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# University of Pretoria Yearbook 2017

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## Statics 211 (SWK 211)

**Qualification** Undergraduate

**Faculty** [Faculty of Engineering, Built Environment and Information Technology](#)

**Module content** Centroids: centroids of lines, surfaces and volumes. Constraints and statical determinancy. Space trusses. Bending moments and cables: distributed loads, parabolic and uniform cables. Liquid statics: buoyancy. Elasticity: stress-strain, stiffness, elastic moduli relations, torsion. Deflection of beams: derivation of differential equations, bending stresses. Friction: friction surfaces, wedges, screws, belt, bearings and rolling resistance. Work and energy, virtual work. Vibration.

**Module credits** 16.00

**Programmes** [BEng Civil Engineering](#)

[BEng Civil Engineering ENGAGE](#)

**Prerequisites** SWK 122

**Contact time** 3 tutorials per week, 2 lectures per week, 1 practical per week

**Language of tuition** Module is presented in English

**Academic organisation** Civil Eng

**Period of presentation** Semester 1

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