



# University of Pretoria Yearbook 2018

## Geometrical and space geodesy 310 (GMC 310)

**Qualification** Undergraduate

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

**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, 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.

**Module credits** 22.00

**Programmes** [BSc Geography](#)

[BSc Geoinformatics](#)

[BSc Meteorology](#)

**Prerequisites** GMC 110 and WTW 114/WTW 134

**Contact time** 1 practical per week, 2 lectures per week

**Language of tuition** Afrikaans and English are used in one class

**Department** Geography Geoinformatics and Meteorology

**Period of presentation** Semester 1

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