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

MSc degree program in Computer Engineering

4 semesters, 120 credits,
starts: Spring, valid from 2016

1ts semester spring 29 credits 24 h/week

- System optimization 4/0/0/e/4 BMEVISZMA02
- Formal methods 3/0/0/m/4 BMEVIMIMA07
- Main specialization subject 2/1/0/e/4 3x
- Secondary specialization subject 2/1/0/e/4
- Project laboratory 1 0/0/5/m/5 BMEVI**ML00

DISCLAIMER: this roadmap is for information purposes only, without contractual value. Content is subject to change without notice.
MINIMAL NUMBER OF APPLICANTS REQUIRED

2nd semester fall 33 credits 27 h/week

- Applied algebra and mathematical logic 4/0/0/e/4 BMETE90MX57
- Information theory 3/0/0/m/4 BMEVISZMA03
- Languages and automata 3/0/0/m/4 BMEVISZMA04
- Main specialization subject 2/1/0/e/4 2x
- Main specialization laboratory 0/0/3/m/4
- Secondary specialization subject 2/1/0/e/4
- Project laboratory 2 0/0/5/m/5 BMEVI**ML01

3rd semester spring 30 credits 22 h/week

- Free elective 2/0/0/m/2 3x
- Main specialization laboratory 0/0/3/m/4
- Secondary specialization subject 2/1/0/e/4
- Secondary specialization lab. 0/0/3/m/4
- MSc DiplomaThesis Design 1 0/5/0/m/10 BMEVI**MT00
- Mandatory human & economic science elective 2/0/0/m/2 BMEGT*****
- Free elective (for Smart City secondary specialization) 2/0/0/m/2

4th semester fall 28 credits 18 h/week

- Engineering management 4/0/0/e/4 BMEVITMMB03
- Mandatory human & economic science elective 2/0/0/m/2 2x BMEGT*****
- MSc DiplomaThesis Design 2 0/10/0/m/20 BMEVI**MT01

THESIS DEFENSE SESSION
Organized during the last exam period. Includes presentation of thesis work, discussion, oral exam in two subjects. Conditions for admission apply.

Semester structure:

- registration (1 week)
- classes (14 weeks)
  - lectures
  - classroom practices
  - lab. practices
  - quizzes
  - midterms
  - homework assignments
- resits (1 week)
  - retakes of midterm(s)
  - late homework submission
  - early exams

  RESTRICTIONS APPLY
- exams (20 days) RESTRICTIONS APPLY

Main specialization

APPLIED INFORMATICS

- SW development methods & paradigms 2/1/0/e/4 BMEVIAUMA00
- Distributed systems & domain-specific modeling 2/1/0/e/4 BMEVIAUMA01
- Service oriented system integration 2/1/0/e/4 BMEVIIIMA04
- Business intelligence 2/1/0/e/4 BMEVIAUMA02
- Software and systems verification 2/1/0/e/4 BMEVIMIMA01
- Distributed systems laboratory 0/0/3/m/4 BMEVIAUMA03
- Business intelligence laboratory 0/0/3/m/4 BMEVIAUMB00

INTERNET ARCHITECTURES AND SERVICES

- Internet ecosystem and its evolution 2/1/0/e/4 BMEVITMMA00
- Agile network service development 2/1/0/e/4 BMEVITMMA01
- Cloud networking 2/1/0/e/4 BMEVITMMA02
- Modeling seminar for engineers 2/1/0/e/4 BMEVITMMA03
- Internet services and applications 2/1/0/e/4 BMEVITMMA04
- Infocommunication services laboratory 1 0/0/3/m/4 BMEVIHIMA04
- Infocommunication services laboratory 2 0/0/3/m/4 BMEVITMMB00

REMARK
The datasheet of some specialization subjects may include prerequisites. Especially in the case of laboratories that are followed by and based on the knowledge of specialization subjects.

REMARKS:
Project lab. and MSc thesis topics must be related to the main or secondary specialization. One subject in the common subjects block and two subjects from the advanced mathematics block are determined by the main specialization. Subjects from remaining specialization blocks can be selected as free electives.

Secondary specialization

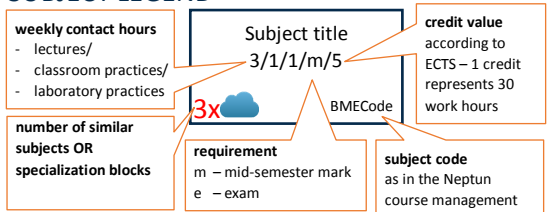
SMART CITY

- Sensor networks and applications 2/1/0/e/4 BMEVITMMA09
- Intelligent traffic systems 2/1/0/e/4 BMEVITMMA10
- Human-Computer Interaction 2/1/0/e/4 BMEVITMMA11
- Smart city laboratory 0/0/2/m/2 BMEVITMMB04

CLOUD AND PARALLEL SYSTEMS

- Cloud computing 2/1/0/m/4 BMEVIIIMA05
- High performance parallel computing 2/1/0/e/4 BMEVIIIMA06
- GPGPU applications 2/1/0/e/4 BMEVIIIMB01
- Parallel programming laboratory 0/0/3/m/4 BMEVIIIMB02

SUBJECT LEGEND



SUBJECT TYPES

- Fundamentals in natural sciences
- Secondary specialization studies
- Main specialization studies
- Economics & humanities
- Free electives
- Common courses

PRE-REQUISITES
Project Laboratory 1., Project Laboratory 2., Diploma Thesis Design 1., Diploma Thesis Design 2. can only be taken one after the other having completed the credits of the previous subject .

The prerequisite of the admission of Diploma Thesis Design 2

- Completing 84 credits according to the study plan
- Completing the credits of the following subjects
  - Applied algebra and mathematical logic (BMETE90MX57)
  - System optimization (BMEVISZMA02)
  - Languages and automata (BMEVISZMA04)
  - Information theory (BMEVISZMA03)
  - Formal methods (BMEVIMIMA07)
  - Diploma Thesis Design 1 (BMEVI**MT00)