

Semester 5

Language and human Sciences - 5 ECTS - 84h

English
Second language (optional)
Society and environmental responsibility
Business organization
Accountancy
Sport activities

Automation - 6 ECTS - 80 h

Signals and Systems: from continuous to digital
Analysis of continuous linear systems
Introduction to application domains

Discrete and distributed systems - 6 ECTS - 90 h

Discrete digital systems
Discrete event systems
Distributed systems

Embedded system - 6 ECTS - 80 h

Language C
Software tools of automatic control engineer
On-board computers

Electrotechnic / Electronic - ECTS 4 - 60 hours

Electrotechnic
Electronic 1

Energetics and Mechanics - ECTS 3 - 51 hours

System mechanics 1-Static
System mechanics 4- Dynamic
Mechanism design

Semester 6

Languages and human sciences 2 - 5 ECTS - 73,5h

English
Second language (optional)
Personal communication technics
Engineering culture
Health and security at work
Training by Physical Activites and Sport

Innovation and Creativity - 3 ECTS - 42h

Creativity and Innovation Project

Numerical and continuous systems - 4 ECTS - 60 h

Control of continuous-time systems
Advanced digital module

Identification - 4 ECTS - 60 h

Modeling and Identification
Advanced digital control

Industrial computing and human factors 3 ECTS - 60 h

Human factors & biomechanics
Real Time

Industrial computing for manufacturing industries 4 ECTS - 60 h

Industrial controlers
SCADA

Industry and Robotics - 4 ECTS - 60h

Techno & instrumentation
Industrial robotics

IOT for manufacturing systems - 3 ECTS - 60 h

Industrial IOT (Internet Of Things)
Java

Semester 7

Internship - 30 ECTS - 700h

Semester 8

Languages and Human Sciences 3 - 5 ECTS - 94,5h

English
Second language (optional)
Training by Physical Activities and Sport
Group Communication technics
Intellectual Property
Entrepreneurship
Humans Resources Management

Robotics and Transportation applications

3 ECTS - 40 h

Problem-based learning « Transportation »
Problem-based learning «Robotics»

Advanced Automation - 5 ECTS - 90 h

Soft sensors and estimation
Diagnosis and reconfiguration
Espace d'état et Commande robuste

Advanced Industrial Informatics - 4 ECTS - 70 h

Multitasking Application Development
Design validation & Hardware in the loop

Human based automation - 5 ECTS - 80 h

Human Centered Automation
Perception of the surroundings
Vision, and image processing

Intelligent manufacturing - 4 ECTS - 60 h

Advanced manufacturing
Factory X.0

Transportation - 4 ECTS - 60 h

Automatic control and Automotive
Advanced powertrain control

Semester 9

Industrially based group project - 6 ECTS - 120h

Industrially based group project

Foreign languages and human sciences 4 4 ECTS - 63h

English
Second language (optional)
Labour law
Project management
Training by Physical Activities and Sports

Elective courses - 3 ECTS - 42h

Elective course n°1
Elective course n°2

Total Common Basis 3A - 13 ECTS - 225h

Artificial Intelligence for Automation 4 ECTS - 60 hours

Artificial Intelligence for Automation
Control of complex Systems

Integrative projects - 6 ECTS - 120 hours

Integrative project « Manufacturing system »
Integrative project « Transportation »

Robotics and Transportation 4 ECTS - 60 hours

Autonomous vehicle & Simulation
Mobile robotics
Service robotics, collaborative robotics, cobot,
exoskeleton

Smart Buildings and E-Health - 3 ECTS - 45 Hours

Buildings
E-Health

Semester 10

Final Internship - 30 ECTS - 700h