemical Technology for the Manufacturing of Biomaterials, Pulp and Paper Products	5	Compulsory
	Acoustics	3	Optional
	Applied Robotics	3	Optional
	Business Management	5	Compulsory
	Chemical Technology	3	Optional
	Design of Experiments	3	Optional
	Electrical Technology	3	Optional
	Electronic Technology	3	Optional
	Fundamentals of Nuclear Engineering	3	Optional
	Fundamentals of Structural Calculation	3	Optional
	Game Theory	3	Optional
	Geotechnical Engineering	3	Optional
	Quality Management	3	Optional
	Railway Systems	3	Optional
	Research Seminars	3	Optional
	Science and Technology Communication Through Media	3	Optional
Structures of New Generation Materials	3	Optional	
Surface Engineering	3	Optional	
Theory of Machines	3	Optional	
Thermal Turbomachinery and Combustion	3	Optional	
Specialisation in Specialisation in Industrial Scheduling	Applied Statistics in Industrial Engineering	5	Compulsory
	Business Process Reengineering	5	Optional
	Management Control and Cost	5	Compulsory
	Quantitative Methods in Industrial Scheduling	5	Compulsory
	Supply Chain Management	5	Compulsory
	Tools for Decision Analysis	5	Compulsory
	Acoustics	3	Optional
	Applied Robotics	3	Optional
	Business Management	5	Compulsory
	Chemical Technology	3	Optional
	Design of Experiments	3	Optional
	Electrical Technology	3	Optional
	Electronic Technology	3	Optional
	Fundamentals of Nuclear Engineering	3	Optional
	Fundamentals of Structural Calculation	3	Optional
	Game Theory	3	Optional
	Geotechnical Engineering	3	Optional
	Quality Management	3	Optional
	Railway Systems	3	Optional
	Research Seminars	3	Optional
Science and Technology Communication Through Media	3	Optional	
Structures of New Generation Materials	3	Optional	
Surface Engineering	3	Optional	
Theory of Machines	3	Optional	
Thermal Turbomachinery and Combustion	3	Optional	

Subjects		ECTS credits	Type
Specialisation in Specialisation in Mechanics	Advanced Machining Systems	5	Compulsory
	Fluid Systems Design	5	Compulsory
	Machine Design and Mechanical Vibrations	5	Compulsory
	Power Transmission Systems	10	Compulsory
	Acoustics	3	Optional
	Applied Robotics	3	Optional
	Business Management	5	Compulsory
	Chemical Technology	3	Optional
	Design of Experiments	3	Optional
	Electrical Technology	3	Optional
	Electronic Technology	3	Optional
	Fundamentals of Nuclear Engineering	3	Optional
	Fundamentals of Structural Calculation	3	Optional
	Game Theory	3	Optional
	Geotechnical Engineering	3	Optional
	Quality Management	3	Optional
	Railway Systems	3	Optional
	Research Seminars	3	Optional
	Science and Technology Communication Through Media	3	Optional
	Structures of New Generation Materials	3	Optional
Surface Engineering	3	Optional	
Theory of Machines	3	Optional	
Thermal Turbomachinery and Combustion	3	Optional	
Specialisation in Specialisation in Technical Textiles and Multifunctional Structures	Advances in Fibers and Threads	5	Compulsory
	Advances in Knitted and Openwork Fabrics	5	Compulsory
	Advances in Textile Fibers	5	Optional
	Colorimetry, Dyes and Pigments	5	Compulsory
	Yarns, Filaments and Nonwoven Textiles	5	Optional
	Acoustics	3	Optional
	Applied Robotics	3	Optional
	Business Management	5	Compulsory
	Chemical Technology	3	Optional
	Design of Experiments	3	Optional
	Electrical Technology	3	Optional
	Electronic Technology	3	Optional
	Fundamentals of Nuclear Engineering	3	Optional
	Fundamentals of Structural Calculation	3	Optional
	Game Theory	3	Optional
	Geotechnical Engineering	3	Optional
	Quality Management	3	Optional
	Railway Systems	3	Optional
	Research Seminars	3	Optional
	Science and Technology Communication Through Media	3	Optional
Structures of New Generation Materials	3	Optional	
Surface Engineering	3	Optional	
Theory of Machines	3	Optional	
Thermal Turbomachinery and Combustion	3	Optional	

Subjects		ECTS credits	Type
Specialisation in Specialisation in Thermal Energetics	Heat and Mass Transfer	5	Compulsory
	Heat Engines Technology	7.5	Compulsory
	Refrigeration and Air Conditioning	5	Compulsory
	Renewable Energy	7.5	Compulsory
	Acoustics	3	Optional
	Applied Robotics	3	Optional
	Business Management	5	Compulsory
	Chemical Technology	3	Optional
	Design of Experiments	3	Optional
	Electrical Technology	3	Optional
	Electronic Technology	3	Optional
	Fundamentals of Nuclear Engineering	3	Optional
	Fundamentals of Structural Calculation	3	Optional
	Game Theory	3	Optional
	Geotechnical Engineering	3	Optional
	Quality Management	3	Optional
	Railway Systems	3	Optional
	Research Seminars	3	Optional
	Science and Technology Communication Through Media	3	Optional
	Structures of New Generation Materials	3	Optional
Surface Engineering	3	Optional	
Theory of Machines	3	Optional	
Thermal Turbomachinery and Combustion	3	Optional	
FOURTH SEMESTER			
Master's Thesis		12	Project
Specialisation in (Eng) Especialitat Biomèdica	Master's Thesis	12	Project
Specialisation in (Eng) Especialitat en Enginyeria Paperera i Gràfica	Master's Thesis	12	Project
Specialisation in (Eng) Muei Especialitat Tèxtil	Master's Thesis	12	Project
Specialisation in (Eng) No Especialitat	Master's Thesis	12	Project
Specialisation in Specialisation in Construction and Structures	Master's Thesis	12	Project
Specialisation in Specialisation in Electrical Engineering	Master's Thesis	12	Project
Specialisation in Specialisation in Fibrous Biomaterials	Master's Thesis	12	Project
Specialisation in Specialisation in Industrial Scheduling	Master's Thesis	12	Project
Specialisation in Specialisation in Mechanics	Master's Thesis	12	Project
Specialisation in Specialisation in Technical Textiles and Multifunctional Structures	Master's Thesis	12	Project
Specialisation in Specialisation in Thermal Energetics	Master's Thesis	12	Project