



University of Pretoria Yearbook 2022

Algebra 381 (WTW 381)

Qualification Undergraduate

Faculty Faculty of Natural and Agricultural Sciences

Module credits 18.00

NQF Level 07

Programmes BCom (Statistics and Data Science)

BCom

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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