Faculty of Civil Engineering

Tamas Lovas
Course director
Departments – professional areas

• Department of Geodesy and Surveying
• Department of Photogrammetry and Geoinformatics
• Department of Highway and Railway Engineering
• Department of Hydraulic and Water Resources Engineering
• Department of Sanitary and Environmental Engineering
• Department of Construction Materials and Technologies
• Department of Engineering Geology and Geotechnics
• Department of Structural Engineering
• Department of Structural Mechanics
Education cycles

- Pre-Engineering – 2 semesters
- BSc – 8 semesters
  - 240 ECTS (diploma: 24 credits)
- Pre-MSc – 1 or 2 semesters
- MSc – 3 semesters
  - 90 ECTS (diploma: 20 credits)
- PhD – 8 semesters
Core subjects

Civil engineering

- Maths, Physics
- Statics, Strength of materials, Structural Analysis
- Chemistry, geology
- Business, Management
- Informatics
- Surveying, geoinformatics
- Hydraulic engineering, hydrology
- Roads, Railway tracks
- Construction materials
- Geotechnics, foundation engineering
- Mechanics, structural analysis
- Steel structures, Reinforced concrete structures
Specialization subjects

Specialization in Structural Engineering

• Building construction
• Construction materials
• Timber structures
• Steel and composites structures, RC and Masonry structures
• Bridges and infrastructures
• Underground structures, deep foundation, Rock mechanics
• Structural analysis, Strength of materials
• Laboratory practice
• 3D constructional design
• Design of structures projectwork
• Steel buildings
• Reinforced concrete buildings
• Building construction technology
• Engineering works
• Building design projectwork
Specialization subjects
Specialization in Infrastructure Engineering

• Water chemistry and hydrobiology
• Hydraulics, Hydrology, Public works
• Roads, Railway tracks, Highway and railway structures, Highway and railway design
• Basics of environmental engineering, Urban environment
• Water quality management, Water resource management
• Transportation networks
• Highway and railway laboratory course
• Hydraulic engineering field course
• Infrastructure design project
• Public administration and land registry
• Earthworks and drainage of transportation infrastructures
• Highway planning and design, Railway planning and design
• Water damage prevention and water use, Drinking water and wastewater treatment
• River basin management, Environmental impact assessment
• Transportation facility design project
• Hydraulic engineering design project
• Urban infrastructure design project
Specialization subjects
Specialization in Geoinformatics Engineering

- Surveying
- Geoinformatics
- Adjustment calculations
- Large scale mapping
- Geodetic control networks and projections
- Satellite positioning
- Engineering surveying
- Photogrammetry and laser scanning
- Geodesy
- Field course of geodetic control networks
- Remote sensing
- Geoinformatics field course
- Surveying and geoinformatics project
- Topography
- Surveying for engineering planning
- Field course of structural surveys
- Geospatial databases
- Geodetic surveys
- Geospatial analysis
Why BME Faculty of Civil Engineering?
Practical training

• Assignments/homeworks on design
• Laboratory practices/courses
• Field courses – summer courses
  • Surveying
  • Hydrology
• Practical experiments
  • Several courses
• Complex projectworks
• Option to accomplish industrial practice at the home country
Why BME Faculty of Civil Engineering?
Experience-quality

• Experience
  • 150+ regular students
  • 40-60 Erasmus students each semester

• Quality
  • Harmonized education program with major EU university curricula
  • Same curriculum as that of Hungarian students
  • Qualified lecturers, professors

• State-of-the-art
  • Cutting edge technologies in education
  • Integrating the latest research achievements in education
  • Completely updated BSc curriculum from 2015
  • Completely updated MSc curriculum from 2017
Why BME Faculty of Civil Engineering?

Flexibility-support

• Flexibility
  • Running difficult courses in both fall and spring semesters
  • No course limits for international students
  • Extra administrative/consultant support ensured by the Faculty

• Options to reduce tuition fee
  • If less than 24 credits taken in a semester
Why BME Faculty of Civil Engineering?

Perspectives

• Quality diploma
  • Internationally ranked
  • Worldwide connections
  • Especially highly rated in EU

• MSc in civil engineering

• PhD in civil engineering and earth sciences
MSc in civil engineering

- Specialization in Numerical Modeling
- Specialization in Structures
- Specialization in Geotechnics and Geology
- Freedom in selecting elective courses
- Opportunity to get involved in research work
- Option to attend Pre-MSc program for 1-2 semester
  - Learning high-level BSc courses