Wrocław University of Science and Technology

Electronic and Computer Engineering

Faculty of Electronics, Photonics and Microsystems

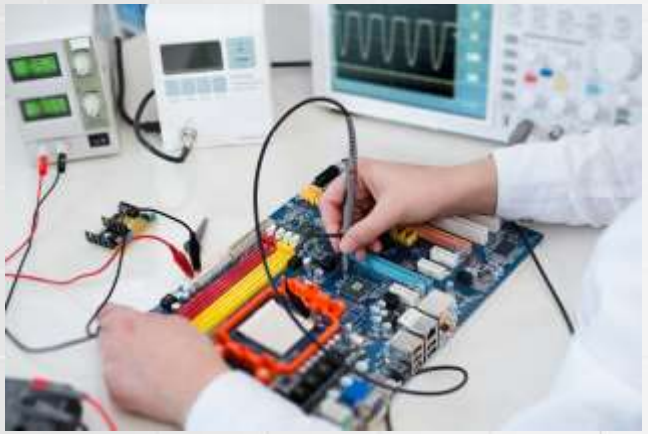
Facts about the course

- **Electronic and Computer Engineering (EAC)** – B.Sc. course conducted entirely in English:
  - 7 semesters
  - Between **40-70** students from all around the world each year
  - EAC is an **unique** combination of most **important** and fascinating areas of electronics, robotics and programming,
  - Delivers up-to-date knowledge necessary in today's **IoT** and **Industry 4.0** world
  - Possibility to **continue your studies** in English at our Master course: Advanced Applied Electronics

Focus

- Seven semester engineering studies focused on **practical knowledge** in:
  - **Computer Science** (programming, AI, machine learning)
  - **Electronics** (analog & digital, DSP, optoelectronics)
  - **Robotics** (designing of robotic systems)
  - **Automation** (intelligent systems, PLC, building management)
  - **Telecommunications** (design and testing of telecom systems)





Job opportunities

- Excellent job prospects on the local market and across Europe
- Examples of employers of our graduates:

BECKER AVIONICS quality you can trust since 1956
Imagination
DIEHL Controls
MT-Silesia
Whirlpool SENSING THE DIFFERENCE
ASML
DOLBY
NOKIA
DeLaval
tieto EVRY
CREDIT SUISSE
WABCO

Plan of studies

h\sem.	I	II	III	IV	V	VI	VII
28		Electronics 33200 ECEA00003	Electronic components and sensors 31200 E ECEA00016				
27				Electronic circuits 20220 E ECEA00009			
26							
25							
24							
23							
22			Electronic Technology 20200 ECEA00006				
21							
20		Object oriented programming 20200 E ECEA17004		Programming Systems and Environments 20200 ECEA00010	Optonal course 1 15h ECEA19001BK	Optional course 2 15h ECEA00002BK	Final project 12h ECEA17100 Intership ECEP16001Q
19	Metrology 11200 ECEA00001		Scienific and engineering programming 20200 ECEA00007				
18							
17							
16		Math - Analysis 22000 E MAT001510	Python 10100	Fundamentals of Telecommunication 20200 ECEA00021			
15	Introduction to Programming 20300 ECEA00002						
14							
13							
12		Math for Electronics 22000 MAT001512	Physics for electronics 22000 ECEA00014	Introduction to Microcontrollers 21300 E ECEA00022			Diploma Seminar 00002 ECEA17105
11							
10	Math - Algebra 22000 E MAT001654				Computer Networks 20200 ECEA00101		Optional course 3 6h ECEA00003BK
9		Physics 20200 E FZP001127	Foreign language 00400 JZL100928			Electroacoustics 20200 ECEA00103	
8							
7				Introduction to Automation 20100 ECEA00019			
6	Math - Analysis 22000 E MAT001653		Sport 2h WFW03000		Microcontrollers 20210 E ECEA19202		Copyright 20000 PRZ000339
5		Foreign language 00400 JZL100927		Introduction to Robotics 20100 ECEA00020		Team and preengineering project 00030 ECEA00106	
4							
3							
2	Philosophy 20000 FLEA100		Sport 2h WFW03000				Entrepreneurship 20000 ZMZ001048
1							

Optional courses

5th semester:

- Advanced Topics and Robotics [20021]
- Digital Signal Processing [20210]
- Artificial Intelligence and Computer Vision [20210]
- Optoelectronics [20021]
- Wireless Systems [30200]

6th semester

- Control Systems Engineering [20210]
- Embedded Systems [20210]
- Real Time Operating Systems [20030]
- Lasers, Fibers and Applications [20201]
- Telecommunication Systems [20201]

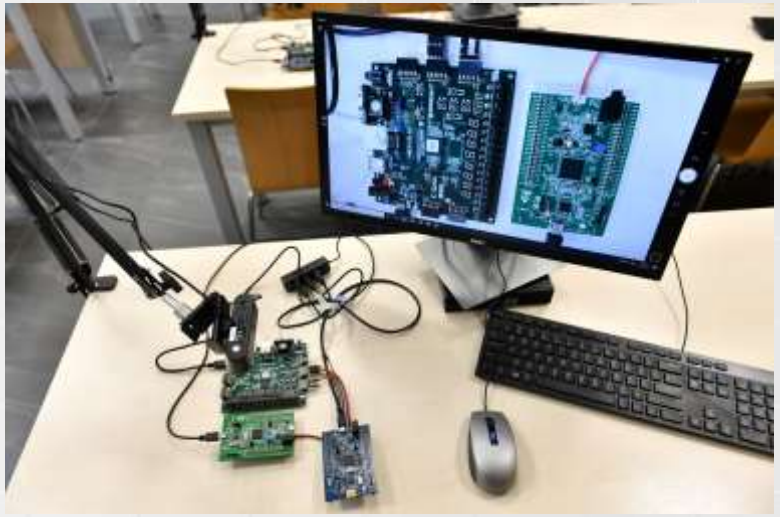
7th semester

- Practical Electronics [20100]
- Medical Electronics [20001]
- Fibre Optic Technology [20100]
- Electronic of Renewable Energy Sources [20001]
- Satellite Communication Network [20001]
- Virtualization and Cloud Computing [10200]
- Machine Learning [10020]
- Selected Topics in Artificial Intelligence [10200]
- Hybrid Telecommunication Networks [10101]
- Ultrasonic Technology [10200]
- Speech communication [10200]

You will choose between 2-3 optional courses on each semester

Laboratories

- Our students have access to laboratories equipped with high-end measurement & testing instrumentation
- You can gain ands-on experience with the most latest generations of microcontrollers and other electronic components



Examples of Diploma Thesis topics

- Application of Deep Learning for face recognition
- Balanced photodetector for advanced optical systems
- Numerical simulation of gyrotronic gun
- Non-contact measurement of small distances
- Identification of the genre of music using a statistical classifier
- Control System for Selective Laser Sintering Laboratory Setup