MECHANICS OF THIN-WALLED STRUCTURES – summer 2024

LECTURES, TUTORIALS, Labs

Tuesday	Hours	Type of classes:	Topic:
FEBRUARY			
20.02	4 h	Lecture 1	**0.** Contents & requirements **1.** Knowledge refreshment: *Stress, Strain, Moment of inertia* *(first, second, inclined section), Bending, Torsion* **2.** Thin-walled structures introduction **3.** Beams (1D structures): - bending of beams - shear center definition
27.02	4 h	Lecture 2	**4.** Bending of open section beams **5.** Bending of closed section beams - introduction
MARCH			
05.03	4 h	**Exercises 1**	**Exercises: Bending of open section beams** **Bending of closed section beams**
12.03	4 h	Lecture 3	**5.** Bending of closed section beams - continuation **6.** Torsion of beams - Free torsion - Constrained torsion
19.03	1,5 h	**Test 1 (1h 30 min)**	**Bending of closed section beams** **(theory + problem)**
	2, 5 h	**Exercises 2**	**Exercises: Torsion of beams, Buckling**
26.03	4 h	Lecture 4	**6.** Torsion of beams - continuation **7.** Buckling
APRIL			
02.04	**–**	**DAY OFF**	**Eastern Holidays**
09.04	1,5 h	**Test 2 (1h 30 min)**	**Torsion of beams and buckling** **(theory + problem)**
	2,5 h	Lab introduction	Patran+Nastran Presentation

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LABORATORY

APRIL			
16.04	4 h	Lab 1 (group 1)	Introduction lab test (5 min) **Clevis**
23.04	4 h	Lab 2 (group 1)	Introduction lab test (5 min) **Conical**
30.04	**–**	**DAY OFF**	
MAY			
07.05	4 h	Lab 3 (group 1)	Introduction lab test (5 min) **Thin-walled beam**
14.05	4 h	Lab 4 (group 1)	Introduction lab test (5 min) **Buckling** **Final lab test (30 min)**
21.05	4 h	Lab 1 (group 2)	Introduction lab test (5 min) **Clevis**
28.05	4 h	Lab 2 (group 2)	Introduction lab test (5 min) **Conical**
JUNE			
04.06	4 h	Lab 3 (group 2)	Introduction lab test (5 min) **Thin-walled beam**
11.06	4 h	Lab 4 (group 2)	Introduction lab test (5 min) **Buckling** **Final lab test (30 min)**
16.06 (Friday)	–	End of semester	