Session 2 Learning and Teaching Update

The decision has been made to conduct study online for the remainder of Session 2 for all units WITHOUT mandatory on-campus learning activities. Exams for Session 2 will also be online where possible to do so.

This is due to the extension of the lockdown orders and to provide certainty around arrangements for the remainder of Session 2. We hope to return to campus beyond Session 2 as soon as it is safe and appropriate to do so.

Some classes/teaching activities cannot be moved online and must be taught on campus. You should already know if you are in one of these classes/teaching activities and your unit convenor will provide you with more information via iLearn. If you want to confirm, see the list of units with mandatory on-campus classes/teaching activities.

Visit the MQ COVID-19 information page for more detail.
General Information

Unit convenor and teaching staff
Damian Jurd
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Credit points
10

Prerequisites
COMP2250 and COMP3260

Corequisites

Co-badged status
Comp6265

Unit description
This unit is designed to impart practical skills in designing, configuring, installing, and troubleshooting computer internetworks using Cisco equipment such as routers and switches. It provides an integrated and comprehensive coverage of networking topics including: wireless local area networks, network security and services, network architecture and design, and automation while providing students opportunities for hands-on practical experience and career skills development. Using various assessment tasks, this unit also aims to enhance students' skills in critical thinking and problem solving.

Important Academic Dates
Information about important academic dates including deadlines for withdrawing from units are available at https://students.mq.edu.au/important-dates

Learning Outcomes
On successful completion of this unit, you will be able to:

ULO2: Understand, design, implement and troubleshoot security services and technologies that underpin networks and systems.
ULO1: Demonstrate a detailed knowledge of wireless LANs and design, implement and troubleshoot 802.11 Wireless LAN technologies
ULO3: Understand and design core IP services.
ULO4: Analyze, design and implement network architectures
ULO5: Use network automation tools to configure, provisions, manage and test network devices.
ULO6: Collaborate and communicate with others in a professional setting.
ULO7: Conduct professional work ethically with a high level of integrity, autonomy, and accountability.

General Assessment Information

Submission of assessable work
For all your assignments, and for your professional life in the future, you are encouraged to

- set your personal deadline earlier than the official deadline
- keep backups of all your important files
- make sure that no-one else has access to your files or documents

Late work will not be accepted. Develop good working habits and manage your time well. If your contributions are seriously affected by illness or misadventure you do your utmost to submit a request for special consideration before the due date, do not email the unit convenor directly.

Assessment Tasks

<table>
<thead>
<tr>
<th>Name</th>
<th>Weighting</th>
<th>Hurdle</th>
<th>Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekly Practical</td>
<td>10%</td>
<td>No</td>
<td>Weekly</td>
</tr>
<tr>
<td>Module Exams</td>
<td>10%</td>
<td>No</td>
<td>Most weeks</td>
</tr>
<tr>
<td>Assignment 1</td>
<td>10%</td>
<td>No</td>
<td>Week 6</td>
</tr>
<tr>
<td>Lab Examination</td>
<td>20%</td>
<td>No</td>
<td>Week 11</td>
</tr>
<tr>
<td>Assignment 2</td>
<td>20%</td>
<td>No</td>
<td>Week 12</td>
</tr>
<tr>
<td>Final examination</td>
<td>30%</td>
<td>No</td>
<td>Week 13</td>
</tr>
</tbody>
</table>

Weekly Practical
Assessment Type 1: Design Implementation
Indicative Time on Task 2: 24 hours
Due: Weekly
Weighting: 10%

Practical marks are obtained by attendance of practical sessions and making a suitable attempt
at the practical work during the session. The practical work in this unit makes up 10% of the mark. To receive marks student must attend the practical section and demonstrate completion of the section to the practical supervisor. Earning the marks will require not only successful completion of the exercises, but presentation of appropriate documentation, as outlined in the question sheets. Student should complete the practical session in the week it is allocated.

On successful completion you will be able to:

- Understand, design, implement and troubleshoot security services and technologies that underpin networks and systems.
- Demonstrate a detailed knowledge of wireless LANs and design, implement and troubleshoot 802.11 Wireless LAN technologies
- Understand and design core IP services.
- Analyze, design and implement network architectures
- Use network automation tools to configure, provisions, manage and test network devices.
- Collaborate and communicate with others in a professional setting.

**Module Exams**

**Assessment Type**: Examination
**Indicative Time on Task**: 8 hours
**Due**: Most weeks
**Weighting**: 10%

The module examinations ask students to answer conceptual questions about the course material as well as solve simple networking problems.

On successful completion you will be able to:

- Understand, design, implement and troubleshoot security services and technologies that underpin networks and systems.
- Demonstrate a detailed knowledge of wireless LANs and design, implement and troubleshoot 802.11 Wireless LAN technologies
- Understand and design core IP services.
- Analyze, design and implement network architectures
- Collaborate and communicate with others in a professional setting.
- Conduct professional work ethically with a high level of integrity, autonomy, and...
assignment. accountability.

Assignment 1
Assessment Type 1: Report
Indicative Time on Task 2: 16 hours
Due: Week 6
Weighting: 10%

The purpose of this assignment is to help students understand how network security issues can manifest within networks, what controls exist to mitigate these issues, and how to deploy these controls.

On successful completion you will be able to:
- Understand, design, implement and troubleshoot security services and technologies that underpin networks and systems.
- Demonstrate a detailed knowledge of wireless LANs and design, implement and troubleshoot 802.11 Wireless LAN technologies
- Understand and design core IP services.
- Conduct professional work ethically with a high level of integrity, autonomy, and accountability.

