

STRUCTURAL ENGINEERING MSC PROGRAM

FROM 2017

		Credit	Lecture	Seminar	Laboratory	Consultation	Day	M/E/S	Semester
Core Subjects									
Advanced Mathematics	BMETE90MX33	3	2	1				E	1
Physics Laboratory	BMETE11MX22	1			1			M	2
Methods of Engineering Analysis	BMEEOHSMK51	3	1	1				M	1
Numerical Methods	BMEEOFTMK51	4			3			M	1
Geodynamics	BMEEOGMMS51	3	2					M	2
FEM for Civil Engineers	BMEEOTMMS51	5	2	2				E	1
Soil-Structure Interaction	BMEEOGMMS52	5	3	1				M	1
Structures 1	BMEEOHSM51	5	3	1				E	1
Decision Supporting Methods	BMEEPEKMST4	2	2					M	3
Accounting, Controlling, Taxation	BMEGT35M014	2	2					M	3
Corporate Finance	BMEGT35M411	2	2					M	3
Engineering Ethics	BMEGT41M004	2	2					M	3
Optional Subjects		5							
Specialization in Numerical Modeling									
Obligatory Subjects									
Numerical modeling project	BMEEOTMMS5P	5				2		M	2
Structural Dynamics	BMEEOTMMN-1	4	2	1				M	2
Stability of Structures	BMEEOHSM-2	4	2	1				E	2
Nonlinear Mechanics	BMEEOTMMN-2	4	2	1				E	1
Elective Subjects		11							
Diploma Project	BMEEODHMN-D	20						M	3
Recommended Elective Subjects									
Plasticity	BMEEOTMMN61	3	1	1				M	2
Nonlinear FEM	BMEEOTMMN62	3	2					M	2
Analysis of Rods and Frames	BMEEOTMMN63	3	1	1				M	2
Discrete Element Method	BMEEOTMMN64	3	1	1				M	2
Specialization in Structures									
Obligatory Subjects									
Structures project	BMEEOHSM5P	5				2		M	2
Structures 2	BMEEOHSM-1	4	2	1				E	2
Stability of Structures	BMEEOHSM-2	4	2	1				E	2
Seismic Design	BMEEOHSM-3	4	2	1				M	2
Structural Dynamics	BMEEOTMMN-1	4	2	1				M	2
Elective Subjects		7							
Diploma Project	BMEEODHMT-D	20						M	3
Recommended Elective Subjects									
Applied Fracture Mechanics	BMEEOHSM61	4	2	1				M	2
Prestressing Technologies	BMEEOHSM62	3	1	1				M	2
Strengthening of Structures	BMEEOHSM63	3	1	1				M	2
Specialization in Geotechnics and Geology									
Obligatory Subjects									
Geotechnics and engineering geology project	BMEEOGMMS5P	5				2		F	2
Engineering Geology MSc	BMEEOGMMG-1	4	2	1				V	2
Environmental Geology	BMEEOGMMG-2	4	2	1				F	1
Geotechnical Design	BMEEOGMMG-3	4	2	1				F	2
Earthworks of Infrastructures	BMEEOGMMG-4	4	2	1				F	2
Elective Subjects		7							
Diploma Project	BMEEODHMG-D	20						F	3
Recommended Elective Subjects									
Tunneling	BMEEOGMMG61	3	2					F	2
Hydrogeology	BMEEOGMMG62	3	2					F	2
Numerical Methods of Geotechnics	BMEEOGMMG63	3	1		1			F	1
Engineering Geology of Hungary	BMEEOGMMG64	3	2					F	2

Mobility window is the 3. semester.

