

# University of Pretoria Yearbook 2022

## Spatial analysis 320 (GIS 320)

**Qualification** Undergraduate

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

**Module credits** 22.00

**NQF Level** 07

**Programmes** [BIT \(Information Systems\)](#)

[BSc \(Information and Knowledge Systems\)](#)

[BSc \(Geoinformatics\)](#)

[BSc \(Chemistry\)](#)

[BSc \(Geography and Environmental Science\)](#)

[BSc \(Geology\)](#)

**Service modules** Faculty of Engineering, Built Environment and Information Technology

**Prerequisites** GIS 220 and GGY 283

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

**Language of tuition** Module is presented in English

**Department** Geography Geoinformatics and Meteorology

**Period of presentation** Semester 2

### Module content

Construction of Raster Geovisualisations, spatial model construction and use, multi-criteria decision analysis. Factor analysis: Principle component analysis. Geostatistics: Spatial dependence modelling, ordinary kriging. Markov chains and cellular Automata, combined models. Examples using data from South Africa are implemented. A project or assignment of at least 64 notional hours.

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