

# Unit Outline

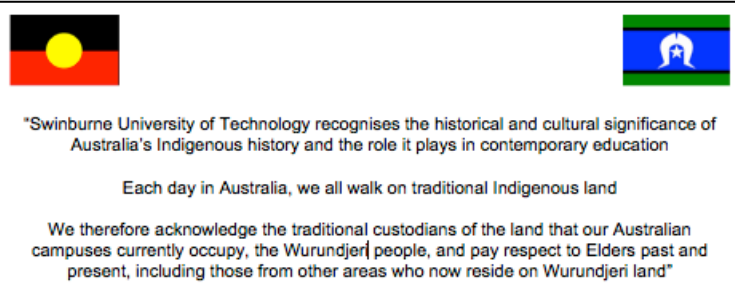
**TNE30012**

## Secure Remote Access Networks

Semester 2 2022

**Please read this Unit Outline carefully. It includes:**

- PART A** Unit summary
- PART B** Your Unit in more detail
- PART C** Further information



## PART A: Unit Summary

<b>Unit Code(s)</b>	TNE30012
<b>Unit Title</b>	Secure Remote Access Networks
<b>Duration</b>	One Semester or equivalent
<b>Total Contact Hours</b>	60 hours
<b>Requisites:</b>	
<b>Pre-requisites</b>	TNE20002 Network Routing Principles
<b>Co-requisites</b>	
<b>Concurrent pre-requisites</b>	
<b>Anti-requisites</b>	
<b>Assumed knowledge</b>	
<b>Credit Points</b>	12.5
<b>Campus/Location</b>	Hawthorn
<b>Mode of Delivery</b>	Online: (Interactive online session 12 hours) Asynchronous: (Discussion session 12 hours) Face to Face Laboratory Work (36 hours)
<b>Assessment Summary</b>	In-Semester 25% Exam Period 75%

### Aims

This unit is designed to teach students to develop an in-depth understanding of network security principles as well as the tools and configurations available. The unit provides a theoretically rich, hands-on introduction to network security, in a logical sequence driven by technologies.

### Unit Learning Outcomes

Students who successfully complete this Unit should be able to:

1. Secure network device access
2. Implement AAA on network devices
3. Implement secure network management and reporting
4. Mitigate common layer 2 attacks
5. Implement firewall and Intrusion Protection Systems
6. Implement site to site IPSec VPNs
7. Administer effective security policies

### Graduate Attributes

This unit may contribute to the development of the following Swinburne Graduate Attributes:

- Communication skills
- Teamwork skills
- Digital literacies

## Content

- Modern network security threats
- Securing network devices
- Authentication, Authorization and Accounting
- Implementing Firewall technologies
- Implementing Intrusion Prevention
- Securing the Local Area Network
- Cryptographic System
- Implementing Virtual Private Networks
- Implementing ASA
- Managing a Secure Network

## PART B: Your Unit in more detail

### Unit Improvements

- Unit has been re-designed for the new CCNA Network Security course

### Unit Teaching Staff

Name	Role	Room	Email	Consultation
Dragi Klimovski	Unit Convenor	EN607c	dklimovski@swin.edu.au	By Appointment
Leo Ciavarella	Lecturer/Lab Demonstrator		lciavarella@swin.edu.au	By Appointment

### Learning and Teaching Structure

Activity	Total Hours	Hours per Week	Teaching Period Weeks
Lectures (Live Online)	12 hours	1 hour	Weeks 1 to 12
Discussions (Asynchronous)	12 hours	1 hour	Weeks 1 to 12
Laboratory Work	36 hours	3 hours	Weeks 1 to 12

## Week by Week Schedule

Week	Week Beginning	Lecture Topic	Lab Topic	Assessment
1	Aug 1	Modern Network Security – Understanding & Mitigating Threats	2.4.8, 4.4.7 & 4.4.9	
2	Aug 8	Securing Device Access & Understanding Privilege Levels	5.2.5, 6.2.7 & 6.3.6	Module 1-3
3	Aug 15	Device Management and Access (AAA)	6.7.11, 7.2.5 & 7.4.7	Module 4-5
4	Aug 22	ACLs & Firewalls	7.4.8 & 10.3.12	Module 6-7
5	Aug 29	Understanding & Implementing Intrusion Prevention Systems	14.9.9 & 15.0.3	Module 8-10
6	Sep 5	Endpoint & Layer 2 Security	15.4.5 & 16.1.6	Module 11-12
<b>Mid-Semester Break – Sep 12 to Sep 16</b>				
7	Sep 19	Cryptographic Services with Integrity & Authenticity	Mini-Skills	Module 13-14
8	Sep 26	Public Key Cryptography and VPNs	16.3.10-12	Module 15-16
9	Oct 3	Implementing IPsec VPNs	17.2.7 & 19.5.6	Module 17-18
10	Oct 10	Intro to ASAs & Network Security Testing	21.2.10 & 21.7.6	Module 19
11	Oct 17	ASA Firewall Configurations	21.9.5	Module 20-22
12	Oct 24	Catch up and Revision	Online Final	