Structures in Nuclear Power Plants Program

FROM 2020

	Code	Credit	Lecture	Seminar	Laboratory	Consultation	Day	M/E/S	Semester	
Core Subjects										
Advanced Mathematics	BMETE90MX33	3	2	1				E	1	
Physics Laboratory	BMETE11MX22	1			1			M	2	
Methods of Engineering Analysis	BMEEOHSMK51	3	1	1				M	1	
Numerical Methods	BMEEOTMK51	4			3			M	1	
Nuclear and Reactor Physics Fundamentals	BMETE80MX00	5	3	1				E	1	
Thermal Hydraulics of Nuclear Power Plants	BMEEOTE	5	3	1				E	2	
Soil-Structure Interaction	BMEEOGMMS52	5	3	1				M	1	
Structures 1	BMEEOHSMS51	5	3	1				E	1	
Decision Supporting Methods	BMEEPEKMST4	2	2					M	3	
Accounting, Controlling, Taxation	BMEGT35M014	2	2					M	3	
Corporate Finance	BMEGT35M411	2	2					M	3	
Engineering Ethics	BMEGT41M004	2	2					M	3	
Optional Subjects		5								1
Specialization in Structures in Nuclear Power Plants										
Obligatory Subjects										
Nuclear Power Plants	BMETE80MF14	5	3	1				M	2	
Extreme Actions on Structures	BMEEOHSMMA-1	3	2					E	2	
Seismic Design	BMEEOHSMMA-2	4	2	1				M	2	
Containment Building	BMEEOHSMMA-2	3	2					M	2	
Elective Subjects		11								
Diploma Project	BMEEODHMT-D	20						M	3	
Recommended Elective Subjects										
Structures in Nuclear Power Plants project	BMEEOHSMMA6P	5				2		M	2	
Stability of Structures	BMEEOHSMMA-2	4	2	1				E	2	
Structural Dynamics	BMEEOTMMN-1	4	2	1				M	2	
Structures 2	BMEEOHSMMA-1	4	2	1				E	2	
Applied Fracture Mechanics	BMEEOHSMMA61	4	2	1				M	2	
Prestressing Technologies	BMEEOHSMMA62	3	1	1				M	2	
Strengthening of Structures	BMEEOHSMMA63	3	1	1				M	2	
Plasticity	BMEEOTMMN61	3	1	1				M	2	
Nonlinear FEM	BMEEOTMMN62	3	2					M	2	
Analysis of Rods and Frames	BMEEOTMMN63	3	1	1				M	2	
Discrete Element Method	BMEEOTMMN64	3	1	1				M	2	

Mobility window is the 3. semester.

Infrastructural Engineering Program

FROM 2021

	Code	Credit	Lecture	Seminar	Laboratory	Consultation	Day	M/E/S	Semester
Core Subjects									
Advanced Mathematics	BMETE90MX33	3	2	1				E	1
Physics Laboratory	BMETE11MX22	1			1			M	2
Methods of Engineering Analysis	BMEEOHSMK51	3	1	1				M	1
Numerical Methods	BMEEOFTMK51	4			3			M	1
Database Systems	BMEEOFTMI51	3		2				M	2
Environmental systems	BMEEOVKMI51	4	3					E	1
Ecology	BMEEOVKMI52	3	2					M	1
Engineering works of infrastructure	BMEEOHSMI51	3	2					E	2
Drainage of engineering constructions	BMEEOVKMI53	3	2					M	2
Environmental economics	BMEGT42M400	2	2					M	3
Accounting, Controlling, Taxation	BMEGT35M014	2	2					M	3
Corporate Finance	BMEGT35M411	2	2					M	3
Engineering Ethics	BMEGT41M004	2	2					M	3
Optional Subjects		5							
Specialization in Highway and Railway Engineering									
Obligatory Subjects									
Transport strategic planning	BMEEOUVMU-1	4	2	1				M	1
Railway Station Design	BMEEOUVMU-2	4	2	1				E	2
infrastructure Management Systems	BMEEOUVMU-3	3	2					E	2
Project Management in Transportation	BMEEOUVMU-4	2	2					M	1
Elective Subjects		17							
Diploma Project	BMEEODHMu-D	20						M	3
Recommended Elective Subjects									
Transportation Modeling	BMEEOUVMU61	2	2					M	1
Railway Operation	BMEEOUVMU62	2	2					M	1
Pavement Structures	BMEEOUVMU63	5	4					E	2
Railway Track Structures	BMEEOUVMU64	5	4					E	1
Intelligent Transportation Systems	BMEEOFTMF61	3	1	1				M	2
Economics of Civil Engineering Projects	BMEEOUVMU65	3	2					M	2
CAD Software in Road and Rail Design	BMEEOUVMU66	3	3					M	1
Specialization in Water and Hydro-Environmental Engineering									
Obligatory Subjects									
Water and wastewater treatment II.	BMEEOVKMV-1	4	3					E	1
Water quality monitoring	BMEEOVKMV-2	2	2					M	1
Modelling of Hydrosystems	BMEEOVVMV-1	4	2	1				E	1
Hydromorphology	BMEEOVVMV-2	4	2				3	E	2
Elective Subjects		16							
Diploma Project	BMEEODHMuV-D	20						M	3
Recommended Elective Subjects									
Design of Water-Use Structures	BMEEOVVMV61	4	2	1				M	2
Design of Water Damage Prevention Structures	BMEEOVVMV62	4	2	1				M	1
Groundwater	BMEEOVVMV63	3	2					M	2
Hydrography and Hydroinformatics	BMEEOVVMV64	5	2	2				M	2
Water and wastewater treatment plants	BMEEOVKMV61	3	2	1				M	2
Water quality management	BMEEOVKMV62	2	1	1				M	2
Public water utility systems	BMEEOVKMV63	4	2	1				M	2
Reconstruction of public water utility systems	BMEEOVKMV64	3	2					M	1

