




SE – GREEN ELECTRONICS

BACHELOR | FULL-TIME | ENGLISH





 **Location:** Campus Villach
Europastraße 4, 9524 Villach

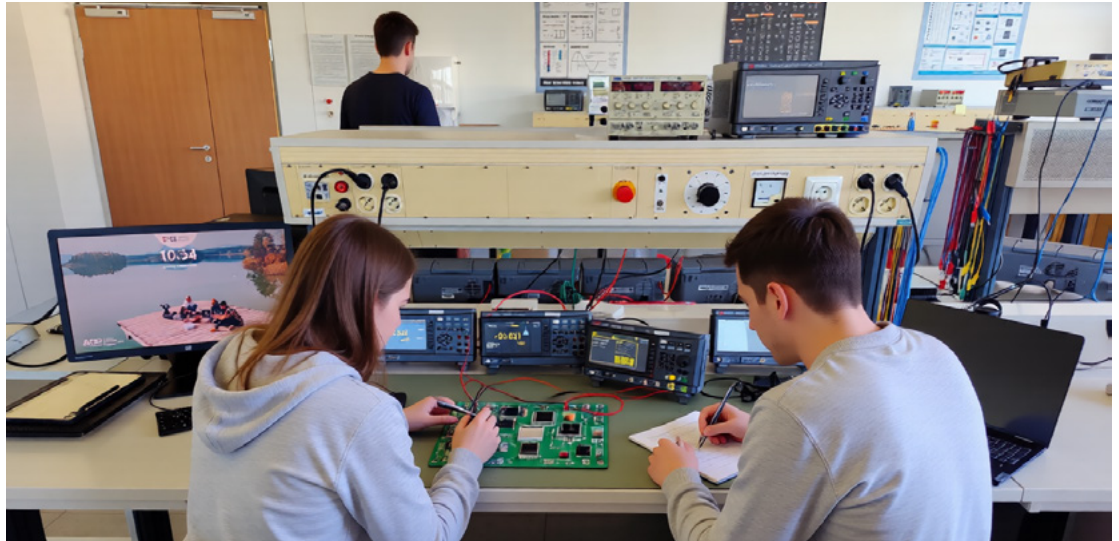
 **Duration:** 6 Semesters

 **Schedule:**
Mon until Fri full-time, partly on Saturdays

 **ECTS-Credits:** 180

 **Study places:** 12

 **Academic Degree:**
Bachelor of Science in Engineering (BSc)



UNDERSTANDING TECHNOLOGY. DEVELOPING SYSTEMS. SHAPING THE FUTURE.

Electronics, energy efficiency, and sustainability are core elements of the Green Electronics program and form the foundation of tomorrow's technologies. You will gain the knowledge and skills to design, analyze, and improve electronic systems both technically and ecologically. Through practical projects and modern laboratories, you will apply your knowledge directly and develop solutions that integrate theory and practice.

STUDY CONTENT

Green Electronics combines in-depth electronics knowledge with creative engineering thinking. You will learn how circuits, sensors, and embedded systems are used to create energy-efficient devices and applications, and how technology can be used sensibly and sustainably.

In modules such as Circular Economy, Life Cycle Assessment, and Eco-Design, you will learn how electronics are developed responsibly from the outset. In the laboratory, you can experiment and implement your own ideas in projects. Elective modules allow you to tailor your studies to your individual interests and explore topics that particularly interest you, such as how electronics are developed in an environmentally friendly way or how modern embedded systems work.

PROFESSION AND CAREER

With a degree in Green Electronics, you will actively shape the future of technology. You will work on ideas that save energy, make devices smarter, or conserve resources.

Whether at technology companies, in the energy industry, in research projects, or in start-ups—your expertise will be needed everywhere when it comes to combining technology and sustainability.

Thanks to the high practical component of the program, you can quickly take on responsibility and apply your knowledge directly in your professional life. Or you can deepen your knowledge in a further master's program, depending on your personal goals.

CURRICULUM

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
Digital Circuits Design	5
Sum	30

Semester 4	ECTS
Control Engineering	5
Analog Circuits Design	5
Power Electronics	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	
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

SCHEDULE

Start: 1 October

Information Events at:
www.fh-kaernten.at/fhday

Study guidance:
info@fh-kaernten.at | +43 5 90500 7700

COSTS

Tuition fees per semester:

€ 363,36 for EU citizens,
€ 500 for non-EU countries

Student Union Fee: about € 24, annual adjustment

CONTACT

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