

## *Bachelor degree programme*

# ELECTRONICS AND COMPUTER ENGINEERING

*ELECTRONICS > INFORMATICS > INTEGRATED CIRCUITS > MICROCONTROLLERS > PROGRAMMING > CONTROL ENGINEERING > SIGNAL PROCESSING > TELECOMMUNICATIONS > AUTOMATION > MOBILITY*

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**T**his degree programme offers students some of the most advanced training in Austria. Throughout the course students gain hands-on experience in the use of state-of-the-art technologies. They acquire a sound basic and practical knowledge of the subject area, and undertake many exciting projects. The curriculum includes laboratory practicals and project work from the first semester onwards. The programme is taught in small, supervised groups, and in close cooperation with business and industry. The curriculum focuses on electronic systems and how to programme them.

A practical approach is taken to learning based on current developments including driverless cars and Industry 4.0. In addition to application-oriented technical knowledge, our students also learn methodology and acquire social skills. Courses in business, law, management and languages ensure our students are ideally equipped with the skills demanded by industry.

Austrian pupils graduating from technical secondary schools (HTL) with relevant subject specialisms may join the degree programme in the second semester, after having completed their compulsory military or civil service. We would be delighted to provide more information and details about this option.

*“The degree programme provides us students with a broad range of knowledge, enabling us to find work in the various fields of the electronics industry. The numerous exercises completed during the course provide an introduction to some of the aspects of our future professional life.”*

Christoph Müller, Student

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### FACTS

- Bachelor of Science in Engineering (BSc)
- Full-time
- 6 semesters / 180 ECTS
- 20 places per year
- Language of instruction: German
- Head of Degree Programme: Priv.-Doz. DI Dr. Christian Vogel
- FH JOANNEUM Graz

[www.fh-joanneum.at/ece](http://www.fh-joanneum.at/ece)

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## CAREER PROSPECTS

After completing the bachelor degree programme, our graduates can undertake a master degree programme, e.g. in Advanced Electronic Engineering, or else start out on their professional career. The interplay between electronics and computer sciences is the key technology of the future. This opens up many careers for our graduates with attractive local and international employers. Fields in which our graduates prove their worth include the electronics and automotive industries, telecommunications, automation and medical technologies.

*“The main reasons for choosing this degree programme were the chance to obtain practical training as well as the modern labs. The combination of study and practical work lead to some interesting projects with a personal level of supervision at FH JOANNEUM.”*

Bertram Winter, BSc, Graduate, currently studying on the master degree programme in Advanced Electronic Engineering

CURRICULUM: 180 ECTS (30 ECTS per semester)

1st semester	2nd semester	3rd semester	4th semester		5th semester		6th semester
Applied Computer Science 1 10 ECTS	Digital Systems 5 ECTS	Embedded Computing 8 ECTS	Industrial Automation 1 7 ECTS	Energy and Mobility 1 7 ECTS	Bachelor's Thesis 1 15 ECTS		Bachelor's Thesis 2 10 ECTS
Fundamentals of Electrical Engineering 10 ECTS	Applied Computer Science 2 7 ECTS	Power Electronics, Drives and Dynamic Control 5 ECTS	Object-Oriented Software Design 5 ECTS		Industrial Automation 2 7 ECTS		Internship 20 ECTS
Fundamentals of Science 1 7 ECTS	Power and AC Engineering 8 ECTS	Semiconductor Engineering 5 ECTS	Communication Technology 5 ECTS				
Technology Management 1 3 ECTS	Fundamentals of Science 2 7 ECTS	Signals and Systems 8 ECTS	Design of Electronic Devices 5 ECTS		Energy and Mobility 2 7 ECTS		
	Technology Management 2 4 ECTS	Technology Management 3 4 ECTS	Analog Signal Processing 5 ECTS		Model-Based Design 4 ECTS		
		Technology Management 4 3 ECTS	Technology Management 5 4 ECTS				
Electrical Engineering – Electronics (25%)	Computer Engineering – Embedded Software (24%)	Mathematics – Physics (8%)	Technology Management (10%)		Electives (8%)		Internship (25%)



Courses with strong focus on lab exercises