## Assessment

### a) Assessment Overview

Tasks and Details	Individual or Group	Weighting	Unit Learning Outcomes that this assessment task relates to	Assessment Due Date
1. Mini-Skills	Individual	10%	1-4	Week 7
2. CNAP Online Final (Test)	Individual	5%	1-7	Week 12
3. Security Policies	Group	10	1-7	Week 12
4. Skills Exam	Individual	35%	1-6	Formal Exam Period
5. Online Exam	Individual	40%	1-7	Formal Exam Period

(You must do an oral defence to be considered for a HD in this unit)				
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All Cisco chapter tests for this unit of study are taken on-line and will be carried out in your own time. They should be used to provide you with feedback on your level of understanding of the curriculum material for each module; subsequently they contribute zero marks to your overall assessment.

The on-line chapter tests can be accessed at URL <https://www.netacad.com/>

**Note:**

It is a condition of use any of the CNAP material that none of it (including the CISCO logo) be printed nor copied in any form, in part or full.

The Cisco CNAP final will be undertaken in the week 12 lab class under normal exam conditions and you are **NOT** allowed to bring **ANY** material into the exam, except for writing implements.

**b) Minimum requirements to pass this Unit**

As the minimum requirements of assessment to pass the unit and meet all Unit Learning Outcomes to a minimum standard, a student must achieve:

- (i) An aggregate mark of 50% or more, and
- (ii) At least 40% in the online final exam, and
- (iii) A pass grade of 50% for the skills exam.

Students who do not successfully achieve hurdle (ii) and (iii) will receive a maximum of 45% as the total mark for the unit.

In order to graduate in the CNAP (Cisco Networking Academy Program) you must pass the Skills exam and final on-line exam as per the following:

CNAP Final Exam:

- To be passed in the CNAP system you will need to achieve a mark of at least 70 in CCNP Network Security final exam, and

Skills Exam:

- You will need to get at least 80% for the Skills exam.

Note: Configuration scripts for the Skills exam will be recorded and assessed in order to determine the final mark for this assessment task

**c) Examinations**

If the unit you are enrolled in has an official examination, you will be expected to be available for the entire examination period including any Special Exam period.

In the CNAP Skills exam, you are allowed to bring your hand written lab journal.

**d) Submission Requirements**

Assignments and other assessments are generally submitted online through the Canvas assessment submission system which integrates with the Turn-it-in plagiarism checking service.

Please ensure you keep a copy of all assessments that are submitted.

In cases where a hard copy submission is required an Assessment Cover Sheet must be submitted with your assignment. The standard Assessment Cover Sheet is available from the Current Students web site (see Part C).

**e) Extensions and Late Submission**

Late Submissions - Unless an extension has been approved, late submissions will result in a penalty. You will be penalised 10% of your achieved mark for each working day the task is late, up to a maximum of 5 working days. After 5 working days, a zero result will be recorded.

**f) Referencing**

To avoid plagiarism, you are required to provide a reference whenever you include information from other sources in your work. Further details regarding plagiarism are available in Section C of this document.

Referencing conventions required for this unit are: IEEE Referencing

Helpful information on referencing can be found at  
<http://www.swinburne.edu.au/library/referencing/>

**g) Groupwork Guidelines**

A group assignment is the collective responsibility of the entire group, and if one member is temporarily unable to contribute, the group should be able to reallocate responsibilities to keep to schedule. In the event of longer-term illness or other serious problems involving a member of group, it is the responsibility of the other members to notify immediately the Unit Convenor or relevant tutor.

Group submissions must be submitted with an Assignment Cover Sheet, signed by all members of the group.

All group members must be satisfied that the work has been correctly submitted. Any penalties for late submission will generally apply to all group members, not just the person who submitted.

**Recommended Reading Materials**

The Library has a large collection of resource materials, both texts and current journals. Listed below are some references that will provide valuable supplementary information to this unit. It is also recommended that you explore other sources to broaden your understanding.

CCNA Security 210-260 Official Cert Guide Omar Santos, John Stuppi, Cisco Press, 2015

## PART C: FURTHER INFORMATION



For further information on any of these topics, refer to Swinburne's Current Students web page <http://www.swinburne.edu.au/student/>.

### **Student behaviour and wellbeing**

All students are expected to: act with integrity, honesty and fairness: be inclusive, ethical and respectful of others; and appropriately use University resources, information, equipment and facilities. All students are expected to contribute to creating a work and study environment that is safe and free from bullying, violence, discrimination, sexual harassment, vilification and other forms of unacceptable behaviour.

The [Student Charter](#) describes what students can reasonably expect from Swinburne in order to enjoy a quality learning experience. The Charter also sets out what is expected of students with regards to your studies and the way you conduct yourself towards other people and property.

