ELECTRICAL ENGINEERING
BACHELOR

Ingénierie des systèmes intelligents communicants et énergies

SEMESTER 1 — 30 ECTS

INTERCULTURAL EDUCATION 1
Foreign Languages 1	4	48 h
Intercultural Management 1	2	24 h

ENGLISH 1
English 1	3	36 h

BASIC TEACHINGS 1
Algebra 1	2	24 h
Analysis 1	2	24 h
Introduction to Electronics and Energetics Engineering	2	24 h

COMPUTER ENGINEERING 1
VBA Programming in Excel	2	24 h
Advanced VBA Programming	2	24 h
Command Line Interface	2	24 h

ELECTRICAL ENGINEERING 1A
Electrical Circuits	3	28 h
Practical Electrical Circuits	3	24 h

ELECTRICAL ENGINEERING 1B
Electrostatics and Magnetostatics	2	36 h
Industrial Information Technology	1	20 h

SEMESTER 2 — 30 ECTS

INTERCULTURAL EDUCATION 2
Foreign Languages 2	4	48 h
Intercultural Management 2	2	24 h

ENGLISH 2
English 2	3	36 h

BASIC TEACHINGS 2
Analysis 2	2	24 h
Algebra 2	2	24 h
Measurement, Instrumentation, Sensors	2	18 h

COMPUTER ENGINEERING 2
Programming in C	2	24 h
Introduction to Digital Systems	4	48 h

ELECTRICAL ENGINEERING 2
Theory of Oscillations and Electrical Circuits	3	32 h
Fundamentals of Electronics	3	42 h

APPLIED PHYSICS
Geometric Optics and Thermodynamics	3	40 h

SEMESTER 3 — 30 ECTS

FOREIGN LANGUAGES AND INTERCULTURAL EDUCATION 3
Foreign Languages 3	4	4 SWS
English 3	2	2 SWS
Intercultural Management 3	2	2 SWS

MATHEMATICS
Applied Mathematics	4	4 SWS
Statistics 1	2	2 SWS

COMMUNICATION TECHNOLOGY
Programming of Microcontroller Systems	2	2 SWS
Fundamentals of Transmission Technology	3	3 SWS
Microcontrollers and Applications 1	3	3 SWS

ELECTRONICS AND ENERGY
Electronic Devices and Circuits	4	4 SWS
Renewable Energies	4	4 SWS

SEMESTER 4 — 32 ECTS
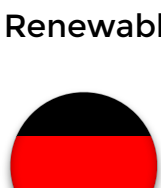
FOREIGN LANGUAGES AND INTERCULTURAL EDUCATION 4
Foreign Languages 4	4	4 SWS
English 4	2	2 SWS
Intercultural Management 4	2	2 SWS

ELECTRICAL ENERGY SYSTEMS
Statistics 2	2	2 SWS
Electrical Energy Systems	6	6 SWS

EMBEDDED SYSTEMS
Programming in C++	4	4 SWS
Microcontrollers and Applications 2	4	4 SWS

ELECTRONIC SYSTEMS
Circuitry in Electronic Systems	4	4 SWS
Measurement and Instrumentation	4	4 SWS

SEMESTER 5 — 30 ECTS
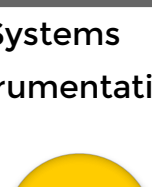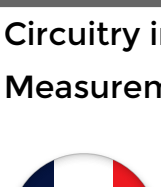
FOREIGN LANGUAGES 5
Foreign Languages 5	4	48 h
English 5	2	24 h

COMPUTER SCIENCE AND VIRTUAL INSTRUMENTATION
Mobile Device Programming	3	50 h
Labview Programming	1,5	21 h
Practical Work on Virtual Instrumentation	1,5	24 h

COMPLEX SYSTEMS
Automatic	3	33 h
Case Study	2	12 h
Digital Filtering	2	23 h
Control of Digital Systems	2	22 h

NEW ENERGIES
New Energies	3	30 h

PROJECT MANAGEMENT
Project Management	6	78 h

SEMESTER 6 — 28 ECTS
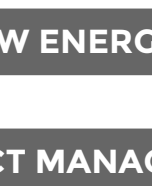
ELECTRICAL POWER ENGINEERING AND FEEDBACK... TECHNOLOGY
System Theory and Feedback Control Technology	5	4 SWS
Photovoltaics	3	2 SWS

SYSTEMS ENGINEERING
Industrial Control Technology	2	2 SWS
Practical Course in Systems Engineering	6	6 SWS

DEGREE THESIS
Bachelor Thesis	12	12 Wo.

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