MATH 3005 ENVIRONMENTAL INFORMATICS

Credit Points 10

Legacy Code 301035

Coordinator Than Pe (https://directory.westernsydney.edu.au/search/name/Than Pe/)

Description Today, the environment is becoming more and more in the public eye. Methods of environmental monitoring and data analysis are an important source of information for science, business and government regulation. This subject aims to give students a good introduction to environmental informatics and the analysis of spatio-temporal data.

School Computer, Data & Math Sciences

Discipline Statistics

Student Contribution Band HECS Band 1 10cp

Check your HECS Band contribution amount via the Fees (https://www.westernsydney.edu.au/currentstudents/current_students/fees/) page.

Level Undergraduate Level 3 subject

Pre-requisite(s) MATH 1028 OR
MATH 1003 OR
MATH 1030

Learning Outcomes

On successful completion of this subject, students should be able to:

1. Design an environmental sampling program
2. Use and interpret control charts
3. Estimate and interpret Tolerance and Prediction Intervals
4. Use statistical software to conduct time series analyses
5. Use statistical software to analyse spatial data

Subject Content

1. Environmental Sampling
2. Prediction and Tolerance Intervals
3. Control Charts
4. Time Series - Trend and Autocorrelation
5. Autoregressive and Moving Average Process
6. Models for Spatial Data
7. Modelling Spatial Correlation

Assessment

The following table summarises the standard assessment tasks for this subject. Please note this is a guide only. Assessment tasks are regularly updated, where there is a difference your Learning Guide takes precedence.

Type	Length	Percent	Threshold	Individual/ Group Task
Weekly Test (Best 8 from 10)	15 mins for each of 10 weeks	24	N	Individual
Quizzes	3 quizzes of 30 minutes each	12	N	Individual
Computer based Assignment - Data Analysis task	To consist of 10 or so pages of text and computer output, equivalent to approx. 2000 words	14	N	Group
Lab based exam	One exam of 2 hours	50	N	Individual

Teaching Periods

Spring (2023)

Campbelltown

On-site

Subject Contact Than Pe (https://directory.westernsydney.edu.au/search/name/Than Pe/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=MATH3005_23-SPR_CA_1#subjects)

Parramatta - Victoria Rd

On-site

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