

University of Pretoria Yearbook 2017

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 3 lectures per week, 1 practical per week

Language of tuition Afrikaans and English is used in one class

Academic organisation Geography, Geoinf + Meteor

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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