Introduction to Strength of Materials

BSc (BMEEOTMAT42)

2018/19, spring semester

(Mon 12.15-14.00, K373 +Wed 12.15-14.00, K373 Fri 14.15-16.00, K373)

week	date	topic
1	4 Feb	Introduction to Strength of Materials
	6 Feb	Elastic beam model
	8 Feb	Tension/compression
2	11 Feb	Tension/compression, examples
	15 Feb	Simple shear
3	18 Feb	Simple shear, examples
	20 Feb	Torsion of circular prismatic beams
	22 Feb	Torsion of circular prismatic beams, examples
4	25 Feb	Torsion of thin-walled beams
	1 Mar	Torsion, examples
5	**4 Mar**	**Test 1: Simple tension/compression and shear, torsion**
	6 Mar	Pure bending, moments of inertia
	8 Mar	Moments of inertia
6	11 Mar	Moments of inertia
	15 Mar	---
7	25 Mar	Uniaxial bending
	27 Mar	Uniaxial bending, examples
	29 Mar	Deflections of a beam, examples
8	1 Apr	Biaxial bending
	5 Apr	Eccentric tension/compression, examples
9	8 Apr	The kern of the cross section
	10 Apr	Members with no-tension material
	12 Apr	**Test 2: Pure bending and eccentric tension/compression**
10	15 Apr	Nonuniform bending, shear formula
	19 Apr	---
11	22 Apr	---
	24 Apr	Thin walled beams: shear flow and shear centre
	26 Apr	Nonuniform bending, shear formula, examples
12	29 Apr	---
	1 May	---
	3 May	Internal forces of 3D frames (repetition), stresses from a general loading
13	6 May	Principal stresses
	8 May	The stress state, principal stresses of plane stress
	10 May	Principal stresses, examples
14	**13 May**	**Test 3: Nonuniform bending, compound stresses**
14	**17 May**	**Repetition of Test 2**
REP	**20 May**	**Repetition of Test 3**
REP	**23 May**	**Rep. Rep.**

Budapest, 21 Nov 2018

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