



University of Pretoria Yearbook 2020

Axiomatic set theory and mathematical logic 724 (WTW 724)

Qualification Postgraduate

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

Module credits 15.00

Programmes [BScHons Mathematics](#)

[BScHons Mathematics and Mathematics Education Algebra and Analysis](#)

Contact time 1 lecture per week

Language of tuition Module is presented in English

Department Mathematics and Applied Mathematics

Period of presentation Semester 1

Module content

Axiomatic set theory, ordinals, transfinite induction and recursion, ordinal arithmetic, the axiom of choice, cardinal arithmetic, the continuum hypothesis. Propositional and first order logic. The completeness and compactness theorems. Decidability, Gödel's incompleteness theorems.

The information published here is subject to change and may be amended after the publication of this information. The [General Regulations \(G Regulations\)](#) apply to all faculties of the University of Pretoria. It is expected of students to familiarise themselves well with these regulations as well as with the information contained in the [General Rules](#) section. Ignorance concerning these regulations and rules will not be accepted as an excuse for any transgression.