



# University of Pretoria Yearbook 2020

## Algebra 381 (WTW 381)

**Qualification** Undergraduate

**Faculty** [Faculty of Natural and Agricultural Sciences](#)

**Module credits** 18.00

**Programmes** [BCom](#)

[BCom Statistics and Data Science](#)

[BSc Computer Science](#)

[BSc Applied Mathematics](#)

[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** Afrikaans and English are used in one class

**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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