



University of Pretoria Yearbook 2021

Algebra 381 (WTW 381)

Qualification	Undergraduate
Faculty	Faculty of Natural and Agricultural Sciences
Module credits	18.00
NQF Level	07
Programmes	BCom BCom Statistics and Data Science BSc Computer Science BSc Applied Mathematics BSc Chemistry BSc Geology BSc Mathematical Statistics BSc Mathematics BSc Physics
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Economic and Management Sciences Faculty of Humanities
Prerequisites	WTW 114 and WTW 211
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

Group theory: Definition, examples, elementary properties, subgroups, permutation groups, isomorphism, order, cyclic groups, homomorphisms, factor groups. Ring theory: Definition, examples, elementary properties, ideals, homomorphisms, factor rings, polynomial rings, factorisation of polynomials. Field extensions, applications to straight-edge and compass constructions.

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