COMP 3028 SOFTWARE CONSTRUCTION

Credit Points 10

Legacy Code 301348

Coordinator Rhys Tague (https://directory.westernsydney.edu.au/search/name/Rhys Tague/)

Description Students learn backend software design and secure API development, while also mastering testing and debugging processes. Students also examine development methodologies and build upon existing knowledge of version control and database queries. Throughout this subject, students have the opportunity to apply theoretical knowledge to practical software construction tasks and projects. This holistic approach ensures that they are not only prepared for subsequent software development subjects but are also conversant with current industry-relevant technologies for career pathways in Back-End Development such as Software Tester/Reviewer or DevOps Engineer.

School Computer, Data & Math Sciences

Discipline Programming

Student Contribution Band HECS Band 2 10cp

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

Level Undergraduate Level 3 subject

Pre-requisite(s) COMP2021

Assumed Knowledge

- Basic understanding of version control, such as Git, and group work to develop a software solution.
- Systems Analysis and Design
- Python and Javascript

Learning Outcomes

After successful completion of this subject, students will be able to:

1. Apply programming skills to develop and deploy an event-driven software architecture in a web server environment.
2. Apply secure API practices to control access to online resources.
3. Demonstrate agile software development practices and processes in a group setting.
4. Plan, develop, and implement unit and integration tests.
5. Create a Software Design Document to propose, justify and plan software development.
6. Implement web server and service management techniques for the purpose of achieving service-level agreements.

Subject Content

1. Version Control using Git
2. JavaScript
3. Node.js Framework
4. Secure API Development – JWS and OAUTH
5. Unit and Integration Testing
6. Advanced SQL
7. Server Programming (Python and Javascript)
8. Agile Methodology SCRUM

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	Mandatory
Proposal	1000 words	10	N	Individual	Y
Peer Review	2000 words, or 2 hours per week for 8 weeks	20	N	Individual	Y
Applied Project	3 hours per week for 8 Weeks	30	N	Individual	Y
Final Exam	2 hours	40	Y	Individual	Y

Teaching Periods

Spring (2024)
Campbelltown
On-site
Subject Contact Rhys Tague (https://directory.westernsydney.edu.au/search/name/Rhys Tague/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=COMP3028_24-SPR_CA_1#subjects)

Melbourne
On-site
Subject Contact Rhys Tague (https://directory.westernsydney.edu.au/search/name/Rhys Tague/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=COMP3028_24-SPR_MB_1#subjects)

Parramatta - Victoria Rd
On-site
Subject Contact Rhys Tague (https://directory.westernsydney.edu.au/search/name/Rhys Tague/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=COMP3028_24-SPR_PS_1#subjects)

Sydney City Campus - Term 1 (2025)
Sydney City
On-site
Subject Contact Mahsa Razavi (https://directory.westernsydney.edu.au/search/name/Mahsa Razavi/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=COMP3028_25-SC1_SC_1#subjects)

Spring (2025)

Campbelltown
On-site
Subject Contact Rhys Tague (https://directory.westernsydney.edu.au/search/name/Rhys Tague/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=COMP3028_25-SPR_CA_1#subjects)

Penrith (Kingswood)
On-site
Subject Contact Rhys Tague (https://directory.westernsydney.edu.au/search/name/Rhys Tague/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=COMP3028_25-SPR_KW_1#subjects)

Parramatta - Victoria Rd
On-site
Subject Contact Rhys Tague (https://directory.westernsydney.edu.au/search/name/Rhys Tague/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=COMP3028_25-SPR_PS_1#subjects)

Sydney City Campus - Term 3 (2025)

Sydney City
On-site
Subject Contact Mahsa Razavi (https://directory.westernsydney.edu.au/search/name/Mahsa Razavi/)

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=COMP3028_25-SC3_SC_1#subjects)