

Basics of Statics and Dynamics
BSc
2022/23, autumn semester

(Mon 14.15-16.00, K376/K374 – Wed 10.15-13.00, K376/K372)

| Week | Date | Topic |
|------|---------------|--|
| 1 | 05 Sep | A1: Introduction, vector operations, rectilinear motion of a particle |
| | 07 Sep | A2-A3: Kinematics of a particle, Newton's laws |
| 2 | 12 Sep | A3-A4: Newton's laws, kinetics of particles |
| | 14 Sep | --- (<i>Sports Day</i>) |
| 3 | 19 Sep | A4-A5: Moment of forces, couple; resultant of force systems |
| | 21 Sep | A6: Distributed loads, resultant of force systems, centroid of 2D objects |
| 4 | 26 Sep | A7: Kinematics of rigid bodies |
| | 28 Sep | A8: Kinetics of rigid bodies + consultation (A) |
| 5 | 03 Oct | TEST 1: Forces and motion |
| | 05 Oct | A9: Forces in 3D |
| 6 | 10 Oct | B1: Constraints; reactions of simple structures |
| | 12 Oct | B2-B3: Statical determinacy, reactions of simple structures |
| | 13 Oct | repetition of TEST 1 (18:15-20:00) |
| 7 | 17 Oct | B3-B4: Reactions of compound structures, Gerber girders |
| | 19 Oct | B4-B5: Reactions of compound structures, three hinged frames, statical determinacy |
| 8 | 24 Oct | B6-B7: Truss analysis |
| | 26 Oct | B7-B8: Truss analysis, Structures in 3D |
| 9 | 31 Oct | --- (<i>See 15 Oct, Saturday</i>) |
| | 02 Nov | B8: Structures in 3D + consultation (B) |
| 10 | 07 Nov | TEST 2: Reactions of structures |
| | 09 Nov | C1-C2: Internal forces, basics of internal force diagrams |
| 11 | 14 Nov | C2-C3: Internal force diagrams of cantilever beams |
| | 16 Nov | C3-C4: Internal force diagrams of simply supported beams |
| 12 | 21 Nov | C5: Internal force diagrams of Gerber beams |
| | 22 Nov | repetition of TEST 2 (18:15-20:00) |
| | 23 Nov | C6-C7: Internal force diagrams of frames |
| 13 | 28 Nov | C7: Internal force diagrams of compound frames + consultation (C) |
| | 30 Nov | TEST 3: Internal force diagrams |
| 14 | 05 Dec | C8: Internal forces in 3D |
| | 07 Dec | repetition of TEST 3 (10:15-12:00) |

Homeworks are issued at 13:00 of Wednesdays on weeks 1, 2, 3, 4, 6, 7, 8, 10, 11, 12, 13.
Deadline for submission is always at 23:59 of the forthcoming Monday.

Dec 5, 2022

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