You are expected to familiarise yourself with University regulations and policies and are obliged to abide by these, including the [Student Academic Misconduct Regulations](#), [Student General Misconduct Regulations](#) and the [People, Culture and Integrity Policy](#). Any student found to be in breach of these may be subject to disciplinary processes.

Examples of expected behaviours are:

- conducting yourself in teaching areas in a manner that is professional and not disruptive to others
- following specific safety procedures in Swinburne laboratories, such as wearing appropriate footwear and safety equipment, not acting in a manner which is dangerous or disruptive (e.g. playing computer games), and not bringing in food or drink
- following emergency and evacuation procedures and following instructions given by staff/wardens in an emergency response

### **Canvas**

You should regularly access the Swinburne learning management system, Canvas, which is available via the Current Students webpage or <https://swinburne.instructure.com/>. Canvas is updated regularly with important unit information and communications.

### **Communication**

All communication will be via your Swinburne email address. If you access your email through a provider other than Swinburne, then it is your responsibility to ensure that your Swinburne email is redirected to your private email address.

### **Academic Integrity**

Academic integrity is about taking responsibility for your learning and submitting work that is honestly your own. It means acknowledging the ideas, contributions and work of others; referencing your sources; contributing fairly to group work; and completing tasks, tests and exams without cheating.

Swinburne University uses the Turnitin system, which helps to identify inadequate citations, poor paraphrasing and unoriginal work in assignments that are submitted via Canvas. Your Unit Convenor will provide further details.

Plagiarising, cheating and seeking an unfair advantage with regards to an exam or assessment are all breaches of academic integrity and treated as academic misconduct.

Plagiarism is submitting or presenting someone else's work as though it is your own without full and appropriate acknowledgement of their ideas and work. Examples include:

- using the whole or part of computer program written by another person as your own

- using the whole or part of somebody else's written work in an essay or other assessable work, including material from a book, journal, newspaper article, a website or database, a set of lecture notes, current or past student's work, or any other person's work
- poorly paraphrasing somebody else's work
- using a musical composition or audio, visual, graphic and photographic work created by another
- using realia created by another person, such as objects, artefacts, costumes, models
- submitting assessments that have been developed by another person or service (paid or unpaid), often referred to as contract cheating
- presenting or submitting assignments or other work in conjunction with another person or group of people when that work should be your own independent work, This is regardless of whether or not it is with the knowledge or consent of the other person(s). Swinburne encourages students to talk to staff, fellow students and other people who may be able to contribute to a student's academic work but where an independent assignment is required, the work must be the student's own
- enabling others to plagiarise or cheat, including letting another student copy your work or by giving access to a draft or completed assignment

The penalties for academic misconduct can be severe, ranging from a zero grade for an assessment task through to expulsion from the unit and, in the extreme, exclusion from Swinburne.

### **Student support**

Swinburne offers a range of services and resources to help you complete your studies successfully. Your Unit Convenor or studentHQ can provide information about the study support and other services available for Swinburne students.

### **Special consideration**

If your studies have been adversely affected due to serious and unavoidable circumstances outside of your control (e.g. severe illness or unavoidable obligation), you may be able to apply for special consideration (SPC).

Applications for Special Consideration will be submitted via the SPC online tool normally no later than 5.00pm on the third working day after the submission/sitting date for the relevant assessment component.

### **Accessibility needs**

Sometimes students with a disability, a mental health or medical condition or significant carer responsibilities require reasonable adjustments to enable full access to and participation in education. Your needs can be addressed by Swinburne's AccessAbility Services by negotiating and distributing an 'Education Access Plan'. The plan makes recommendations to university teaching and examination staff. You must notify AccessAbility Services of your disability or condition within one week after the commencement of your unit to allow the University to make reasonable adjustments.

### **Review of marks**

An independent marker reviews all fail grades for major assessment tasks. In addition, a review of assessment is undertaken if your final result is between 45 and 49 or within 2 marks of any grade threshold.

If you are not satisfied with the result of an assessment, you can ask the Unit Convenor to review the result. Your request must be made in writing within 10 working days of receiving the result. The Unit Convenor will review your result to determine if your result is appropriate.

If you are dissatisfied with the outcomes of the review, you can lodge a formal complaint.

### **Feedback, complaints and suggestions**

In the first instance, discuss any issues with your Unit Convenor. If you are dissatisfied with the outcome of the discussion or would prefer not to deal with your Unit Convenor, then you can complete a feedback form. See <https://www.swinburne.edu.au/corporate/feedback/>



## **Advocacy**

Should you require assistance with any academic issues, University statutes, regulations, policies and procedures, you are advised to seek advice from an Independent Advocacy Officer at Swinburne Student Life.

For an appointment, please call 03 9214 5445 or email [advocacy@swin.edu.au](mailto:advocacy@swin.edu.au) For more information, please see <https://www.swinburne.edu.au/current-students/student-services-support/advocacy/>