Overview

This course will introduce the student to reference coordinate systems and time systems, satellite orbital motion, signal propagation and satellite tracking observables. The principles of positioning using the current two Global Navigation Satellite Systems (GNSS) will be studied: the U.S. developed Global Positioning System (GPS) and Russia's Global Navigation Satellite System (GLONASS). The mathematical models for pseudo-range and carrier phase-based modes of positioning, for both single receiver (absolute) positioning and relative positioning implementations, will be developed. These principles will be illustrated using the Matlab GNSS toolkit, allowing students to develop algorithms for real and simulated data processing. Land, marine and airborne positioning applications will be discussed.
Faculty
Faculty of Engineering

School
School of Civil and Environmental Engineering

Study Level
Postgraduate

Indicative contact hours
3

Timetable
Visit timetable website for details
Course Outline

To access course outline, please visit:

GMAT9200 Course Outline
Pre-2019 Handbook Editions

Access past handbook editions (2018 and prior)
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Authorised by Deputy Vice-Chancellor (Academic)
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