Mobility window is the 3. semester.

Land Surveying and Geoinformatics Program

FROM 2021

	Code	Credit	Lecture	Seminar	Laboratory	Consultation	Day	M/E/S	Semester	
Core Subjects										
Advanced Mathematics	BMETE90MX33	3	2	1				E	1	
Physics Laboratory	BMETE11MX22	1			1			M	2	
Methods of Engineering Analysis	BMEEOHSMK51	3	1	1				M	1	
Numerical Methods	BMEEOFTMK51	4			3			M	1	
Geophysics	BMEEOAFMF51	3	2					M	1	
Land Management	BMEEOAFMF52	3	2					M	1	
Adjustment calculations (MSc)	BMEEOAFMF53	4	2	1				E	1	
Digital Earth	BMEEOFTMF51	5	2	1				E	1	
Accounting, Controlling, Taxation	BMEGT35M014	2	2					M	3	
Corporate Finance	BMEGT35M411	2	2					M	3	
Engineering Ethics	BMEGT41M004	2	2					M	3	
Optional Subjects		5								
Specialization in Land Surveying and Geoinformatics										
Obligatory Subjects										
GNSS Theory and Applications	BMEEOAFMF-1	5	2	1				E	2	
Information Technologies	BMEEOFTMF-1	5	1	2				M	1	
Automated Surveying	BMEEOAFMF-2	5	1	2				E	2	
Applied Geoinformatics	BMEEOFTMF-2	5	1	2				M	2	
Mapping Technologies	BMEEOFTMF-3	5	1	2				E	2	
Recommended elective subjects		8	3	2						
Diploma project	BMEEODHMF-D	20							3	
Recommended Elective Subjects										
Physical Geodesy and Gravimetry	BMEEOAFMF61	4	2	1				M	1	
Geodetic Networks and Projections	BMEEOAFMF62	3	2					E	2	
Intelligent Transportation Systems	BMEEOFTMF61	3	1	1				M	2	
ITS Geoinformatics	BMEEOFTMF62	2				2		M	2	

Mobility window is the 3. semester.

