

University of Pretoria Yearbook 2018

Theory of structures 211 (STU 211)

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| Qualification | Undergraduate |
| Faculty | Faculty of Engineering, Built Environment and Information Technology |
| Module credits | 8.00 |
| Programmes | BSc Architecture |
| Prerequisites | No prerequisites. |
| Contact time | 3 lectures per week |
| Language of tuition | Module is presented in English |
| Department | Civil Engineering |
| Period of presentation | Semester 1 |

Module content

Introduction to structural engineering concepts like design, analysis, sizing and planning of structures. Introduction to Newton's laws, equilibrium, free body diagrams. The application of equilibrium in solving reactions of statically determinate structures. The principles of determinacy and stability of structures. The application of Newton's laws in determining the internal forces in common structural systems like cable structures, trusses, frames and beams. The fundamental principles of weight and forces and how forces are transmitted through structural members and load tracing.

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