

COMP 2029 DEVOPS

Credit Points 10

Coordinator Tomas Trescak ([https://directory.westernsydney.edu.au/search/name/Tomas Trescak/](https://directory.westernsydney.edu.au/search/name/Tomas_Trescak/))

Description DevOps engineers build tools and pipelines for companies delivering software solutions, assuring the quality of their products. By utilising DevOps, companies limit the risk of introducing errors when updating their applications and experiences which allows them to better serve their customers and dynamically react to their needs. In this subject, students learn the principles and philosophy of DevOps and how to build DevOps tools. Students apply their knowledge in practical activities to create and maintain pipelines for continuous delivery. This involves calculating delivery metrics, estimating and evaluating measures of success. Based on the performance in the subject, a selected number of students will have the opportunity to undergo a week-long placement with a target industry partner. Students doing the placement will work on industry projects assessed by professional staff at their placement venue.

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 2 subject

Pre-requisite(s) INFO1003

Co-requisite(s) INFO 3019

Learning Outcomes

1. Explain DevOps principles, methods, practices in terms of Industry application
2. Assess the complexity of business operation and facilitate it using DevOps strategies
3. Collaborate with a diverse team to deliver projects on time to customers in a complex environment
4. Manage the process of DevOps utilising a range of project management tools
5. Create and manage the software implementation and distribution models, software release processes (source, build, test, production)
6. Implement continuous delivery, continuous (automated) deployment, and continuous monitoring pipelines

Subject Content

- History
- Principles
- DevOps in digital transformation
- Silos and how to remove them
- Roles and responsibilities
- Autonomous teams
- DevOps way of working
- Culture
- DevOps at scale
- Continuous delivery pipelines
- Minimum viable products (MVP) for continuous delivery
- Automation of delivery

- Service management
- Metrics and success measurement
- Emerging trends

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 |
|-----------------|---|---------|-----------|---------------------------|
| Practical | 2 hours / 500 words | 40 | N | Individual |
| Applied Project | Part A: 3000 words (plus 1000 lines of programming code) Part B: 15 minutes | 60 | Y | Group |

Placement

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 |
|-----------------|--|---------|-----------|---------------------------|
| Practical | 2 hours / 500 words | 40 | N | Individual |
| Applied Project | Part A: 3000 words (plus 1000 lines of programming code) Part B: 15 minutes Part C: 1500 words | 60 | Y | Group |

Prescribed Texts

Kim, G., Humble, J., Debois, P., & Willis, J. (2021). The DevOps handbook: How to create world-class agility, reliability, & security in technology organizations (2nd ed.). IT Revolution Press.

Teaching Periods

Spring (2024)

Parramatta - Victoria Rd

On-site

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View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=COMP2029_24-SPR_PS_1#subjects)