MSC in Construction Information Technology Engineering

	Angol név	CODE	kredit	előadás	gyakorlat	labor	konzultáció	nap	F/V/A	Félév ****	előkövetelmény
Szak kötelező tárgyai											
Közös törzsanyag											
	Numerical Methods	BMEEOAFMB51	4			2			V	1	
	Construction Information Technology Mathematics	BMETE90MX63	3	2					V	1	
	Building Information Modelling	BMEEOFTMB51	3	2					F	1	
	Decision Support Methods	BMEEPEKMB51	2	2					F	1	
	Construction Information Technology Engineering Project	BMEEODHMB5P	6				2		F	1	
	BIM Modelling and Design	BMEEOFTMB52	5			4			V	2	BMEEOFTMB51
	Civil Engineering Automation, Modelling	BMEEOHSMB51	5	1	2				V	2	
	Construction Information Technology Programming	BMEVIAUM052	6	1	4				F	2	BMEVIHIA061
	Complex Construction IT project	BMEEODHMB5K	6				2		F	2	BMEEODHMB5P
	Argumentation, Negotiation, Presentation	BMEGT41MB51	3	2					F	3	
	Technology Theories	BMEGT41MB52	2	2					F	3	
***	Diploma Project	BMEEODHMB-D	20				1		F	3	
Hallgatói csoport kötelezően választható tárgyai											
	Hallgatói csoport 1. kötelezően választható tárgya*		8	2	4				V	1	
	Hallgatói csoport 2. kötelezően választható tárgya*		4	1	2				F	1	
	Hallgatói csoport 1. kötelezően választható tárgya*		4	2	1				F	2	
	Hallgatói csoport 2. kötelezően választható tárgya*		4	2	1				F	2	
	Optional subjects	BMEEO	5						F	3	
1. félév 30 9 6 2 2 0											
2. félév 30 6 8 4 2 0											
3. félév 30 4 0 0 1 0											
Σ 90 19 14 6 5 0											
*Építőmérnök vagy építészmérnök alapszakos végzettséggel rendelkező hallgatói csoport											
	Kötelezően választható tárgyak (legalább 20 kreditnyi teljesítendő)										
	Programming	BMEVIHIA061	8	2	4				V	1	
	Database Systems	BMEEOFTMB-1	4	1	2				F	1	
	Structural Dynamics	BMEEOTMMN-1	4	2	1				F	2	
	Stability of Structures	BMEEOHSMT-2	4	2	1				V	2	
	FEM for Engineers	BMEEOTMMB61	4	1	2				F	2	
	Numerical Methods in Geotechnics	BMEEOGMMB61	4	1		1			F	2	
	Automated Survey Systems	BMEEOAFMB61	4	1	2				F	2	BMEVIHIA061
	Electrical Systems in Buildings	BMEVIVEM061	4	2					V	2	
	HVAC Basics	BMEGEÉÉNÉ01	4	2					F	2	
*Gépészmérnöki, energetikai mérnöki, mechatronikai mérnöki, villamosmérnöki, mérnökinformatikus alapképzési végzettséggel rendelkező hallgatói csoport											
	Kötelezően választható tárgyak (legalább 20 kreditnyi teljesítendő)										
	Building Constructions	BMEEOEMMB-1	8	2	4				F	1	
	Finite Element Modelling	BMEEOTMMB-1	4	1	2				V	1	
	Construction Management	BMEEPEKMB61	4	2	1				F	2	BMEEOEMMB-1
	Civil Engineering Structures and Modelling	BMEEOHSMB61	4	2	1				F	2	BMEEOEMMB-1
	Constructions of Buildings and Structures	BMEEOEMMB61	4	2	1				F	2	BMEEOEMMB-1
	Modelling of Hydrosystems	BMEEOVVMV-1	4	2	1				F	2	
	Electrical Systems in Buildings	BMEVIVEM061	4	2					V	2	
	HVAC Basics	BMEGEÉÉNÉ01	4	2					F	2	
Szabadon választható tárgyak											
**	Optional subject - internship (at company)	BMEEODHMOV02	5					20	F	3	
**	Optional subject 1.	BMEEO	2	2					F	1	
**	European Engineering Projectwork	BMEEOFTMX61	2	2					F	2	
**	Optional subject etc.	BMEEO	2	2					F	1	

*A szak elvégzésével megszerezhető kimeneti kompetenciák egységes szintre hozása érdekében a szakbizottság a szakra felvételt nyert hallgatókat alapképzésükön végzett előtanulmányaik alapján hallgatói csoportokba osztja be.

**Az egyetem bármely MSc szakon meghirdetett tárgya felvehető

***A Diplomamunka tárgy akkor vehető fel, ha a hallgató a Közös törzsanyag tárgyaiból 33, a hallgatói csoport tárgyaiból legalább 12, a kettő csoportból összesen legalább 51 kreditet teljesített.

**** Az itt jelölt félév a mintatanterv szerinti haladás esetén javasolt teljesítés féléve.

A mobilitási ablak féléve: 3. félév. Mobilitás esetén előzetes kreditelismerési eljárást kell kezdeményezni a KKB-