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# University of Pretoria Yearbook 2021

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## Theory of structures 221 (STU 221)

<b>Qualification</b>	Undergraduate
<b>Faculty</b>	<a href="#">Faculty of Engineering, Built Environment and Information Technology</a>
<b>Module credits</b>	8.00
<b>NQF Level</b>	06
<b>Programmes</b>	<a href="#">BSc Architecture</a>
<b>Prerequisites</b>	STU 211 GS
<b>Contact time</b>	3 lectures per week
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Civil Engineering
<b>Period of presentation</b>	Semester 2

### Module content

Introduction to material science in structural engineering. Concepts like stress, strain, elasticity, stress-strain diagrams, elasticity modules, strength and deformation as applied in structural engineering. Cross-sectional properties of structural elements. Types of stresses, and their transmission in structural elements. Introduction to the relationship between stress and strain (deflection) in beams by Coulomb's theory. Introduction to the analysis of compressive structural elements by means of Euler's theory.

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