

Year of study	Computer-Aided Electrical Engineering	
	1 st Semester (October 1 – February 14)	2 nd Semester (February 22 – June 26)
I 60 ECTS	Technical chemistry - 4 English I - 0 Linear Algebra, Analytic and Differential Geometry - 5 Mathematical analysis I - 5 Computer architecture - 4 Computer aided graphics I (Technical drawing) - 4 Professional information techniques - 2 Technological methods and procedures - 4 History of science and technics - 2 Physical Education I – (1)	Mathematical analysis II - 4 Differential equations and mathematical statistics - 4 Computer programming and programming languages - 5 Elements of Mechanical Engineering I - 3 Physics - 5 English I - 2 Computer aided graphics II - 3 Fundamentals of electrotechnics - 4 Physical Education II – (1)
II 60 ECTS	Introduction to electrical engineering - 3 Numerical processing of signals - 4 English II - 0 Electromagnetic field theory - 7 Special mathematics - 4 Numerical methods for engineers - 4 Electronics I (Analogue Electronics) - 4 Data bases - 4	Electrotechnic materials - 5 Electronics II (Digital circuits) - 3 English II - 2 Theory of electric circuits I - 6 Management - 3 Applications in MATCAD and MATLAB - 4 Systems theory and automatic control - 4 Practice I (3 weeks=90 hours) - 3
III 60 ECTS	Electromechanical Converters - 6 Theory of electric circuits II - 6 Electric and electronic measurements - 4 Electric equipment I – 6 Static converters – 4 Optimization technique in electrical engineering - 4	Electric drives - 4 Industrial informatics - 3 Introduction to finite element method - 3 Practice - 3 Electric equipment II – 4 Quality and Reliability - 4 Systems with microprocessors - 4 Electro-technologies - 5
IV 60 ECTS	Analysis of nonlinear systems in electrical engineering - 3 Transducers, interfaces and data acquisition - 4 Electromagnetic compatibility - 5 Microcontrollers and programmable automatons - 5 Numerical modelling of the electromagnetic field - 3 Simulation of electric circuits – 3 CAD of electric installations – 4 Legislation in electrical engineering - 3	Monitoring and diagnosis of electric equipment – 4 Virtual instrumentation - 4 The lightning technique - 4 Practice for diploma project 10 Engineering industrial systems - 4 Electrothermics - 4

Year of study	Electrical Energy Systems	
	1 st Semester (October 1 – February 14)	2 nd Semester (February 22 – June 26)
I 60 ECTS	Materials technology Applied informatics Computer aided graphics I (Technical drawing) Communication Mathematical analysis I Linear Algebra, Analytic and Differential Geometry Technical chemistry History of science and technics	Computer aided graphics II Introduction to energetic engineering Mechanics Physics Differential equations and mathematical statistics Mathematical analysis II Modern foreign language Computer programming and programming languages Sports
II 60 ECTS	Strength of materials Electronics Thermotechnics Special mathematics Fundamentals of electrotechnics I Fluid mechanics Numerical methods for engineers	Fundamentals of electrotechnics II Modern foreign language Management General energetics and energy conversion Microcontrollers and programmable automatons Practice (3 weeks = 90 hours) Process IT Systems theory and automatic control Optimization techniques in energetics
III 60 ECTS	Equipment and electric installations I Electric devices and drives I Measuring electrics and electronics Heat and mass transfer Reliability Sensors and transducers Organization and regulation in energetics Electric equipment	Energy and environment Electrotechnic materials Electric devices and drives II Producing electric and thermal energy I Hydraulic devices Electric networks I Practice Data acquisition and monitoring of energy
IV 60 ECTS	Computer aided design of electroenergetic systems Electric networks II Electric protections I Producing electric and thermal energy II The electrical part of power stations and sub-stations Administration of Energetic processes Electro-security energy installations	Practice in preparing the diploma project Electroenergetic systems Electric energy quality Electric protections II High voltage technique Values analysis and engineering

Year of study	Electro-Mechanics	
	1 st Semester (October 1 – February 14)	2 nd Semester (February 22 – June 26)
I 60 ECTS	Technological methods and procedures - 4 Communication - 3 Technical design - 4 Computer programming - 3 Linear algebra and analytic geometry - 5 Mathematical analysis I - 5 Chemistry - 4 Modern language 1 - 1	Elements of mechanical engineering and strength of materials - 4 Modern language 2 - 2 Mathematical analysis II - 5 Special mathematics - 5 Programming Languages - 5 Accountancy and economical administration - 3 Applications in Informatics - 3 Physics - 3
II 60 ECTS	Hydro-pneumatic machines and installations - 4 Computer aided graphics I - 4 Machine parts and mechanisms - 5 Electrotechnic materials - 5 Modern language 3 - 2 Electric circuit theory - 5 Analogue Electronics - 5	Electric and electronic measurements - 4 Computer aided graphics II - 3 Electromagnetic field theory - 5 Modern language 4 - 2 Practice (2 weeks = 60 hours) - 3 Digital electronics - 5 Systems theory and automatic control - 4 Data bases - 4
III 60 ECTS	Electric equipment - 5 Lifting and transporting installations - 5 Transducers, interfaces and data acquisition - 5 Static Converters I - 5 Electromechanical converters I - 6 Electrical and electronic equipment of autovehicles - 4	Producing, transporting and distributing electric energy - 3 Safety Equipment and Systems - 4 Hydraulic and Pneumatic Drives - 5 Static Converters II - 5 Practice (3 weeks = 90 hours) - 4 Electromechanical converters II - 5 Climatization Installations - 4
IV 60 ECTS	Systems with microprocessors - 5 Modeling and Simulation - 3 Electrical micro-machines - 4 Manufacturing lines and robots - 5 Management - 2 Electric drives I - 6 Unconventional technologies and equipment - 5	Electric drives II - 6 Digital equipment for electromechanical installations - 6 Servosystems - 6 Practice for elaborating the diploma project (2 weeks=60 hours) - 6 Electric traction - 6