Lab Examination
Assessment Type 1: Examination
Indicative Time on Task 2: 2 hours
Due: Week 11
Weighting: 20%

'Closed book' Practical exam to be held at the end of the teaching period during the examination period.

On successful completion you will be able to:
- Understand, design, implement and troubleshoot security services and technologies that underpin networks and systems.
- Demonstrate a detailed knowledge of wireless LANs and design, implement and troubleshoot 802.11 Wireless LAN technologies
• Understand and design core IP services.
• Analyze, design and implement network architectures
• Use network automation tools to configure, provisions, manage and test network devices.
• Conduct professional work ethically with a high level of integrity, autonomy, and accountability.

Assignment 2
Assessment Type 1: Report
Indicative Time on Task 2: 22 hours
Due: Week 12
Weighting: 20%

The purpose of this assignment is to help students obtain a deeper understanding of the relationship between network protocols and network architecture and design.

On successful completion you will be able to:
• Understand, design, implement and troubleshoot security services and technologies that underpin networks and systems.
• Demonstrate a detailed knowledge of wireless LANs and design, implement and troubleshoot 802.11 Wireless LAN technologies
• Understand and design core IP services.
• Analyze, design and implement network architectures
• Use network automation tools to configure, provisions, manage and test network devices.
• Conduct professional work ethically with a high level of integrity, autonomy, and accountability.

Final examination
Assessment Type 1: Examination
Indicative Time on Task 2: 2 hours
Due: Week 13
Weighting: 30%

Two hour, 'closed book' exam to be held at the end of teaching period during the examination period
On successful completion you will be able to:

- Understand, design, implement and troubleshoot security services and technologies that underpin networks and systems.
- Demonstrate a detailed knowledge of wireless LANs and design, implement and troubleshoot 802.11 Wireless LAN technologies
- Understand and design core IP services.
- Analyze, design and implement network architectures
- Use network automation tools to configure, provisions, manage and test network devices.
- Conduct professional work ethically with a high level of integrity, autonomy, and accountability.

If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment
- the Learning Skills Unit for academic skills support.

Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation.

## Delivery and Resources

### Classes

Each week you should attend two hours of lectures, and a two hour practical. For details of scheduled classes consult the timetables webpage.

**Note** that practicals (lab sessions) commence in week 1. The week-by-week details of the practical (lab) classes will be available from iLearn.

You must attend the practical that you are enrolled in.

### Textbook and Reading Materials

The textbook for this semester is:


### Web Resources

### Unit Websites

https://unitguides.mq.edu.au/unit_offerings/141648/unit_guide/print
Comp3267 is administered via iLearn (http://ilearn.mq.edu.au/).

This unit outline can be found in the university’s unit guides.

Live Streaming

Digital recordings of lectures may be available. They will be linked from iLearn.

Technologies Used and Required

In this unit you will be exposed to the following technology and tools:

- Cisco Packet Tracer software.
- Wireshark Packet Analyzer software.
- Cisco Ethernet Switches and Routers.

General Notes

In this unit, you should do the following:

- Attend lectures, take notes, ask questions.
- Attend your weekly Practical session.
- Ensure that you attend module exams during the second hour of the scheduled lecture time slot.
- Read appropriate sections of the text, add to your notes and prepare questions for your lecturer/tutor.
- Work on any assignments that have been released.

Lecture notes will be made available each week but these notes are intended as an outline of the lecture only and are not a substitute for your own notes or the recommended reading list.

Unit Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Lecture topic</th>
<th>Due</th>
<th>Weight</th>
<th>Practical activity</th>
<th>Module Exams</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>OSPF</td>
<td>Practicals (every week)</td>
<td>10%</td>
<td>OSPF, part 1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Network Security Concepts</td>
<td></td>
<td></td>
<td>OSPF, part 2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Access Control Lists</td>
<td>Module Exams (most weeks)</td>
<td>10%</td>
<td>Standard ACLs</td>
<td>OSPF, attempt #1</td>
</tr>
<tr>
<td>4</td>
<td>Network Address Translation</td>
<td></td>
<td></td>
<td>Extended ACLs</td>
<td>Security, attempt #1</td>
</tr>
</tbody>
</table>
Macquarie University policies and procedures are accessible from Policy Central (https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- **Academic Appeals Policy**
- **Academic Integrity Policy**
- **Academic Progression Policy**
- **Assessment Policy**
- **Fitness to Practice Procedure**
- **Grade Appeal Policy**
- **Complaint Management Procedure for Students and Members of the Public**
- **Special Consideration Policy** *(Note: The Special Consideration Policy is effective from 4 December 2017 and replaces the Disruption to Studies Policy.)*

Students seeking more policy resources can visit the Student Policy Gateway (https://students.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central).
Student Support

Macquarie University provides a range of support services for students. For details, visit http://students.mq.edu.au/support/

Learning Skills

Learning Skills (mq.edu.au/learningskills) provides academic writing resources and study strategies to help you improve your marks and take control of your study.

- Getting help with your assignment
- Workshops
- StudyWise
- Academic Integrity Module

The Library provides online and face to face support to help you find and use relevant information resources.

- Subject and Research Guides
- Ask a Librarian

Student Enquiry Service

For all student enquiries, visit Student Connect at ask.mq.edu.au

If you are a Global MBA student contact globalmba.support@mq.edu.au

Equity Support

Students with a disability are encouraged to contact the Disability Service who can provide appropriate help with any issues that arise during their studies.
IT Help

For help with University computer systems and technology, visit http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.

When using the University's IT, you must adhere to the Acceptable Use of IT Resources Policy. The policy applies to all who connect to the MQ network including students.