

University of Pretoria Yearbook 2020

Discrete structures 115 (WTW 115)

Qualification	Undergraduate
Faculty	Faculty of Natural and Agricultural Sciences
Module credits	8.00
Programmes	BSc Computer Science BSc Information and Knowledge Systems BSc Applied Mathematics BSc Chemistry BSc Extended programme - Mathematical Sciences BSc Mathematical Statistics BSc Mathematics BSc Meteorology BSc Physics
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Economic and Management Sciences
Prerequisites	50% for Mathematics in Grade 12
Contact time	1 tutorial per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	Mathematics and Applied Mathematics
Period of presentation	Semester 1

Module content

Propositional logic: truth tables, logical equivalence, implication, arguments. Mathematical induction and well-ordering principle. Introduction to set theory. Counting techniques: elementary probability, multiplication and addition rules, permutations and combinations, binomial theorem, inclusion-exclusion rule.

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