Year of study	Industrial Informatics	
	1 st Semester (October 1 – February 14)	2 nd Semester (February 22 – June 26)
I 60 ECTS	Physical Education 1 Communication Chemistry Technological methods and procedures Technical design Computer programming Linear algebra and analytic geometry Mathematical analysis I Modern language 1	Accountancy and economical administration Mathematical analysis II Modern language 2 Applied informatics Physics The language C with applications in numerical analysis Special mathematics Mechanics and strength of materials Physical Education 2
II 60 ECTS	Electrotechnic materials Data bases Computer aided graphics I Fundamentals of electrotechnics I Machine parts and mechanisms Modern language 3 Hydro-pneumatic machines and installations Sports	Measuring electrics and electronics Analogue Electronics Systems theory and automatic control Computer aided graphics II Practice (2 weeks = 60 hours) Subjects orientated programming Modern language 4 Fundamentals of electrotechnics II Sports
III 60 ECTS	Digital electronics Electric devices I Static Converters I Instrumentation Computer-aided Design and manufacturing CAD / CAM Electric equipment	Practice Sensors and sensorial systems Hydro-pneumatic drives and automations Information Systems in Electro-energetics Static Converters II Electric devices II Security Equipment and Installations
IV 60 ECTS	Modeling and Simulation Management Electrical micro-machines Robots Acquisition systems and microprocessors Electromechanical drives I Flexible Production Lines Computer aided control processes	Practice Digital systems and control Electromechanical drives II Elements of Robots Operating Servosystems

Year of study	Environment Engineering in Industry	
	1 st Semester (October 1 – February 14)	2 nd Semester (February 22 – June 26)
I 60 ECTS	Technological methods and procedures Chemistry Communication Computer programming Linear algebra and analytic geometry Sports Foreign language 1 Technical design Mathematical analysis I	Applied informatics Sports Mathematical analysis II Special mathematics Elements of mechanical engineering and strength of materials Physics Foreign language 2 Programming Languages Accountancy and economical administration
II 60 ECTS	Databases Computer aided graphics I Modern language 3 Electrotechnics I Hydraulic and renewable energy Machine parts and mechanisms Science and engineering of materials Sports	Modern language 4 Practice (2 weeks = 60 hours) Automation for manufacturing processes and systems Environmental Management I (Air pollution and emissions management) Electronics I Computer aided graphics II Measuring electrics and electronics Electrotechnics II Sports
III 60 ECTS	Transducers, interfaces and data acquisition Electronics II Electric devices I Static Converters I Water engineering Computer-aided Design and manufacturing CAD / CAM	Environmental Management I (Air pollution and emissions management) Electric devices II Static Converters II Environmental Management II (Sustainable Development) Practice (3 weeks = 90 hours) Hydro-pneumatic drives and automations Climatization Installations
IV 60 ECTS	Management Systems of Monitoring the Quality of the Environment Communications Solid waste management Hydraulic and renewable energy Energy quality and electromagnetic compatibility Electromechanical drives I Modelling and simulation of the environment	Wind and solar energy engineering Practice for elaborating the diploma project (2 weeks=60 hours) Electromechanical drives II Digital equipment for electromechanical installations Environmental Quality Technologies and Equipment

Year of study	Aerospace Equipment	
	1 st Semester (October 1 – February 14)	2 nd Semester (February 22 – June 26)
I 60 ECTS	Materials technology Introduction to aerospace engineering Technical chemistry Mathematical analysis I Linear Algebra, Analytic and Differential Geometry Computer aided graphics I Professional information techniques Introduction to computers History of science and technics Sports	Fundamentals of electrotechnics I Modern foreign language Mathematical analysis II Differential equations and mathematical statistics Computer programming and programming languages Computer aided graphics II Physics Elements of Mechanical Engineering Sports
II 60 ECTS	Special mathematics Elements of Mechanical Engineering Fluid mechanics Electronics (Analogue Electronics) Fundamentals of electrotechnics II Numerical methods	Aircraft mechanics I (Construction of aerospace structures) Precision mechanics and mechanisms for onboard aircraft equipment Technological practice (3 weeks=90 hours) Management Fundamentals of aerodynamics Theory of systems and self-actuating adjustment Modern foreign language Technical thermodynamics
III 60 ECTS	Onboard aircraft hydro-pneumatic equipment and systems I Onboard equipment and navigation I Aircraft mechanics II (Dynamics of flight) Fundamentals of aerospace propulsion Gyroscopic equipment and systems I Digital processing onboard aircraft equipment	Practical stage for flight and aircraft maintenance Stability and command in flight theory Theory and construction of onboard aircraft devices Gyroscopic equipment and systems II Onboard equipment and navigation II Fundamentals of radio navigation Onboard aircraft hydro-pneumatic equipment and systems II
IV 60 ECTS	Aircraft automation I Systems for flight management I Onboard aircraft electric installations I Onboard aircraft computers Aerospace navigation systems	Aerospace guidance systems Aircraft automation II Onboard aircraft electric installations II Undergraduate diploma project Systems for flight management II