Budapest University of Technology and Economics
Faculty of Electrical Engineering and Informatics

BSc degree program in Computer Engineering

7 semesters, 210 credits
valid from 2022 Fall

1st semester — 33 credits — 31 h/week

- Calculus 1 for Informaticians 4/2/0/e/6 BMETE90AX21
- Basics of Physics 1/1/0/m/2 BMETE11AX52
- Introduction to the Theory of Computing 1 4/2/0/e/6 BMEVISZAA06
- Digital Design 2/1/1/e/5 BMEVIMIAA03
- Basics of Programming 1 2/2/2/m/7 BMEVIEEAA00
- Basics of Electrical and Electronic Systems 2/0/1/e/3 BMEVIETAA00
- English for Electrical Engineering and Informatics 0/4/0/m/4 BMEGT60Z950
- University Experience 1. (not mandatory) 0/0/2/s/0 BMEVDHAA0I1

2nd semester — 31 credits — 26 h/week

- Calculus 2 for Informaticians 4/2/0/e/6 BMETE90AX57
- Physics i 2/2/0/e/4 BMETE11AX53
- Introduction to the Theory of Computing 2 2/2/0/e/5 BMEVISZAA04
- Computer Architectures 3/1/0/e/5 BMEVIHIAA03
- Programming 2 2/0/2/m/6 BMEVIIIAA03
- Theory of Algorithms 2/2/0/m/5 BMEVISZAA08
- University Experience 2. (not mandatory) 0/0/2/s/0 BMEVIDHAAI2

3rd semester — 30 credits — 26 h/week

- Probability Theory and Statistics 4/2/0/e/6 BMEVISZAB04
- Coding Technology 3/1/0/e/4 BMEVIHIAB04
- Operating Systems 3/0/1/m/5 BMEVIMIAB03
- Databases 2/1/1/e/5 BMEVITMAB04
- Programming 3 2/0/2/m/5 BMEVIIIAB00
- Software Engineering 3/0/1/e/5 BMEVIMIAB04

4th semester — 27 credits — 22 h/week

- Communication Networks 4/0/2/e/7 BMEVITMAB06
- Software Techniques 2/0/2/e/5 BMEVIAUAB00
- Software Project Laboratory 0/0/2/m/4 BMEVIIIAB11
- Computer Graphics 3/0/1/e/5 BMEVIIIAB12
- Management and Business Economics 4/0/0/m/4 BMEGT20A001
- Business Law 2/0/0/m/2 BMEGT55A001

5th semester — 30 credits — 24 h/week

- Artificial Intelligence 3/0/1/e/5 BMEVIMIAC16
- 2x Professional subject 2/0/2/m/5 BMEVI******
- 3x Study specialization subject 2/2/0/e/5

STUDY SPECIALIZATION
Specialization Enrollment conditions:
- at least 90 credits are completed
- ALL courses of the first and second semesters are completed
- at least 20 credits are completed from the third semester

List of the professional subjects
- VIHIAD00 Quantum Computing and its Applications
- VIIIAD01 Image Processing
- VITMAD02 Speech Information Systems
- VIAUAD02 Mobile- and Web-based Software
- VIHVAD00 System Theory
- VIEEAD00 Technology of IT Devices
- VITMAD01 Information Systems Management

5 professional subjects must be completed. Pre-

6th semester — 31 credits — 25 h/week

- IT security 3/0/1/e/5 BMEVIHIAC07
- 2x Professional subject 2/0/2/m/5 BMEVI******
- Study specialization laboratory 0/0/2/m/3
- Project Laboratory 0/0/3/m/5 BMEVI**AL04
- Free elective 4/0/0/e/4
- Micro- and Macroeconomics 4/0/0/e/4 BMEGT30A001

Summer internship 8 weeks/s/0 BMEVI**AS00

7th semester — 28 credits — 20 h/week

- Professional subject 2/0/2/m/5 BMEVI******
- BSc thesis project 0/8/0/m/15 BMEVI**AT02
- 3x Free elective 2/0/0/m/2
- Human & economic science elective 2/0/0/m/2 BMEGT*****

THESIS DEFENCE
Organized in the last exam period in front of a committee. Includes presentation of thesis work, discussions and oral exam in one specialization subjects. Written comprehensive final exam is required in advance.

DISCLAIMER:
this document is for information purposes only and has no contractual value. Its content is subject to change without notice.

SOFTWARE ENGINEERING

- Data-driven Systems 2/2/0/e/5 BMEVIAUAC15
- Object-Oriented Software Design 2/2/0/e/5 BMEVIIIAC09
- Automated Software Engineering 2/2/0/e/5 BMEVIMIAC20
- Data-Driven Softw. Development Lab 0/0/3/m/5 BMEVIAUAC16

INFOCOMMUNICATIONS

- Dev. of Cloud Native Network Functions 2/2/0/e/5 BMEVITMAC12
- Network and Traffic Management 2/2/0/e/5 BMEVIHIAC11
- Mobile Comm. Networks 2/2/0/e/5 BMEVIHIAC10
- Cloud Native Technologies Lab. 0/0/3/m/5 BMEVITMAC13

THESIS PROJECT enrollment conditions
- at least 174 credits are completed (up to 10 credits free electives)
- All courses of the first four semesters are completed
- all specialization subjects are completed (up to the 6th semester)
- Project laboratory is completed

Fundamentals in sciences
Core engineering knowledge
Specialization studies
Economics & humanities
Free electives

Semester structure:

- registration (1w)
- classes (14w)
  - lectures
  - classroom practices
  - lab. practices
  - quizzes
  - midterms
  - homework assignments
- resits (1w)
  - midterm retakes
  - late homework submission
  - early exams
  - RESTRICTIONS APPLY
- exams (20d)
  - RESTRICTIONS APPLY

Legend

Course title 3/1/1/m/5
3x BMEVIAUAC16 CourseCode

- **weekly contact hours** (lectures/ classroom practice/lab. practice)
- **credit value** according to ECTS – 1 credit represents 30 work hours
- **number of similar subjects**
- **requirement** m: mid-semester mark e: exam s: signature
- **subject code** (as in the Neptun system)

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