

Curriculum

SE – Green Mechatronics

Bachelor | Full-time | englisch

Semester 1	ECTS
Mathematics for Science 1	5
Experimental Physics 1: Motion	5
Circuit Analysis Methods	5
Sustainability concepts and studying successfully	5
Starting Project	5
Computer Science	5
Sum	30

Semester 2	ECTS
Mathematics for Science 2	5
Experimental Physics 2: Electrodynamics	5
Semiconductors and Circuits	5
Circular Economy and Waste Materials	5
Embedded Systems Programming	5
Signals and Systems 1	5
Sum	30

Semester 3	ECTS
Measurement Systems	5
AC Analysis	5
Signals and Systems 2:	5
Lifecycle Assessment and Eco Design	5
Embedded Systems Applications	5
Mechanical Systems	5
Sum	30

Semester 4	ECTS
Control Engineering	5
Industrial Automation	5
Dynamics and Simulation	5
Sustainable Materials and Smart Technologies	5

Elective Topic 1 (choose 1)	5
a Device Development (e)	
b Designing Experiments	
c Mechanics of Materials (m)	
d Embedded Communication Systems	
e Energy generation and modern networks	
Project Workshop	
EDU Project + Projectmanagement	5
Sum	30

Semester 5	ECTS
FPGA Systems	5
Elective Topic 2 (choose 1)	5
a Automotive Hybrids (m)	
b Smart Automation (m)	
c IIoT and Python Programming	
d ROS 2 for Industrial Robots (m)	
e Integrated Circuits Basics (e)	
f Computer Aided Systems Engineering	
g Power Electronics, Applications (e)	
Elective Topic 3	5
Open Choice Module 3	
Renewable Energy Systems	5
Capstone Projekt:	
Bachelor Project + Science Communication	10
Sum	30

Semester 6	ECTS
Industrial Training: Internship + Seminar	15
Skills for International Collaborations	5
Completion of Bachelor Degree: Bachelor Thesis, Seminar, Exam	10
Sum	30

Total Sum	180
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Green Modules = study-related sustainability topics

Elective Topic 1 and 2: Choose 1 out of proposed courses

Elective Topic 3: Open Choice Module = Choose from any internal or external courses

ECTS: European Credit Transfer System