

School of Software and Electrical Engineering



Unit Outline

TNE10005

Network Administration

Semester 1, 2021

Please read this Unit Outline carefully. It includes:

PART A Unit summary

PART B Your Unit in more detail

PART C Further information



"Swinburne University of Technology recognises the historical and cultural significance of Australia's Indigenous history and the role it plays in contemporary education"

Each day in Australia, we all walk on traditional Indigenous land

We therefore acknowledge the traditional custodians of the land that our Australian campuses currently occupy, the Wurundjeri people, and pay respect to Elders past and present, including those from other areas who now reside on Wurundjeri land"

PART A: Unit Summary

Unit Code(s)	TNE10005
Unit Title	Network Administration
Duration	One Semester or equivalent
Total Contact Hours	60 hours
Requisites:	
Pre-requisites	Nil
Co-requisites	Nil
Concurrent pre-requisites	Nil
Anti-requisites	Nil
Assumed knowledge	Nil
Credit Points	12.5
Campus/Location	Hawthorn
Mode of Delivery	Online Synchronous and On-campus* <small>*When CoVid19-safe numbers permit, laboratory classes will be conducted on-campus</small>
Assessment Summary	The following are the unit assessments: <ul style="list-style-type: none">• Graded Online Quizzes 20%• Skills Assessment 20%• Theory Assessment 60%

Aims

To build the understanding and skills required to design, configure and manage a single domain network.

Unit Learning Outcomes

Students who successfully complete this unit will be able to:

- ULO-1. Apply the OSI model and the TCP/IP model in networking
- ULO-2. Explain IP networking protocol, routing and transition to IPv6
- ULO-3. Plan an IP addressing strategy and automated configuration with DHCP
- ULO-4. Design, install and maintain secure Windows systems
- ULO-5. Perform user and domain resource management
- ULO-6. Monitor system quality, plan risk management and disaster recovery strategies
- ULO-7. Appraise the knowledge areas of project management and plan responses to project management issues

Graduate Attributes

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

- Communication skills
- Teamwork skills
- Digital literacies

Content

- Network Fundamentals
- Project Management
- Deploying and Managing Windows Server 2016
- Active Directory Domain Services
- IPv4, IPv6 and Dynamic Host Configuration Protocol
- Domain Name System
- File and Print Services
- Group Policy
- Server Virtualization with Hyper-V
- Managing Risk and Disaster Recovery
- Managing Quality by Monitoring Windows

PART B: Your Unit in more detail

Unit Improvements

Feedback provided by previous students through the Student Survey has resulted in improvements to this unit. Recent improvements include:

- Creating a pre-reading list for students who want to start studying before the lecture
- Configuring remote access to ATC626 computers & Azure Labs for skills practice.
- Updating lab servers to dual SSDs to speed up VM loading
- Reducing cost of textbooks by adopting Microsoft Press MCSA Windows Server 2016 textbooks.

Unit Teaching Staff

Name	Role	Room	Phone	Email	Consultation Times
Rhys Shobbrook	Unit Convenor & Lecturer	EN601b	9214 5325	rhobbrook@swin.edu.au	By Appointment Mon 2:00-3:00pm On-campus Wed 10:30-11:00am On-line Wed 2:00-2:30pm On-line
Utami Tran	Unit Moderator	EN607a	9214 3787	utrant@swin.edu.au	By Appointment
Armita Zarnegar	Tutor	NA	NA	azarnegar@swin.edu.au	In allocated labs
Mohammed Aquib	Tutor	NA	NA	maquib@swin.edu.au	In allocated labs
Purvi Koradiya	Tutor	NA	NA	pkoradiya@swin.edu.au	In allocated labs
Pouya Koushandefar	Tutor	NA	NA	pkoushandefar@swin.edu.au	In allocated labs
Fahmida Tasnim Prema	Tutor	NA	NA	fprema@swin.edu.au	In allocated labs
Justin Raymond	Tutor	NA	NA	jraymond@swin.edu.au	In allocated labs
Chinmayi Sajjala	Tutor	NA	NA	csajjala@swin.edu.au	In allocated labs
Farinaz Jokarishasel Taneh	Tutor	NA	NA	fjowkarishasaltaneh@swin.edu.au	In allocated labs

Learning and Teaching Structure

*Scheduled Collaborate Ultra Classes:

Activity	Total Hours	Hours per Week	Teaching Period Weeks
Lectures (On-line)	24 hours	2 hours	Weeks 1 to 12
Practical Classes* <i>*In the first weeks, the labs will be online and remote. When CoVid19-safe numbers permit, labs will be on campus.</i>	33 hours	3 hour	Weeks 2 to 12

