COMP 1013 ANALYTICS PROGRAMMING

Credit Points 10

Legacy Code 301487

Coordinator Rosalind Wang (https://directory.westernsydney.edu.au/search/name/Rosalind Wang/)

Description This subject covers the use of computers and computer programming for Data Science. After briefly considering spreadsheet systems, the subject will consider programming in the statistical system "R" in depth. Finally, other special purpose languages will be touched briefly (eg. SQL).

School Computer, Data & Math Sciences

Discipline Computer Science

Student Contribution Band HECS Band 2 10cp

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

Level Undergraduate Level 1 subject

Assumed Knowledge

Familiarity with computer software programs such as Excel.

Learning Outcomes

1. Familiarity with computer software programs such as Excel.
2. Manage and manipulate data using R and R-Studio; including reading and writing data files
3. Write R programs to conduct Data Science tasks
4. Use basic SQL to manage and manipulate data
5. Apply Simulation techniques to Data Science tasks
6. Write reports using Markdown and R-Markdown

Subject Content

1. Use of Spreadsheets for Data Science
2. Introduction to R and R-Studio
3. Data Types, Variables and Expressions
4. Input and Output
5. Control Structures: Loops and Conditional Expressions
6. Writing Functions
7. Simulation techniques
8. Introduction to SQL
9. Using Markdown for reporting

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.

Item	Length	Percent	Threshold	Individual/ Group Task
Quiz	5x 30 min	20	N	Individual
Final Exam	Lab based 1 hour practical	40	N	Individual
Applied Project	3 weeks/ approx. 2000 words	40	N	Individual

Teaching Periods

Autumn

Parramatta - Victoria Rd
Day
Subject Contact Rosalind Wang (https://directory.westernsydney.edu.au/search/name/Rosalind Wang/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=COMP1013_22-AUT_PS_D#subjects)

WSU Online TRI-2

Wsu Online

Online
Subject Contact Natasha Daraio (https://directory.westernsydney.edu.au/search/name/Natasha Daraio/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=COMP1013_22-OT2_OW_O#subjects)

WSU Online TRI-3

Wsu Online

Online
Subject Contact Natasha Daraio (https://directory.westernsydney.edu.au/search/name/Natasha Daraio/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=COMP1013_22-OT3_OW_O#subjects)