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# University of Pretoria Yearbook 2016

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## Statics 211 (SWK 211)

<b>Qualification</b>	Undergraduate
<b>Faculty</b>	<a href="#">Faculty of Engineering, Built Environment and Information Technology</a>
<b>Module credits</b>	16.00
<b>Programmes</b>	<a href="#">BEng Civil Engineering</a> <a href="#">BEng Civil Engineering Engage</a>
<b>Prerequisites</b>	SWK 122
<b>Contact time</b>	3 tutorials per week, 2 lectures per week, 1 practical per week
<b>Language of tuition</b>	English
<b>Academic organisation</b>	Civil Eng
<b>Period of presentation</b>	Semester 1

### Module content

Centroids: centroids of lines, surfaces and volumes. Constraints and statical determinacy. 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.

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