TNE10005/TNE60002 Network Administration Schedule - 2021, Semester 1

Wk	Week Begin	Lecture Topic (Thu 6:30pm - Online)	Practical Class	Test
1	1/Mar	Intro, Network Components & PC components	None - Practical classes start in week 2.	
2	8/Mar	OSI, Network Infrastructures & PM1	Intro Lab - Using Hyper-V, Creating a Virtual Machine, Connecting a Network <i>(Monday labs run as normal - i.e. No holiday)</i>	
3	15/Mar	PM2 & IPv4 Addressing	MS Project 2016 lab	
4	22/Mar	Subnetting DHCP	Implementing IPv4 & Subnetting Exercises	
5a	29/Mar	<i>(Split week - no lecture on 1/Apr)</i>	Dynamic Host Configuration Protocol Intermediate subnetting	Test 1
Non-Teaching (Split Week) Classes: Mon 29/Mar - Wed 31/Mar; No classes: Thu 1/Apr - Wed 7/Apr; Classes resume: Thu 8/Apr - Fri 9/Apr				
5b	5/Apr	DNS File & Print services	Dynamic Host Configuration Protocol Intermediate subnetting	
6	12/Apr	Manage ADDS	DNS IIS	
7	19/Apr	Groups and Permissions	Configuring a Windows Server 2016 Domain	
8	26/Apr	Group Policy Objects	Securing resources in a multi-domain forest	
9	3/May	Managing Security in a Windows Network	Configuring Group Policies in a Windows 2016 Domain	
10	10/May	Managing Quality in a Windows Network	Managing Security in a Domain	
11	17/May	IPv6, Local & cloud storage; Azure	Practice Skills Assessment 1	Test 2
12	24/May	Review	Practice Skills Assessment 2	

A hyper-linked version of this semester schedule is available on the [Canvas homepage](#) for this unit

Assessment

a) Assessment Overview

Tasks and Details	Individual or Group	Weight	Unit Learning Outcomes that this assessment task relates to	Assessment Due Date
1. Graded Online Quizzes	Individual	20%	ULO 1-7	
1A. Test 1 ϕ	Individual	6%	ULO 1-4,7	Start of week 6 Lab*
1B. Test 2 ϕ	Individual	6%	ULO 1-7	Start of week 11
1C. Quizzes (Revision & Slide) ψ	Individual	6%	ULO 1-7	Each week
1D. Practice Skills λ	Individual	2%	ULO 1-6	Weeks 11 and 12
2. Theory Assessment	Individual	60%	ULO 1-7	Formal Exam Period
3. Skills Assessment Ω	Individual	20%	ULO 1-6	Formal Exam Period

Note: When assessments are conducted on-line, students are required to have a functional web-camera and microphone.

ϕ Students who are ≥ 15 minutes late to the test will be awarded zero. Students who are unable to attend a test due to illness must provide an acceptable medical certificate in evidence. Such students will be awarded their average for the laboratory quizzes conducted at the start of each lab, up until the point of the test, or at the discretion of the convenor an alternative assessment. Some students may be required to participate in verification.

*If laboratory classes are on-campus, the tests will be conducted at the start of your allocated lab, If the laboratory classes are on-line, the test will be at the start of the on-line lecture in that week.

ψ Students can obtain $\frac{1}{3}$ mark for each quiz completed by the scheduled time and to the required standard, to a maximum of 6 marks. There are no marks for quizzes submitted late.

Revision quizzes – must be started in the first 15 minutes of your allocated lab and must score above 25% to earn $\frac{1}{3}$ mark.

Slide quizzes – must be completed in the week following the lecture and must score above 80% to earn $\frac{1}{3}$

λ Students can obtain 1 mark for each Practice Skills submission that successfully upload answers for the practice skills assessments.

Ω All students must have a skills submission validated by an assessor. If validated on-line, students must have a functioning web-camera and microphone. Your mark for the Skills assessment cannot be finalised without being validated.

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 final **theory assessment**, and
- (iii) A pass grade for the **skills assessment**, which is 60% (i.e. 12/20).

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

Any modifications to these hurdles will be posted as an announcement on Canvas

c) **Examinations and End of Semester Assessments**

This unit has official assessments. You will be expected to be available for the entire examination period including any Special Exam period.

d) **Submission Requirements**

Some assessments require students to upload documents. It is the responsibility of each student to ensure that they are familiar with the process for uploading documents within a Canvas quiz and to submit within the time allocated.

e) **Extensions and Late Submission**

Students are required to attend tests in their allocated lab class and other assessments at their allocated time. Students who arrive more than 15 minutes late to a test will not be permitted to sit the test. Students who are absent due to severe illness, or another serious issue, have **three** days from the date of assessment in which to apply for special consideration. Special consideration is not always given.

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 or Harvard

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

g) **Groupwork Guidelines**

There are no group assignments in this unit

Recommended Textbooks

Note: these textbook are not required, but are highly recommended

*These books will also be the recommended textbooks for
TNE30018/TNE80007 Enterprise Network Server Administration.*



Publisher - Microsoft Press

Exam ref 70-740 Installation, storage and compute with Windows Server 2016 by Craig Zacker

Exam ref 70-741 Networking with Windows Server 2016 by Andrew Warren

Exam ref 70-742 Identity with Windows Server 2016 by Andrew Warren

Topics from all three books will be taught throughout the semester.

These books can be:

- Borrowed from the library.
- Accessed online via the Swinburne Library site (details provided on Canvas home page for this unit).
- Purchased as a 3-Pack from the Swinburne Bookshop.
- Purchased as ebooks (from a link provided on Canvas home page for this unit).

The recommended textbook(s) are available to borrow from the library or purchased from Swinburne Bookshop: <http://bookshop.swin.edu.au>

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.

Details and links to recommended reading are provided on Canvas:
<https://swinburne.instructure.com/courses/15147/pages/recommended-textbooks>

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 For more information, please see <https://www.swinburne.edu.au/current-students/student-services-support/advocacy/>