STATICS
SCEDULE – REQUIREMENTS
2018/19-2nd semester

Lecture notes (Gimesy & Laki) and a collection of examples (Kőrössi & Laki) from the copy room of the department

week	**Lecture** (Tuesday 10^{15}-12^{00} K221.)	week	**Practice** (Wednesday 10^{15}-12^{00} K391 and K393)
1. 02.05.	Repetition: forces, equilibrium, statical determinacy, support reactions Structural analysis	1. 02.06.	Repetition: support reactions of beams, of broken segments and of 3 hinged structures
2. 02.12.	Support and joint reactions of planar complex structures, hierarchical structures Possibilities to build a hierarchical structure	2. 02.13.	Support and joint reaction of statically determinate composite structures – 1.
3. 02.19.	Truss structures: design rules, statical determinacy, calculation methods	3. 02.20.	Support and joint reaction of statically determinate composite structures – 2. Bar forces of trusses – 1.
4. 02.26.	Internal forces (N,V,M), characteristics of the diagrams, connection between the diagrams	4. 02.27	Bar forces of trusses – 2.
5. 03.05.	Internal forces of simple structures, skew beams, broken segments, branching, maximal values of internal forces.	5. 03.06.	Internal forces of simple beams – 1: straight beams
6. 03.12.	**TEST 1: calculation of support reactions and joint forces, trusses** **Deadline for (optional) HW1**	6. 03.13.	Internal forces of simple beams – 1: skew beams, broken segments, branching
7. 03.19.	**Spring holiday**	7. 03.20.	**Spring holiday**
8. 03.26.	**Sketch week**	8. 03.27.	**Sketch week**
9. 04.02.	Internal forces and form of the structure Bracing of the buildings against horizontal loads	9. 04.03.	Internal forces of complex structures – 1: Gerber beam, 3 hinged, tiebar
10. 04.09.	Loading schemes, envelope diagrams	10. 04.10.	Internal forces of complex structures – 2: joint upon, joint inside, joint belonging to more than 2 bars, etc Loading schemes, envelope diagrams
11. 04.16.	Forces and moments in 3D Equilibrium of 3D rigid bodies, calculation of support reactions	11. 04.17.	Analysis of complex structures: modelling a beam-girder structure, loads, support reaction, loading scheme
12. 04.23	Internal forces of 3D rigid bodies	04 24	Spatial structures: equilibrium, support reactions, internal forces
13. 04.29.	**TEST 2 – internal forces** **Deadline for (optional) HW2**	13. 05.01.	Holiday
14 05.07.	Cable structures, vaults	14. 05.09	Cable structures, vaults
15 05.14.	*Processing week*	15. 05.16	*Processing week*
16	*Replacement week*	16. 05.22	**Retake TEST 1: 8.15-10.00,** **Retake TEST 2: 10.15-12.00**

Exam dates according to separate announcement

BME FAC. OF ARCHITECTURE DEPT. OF MECHANICS MATERIALS & STRUCTURES			
Subject: **STATICS**		YEAR	SEMESTER
Code: BMEÉPSTA201	Credit: 4	2018-19-02	2nd
Lecturer: **Dr. Péter Várkonyi**		Practical teachers: Dr. Anikó Pluzsik, Dr. Ágnes O. Csicsely, Rita Vajk,	

CONDITIONS OF FULFILMENT

Expected prior knowledge	1. We build upon the curriculum of the Introduction to structural design course (BMEÉPSTA 101). 2. Registration in the NEPTUN system 3. If a person possessing a signature in Statics from the previous year starts the semester (by starting a Test), their signature does not qualify him/her any more for the exam. The person has to obtain a new signature to take the exam.
Type of classes, regulation for presence	-There are lectures, and practical classes in smaller groups. Presence at all lectures is recommended. The presence at practical classes in mandatory and will be checked. -TEST: Closed book test, no questions, study aids or mobile phones (or other type of digital tool, not even as calculator) are allowed; pencil and calculator are required. -HW: the homework is not obligatory, the exercises solved during practical class or at home help to acquire the curriculum.
Midsemester tasks (Dates are in the schedule)	- 2 TESTs classified by 0-120 points, 0 point in case of absence. Both tests can be rewritten once only at the end of the semester during the replacement week. - Homework is given weekly on Piazza and at www.szt.bme.hu , they worth 10 × 5 points. Submisson and acceptance of homework in not obligatory, but it is highly suggested. They improve the final mark. The deadline for the submission of each homework is the time of the next practical lesson, the form (digital of paper format) of the submission will be declared in the homework. No possibility for late submission.
Minimum mid-semester requirements	1. You need to attend more than 70% of practical classes. 2. Both tests should be over 60 points. 3. Homework is optional, its result does not modify the mid-semester requirements, it improves the final mark. If any of the midsemester requirements is not fulfilled, you are not allowed to take the exam. No more possibility to improve or substitute!
Participation at the examinations	- To participate at the examination, you need to have a mid-semester signature from BME Faculty of Architecture obtained within 3 years. - You have to register of the exam in Neptun until the deadline specified there. - During the examination the identity will be checked, you will need a photo ID. - The detailed conditions are specified in the Code of Studies.
Dates of exam	Will be published in NEPTUN system. (Do not go to classrooms given by Neptun, they may be wrong! Check the seating in front of the department before the exam, or at www.szt.bme.hu)
Type of exam	The examination consists of a 90-minute-long written part, where you can get maximum 120 points, and afterwards an oral examination for maximum 120 points. Based on the written part of the examination we can offer a mark 3 or 4 by doubling the points of the written part of the examination. All students, who would like to improve the offered mark, or did not get an offered mark, but the written part of their examination is over 50 points can participate in the oral examination. In this case the points from the oral part will be summarized with the points from the written part. During the examination only calculator can be used, no other digital tool, or any study material!
Final mark	During the semester maximum 480 points can be obtained without the points for the homework. (max. 240 points from midsemester and max. 240 points from examination, with homework points the maximum is 530 points) Requirements to pass the examination: 1. At least 120 points from the examination 2. At least 240 points from the semester points (midsemester + examination) The mark for the subject: 2: 240-289 points, 3: 290-339 points, 4: 340-389 points, 5: 390-530 points.
Repetition of exam	According to Code of Studies.
Contact	Teachers are available during their office hours. Communication by email is also encouraged: vpeter@mit.bme.hu, vajkrita@szt.bme.hu. During the course we use the online Q&A platform piazza (piazza.com). For enrolment send an email to vajkrita@szt.bme.hu include your name, email address and course. (During registration you will receive an activation code.)
Study aids	Lecture notes (Gimesy & Laki) and a collection of examples (Kőrössi & Laki) are available at the copy room of the department. Practice examples on piazza.com are available