

University of Pretoria Yearbook 2018

Cartography 110 (GMC 110)

Qualification Undergraduate

Faculty Faculty of Natural and Agricultural Sciences

Module credits 10.00

Programmes BSc Information and Knowledge Systems
BSc Extended programme - Physical Sciences
BSc Geography
BSc Geoinformatics

BSc Meteorology

Service modules Faculty of Engineering, Built Environment and Information Technology

Prerequisites No prerequisites.

Contact time 1 practical per week, 3 lectures per week

Language of tuition Afrikaans and English are used in one class

Department Geography Geoinformatics and Meteorology

Period of presentation Semester 2

Module content

Spherical trigonometry. Geometrical geodesy: Datum surfaces and coordinate systems in Geodesy, Calculations on the ellipsoid, Datum transformations. Map projections: Projection principles, distortion determination, and construction of conformal, equivalent and equidistant projections, the Transverse Mercator projection and UTM projection of an ellipsoidal earth, projection transformations. Space geodesy: Time systems, Celestial and observer coordinate systems, Global Navigation Satellite Systems (GNSS), Satellite orbits and orbital parameters, 3-D positioning. A project or assignments of at least 64 notional hours.

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