

Course Title:	<b>Network and System Administration</b>
Course Code:	<b>COMP609</b>
Descriptor Start Date:	<b>31/01/2025</b>
POINTS:	<b>15.00</b>
LEVEL:	<b>6</b>
PREREQUISITE/S:	<b>COMP504 or ENEL504</b>
COREQUISITE/S:	<b>None</b>
RESTRICTION/S:	<b>None</b>

## LEARNING HOURS

Hours may include lectures, tutorials, online forums, laboratories. Refer to your timetable and course information in Canvas for detailed information.

**Total learning hours: 150**

## PRESCRIPTOR

Issues, skills and strategies associated with providing core services over a network in a multi user environment. The student will also learn about fine tuning of networked systems for optimum delivery in terms of security, cost and speed.

## LEARNING OUTCOMES

1. Discuss the implementation of the policies and procedures associated with managing an enterprise network to meet end-user needs
2. Install and configure email systems and collaborative software, security, authentication, encryption services, backup, recovery, and virus control on an enterprise network
3. Discuss high-speed network options and their management requirements.
4. Implement and administer core network services required for an organisation's IT infrastructure (email services, application services, network client services).
5. Describe the requirements for internetworking security from the perspective of individual hosts to network and Internetwork firewalling.

**Disclaimer: Course descriptors may be amended between teaching periods/semesters**

## CONTENT

Analysing user requirements

- Managing an enterprise network
- Issues surrounding the evaluation and selection of appropriate network topologies, structures and technologies
- Hardware and software
- Install and configure web services
  - Internet
  - Intranet
- Install and configure email systems and collaborative software
- Serving networked applications
- Backups, disaster recovery and virus control systems
- The setting up of file and print services using multi-user multi-tasking operating systems with multiple users, comparing and contrasting the advantages and disadvantages of the major server systems
- The requirements and methods of integrating different operating systems into a small homogeneous networked computing environment
- The creation and management of user groups within the established file and print environment
- The requirements for internetworking security from the perspective of individual hosts to network and Internetwork firewalling and compare and contrast some of the current techniques
- The requirement for appropriate partitioning, capacity planning, performance tuning
- The creation of small administration scripts to automate simple administrative tasks on a server
- The relevant tools and utilities will be used to configure, run and test the required service software, add and modify users and groups and trouble shoot setting up problems.
- They will apply and analyse the effectiveness of various security methods against their configured systems, applying improvements where necessary.

## LEARNING & TEACHING STRATEGIES

- Readings, Exercises
- Lectures
- Student presentations
- Class discussion
- Guest speaker/lecturer if appropriate
- Laboratory sessions
- Online learning modes: online tutorial(s)

## ASSESSMENT PLAN

Assessment Event	Weighting %	Learning Outcomes
Case-study Assignment	20.00	1, 3,5
Practical Mini-Project	30.00	1, 2, 3, 4
Final Exam	50.00	1, 2, 3, 4, 5

### Grade Map

#### MAP1

A+ A A- Pass with Distinction  
B+ B B- Pass with Merit  
C+ C C- Pass  
D Fail

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## Overall requirement/s to pass the course:

To pass this course, students must attempt all summative assessments and achieve a minimum overall grade of C-.

## LEARNING RESOURCES

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Prescribed text: Limoncelli T., Hogan C, Chalup S., (2007) The Practice of System and Network Administration, (2nd Edition) Boston: Addison-Wesley. Network monitoring and protocol analysis tools Fully functional independent network infrastructure for practical work and student projects  
Suggested resource: Emerson, L. (2000) Writing Guidelines for Business Students (2nd ed.) Palmerston North: Dunmore Press

**For further information, contact:** Te Ara Auaha - Faculty of Design & Creative Technologies

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**Principal Programme:**     **AK3697, Bachelor of Computer and Information Sciences**

**Related Programme/s:**   **AK1302**  
                                     **AK3698**  
                                     **AK3756**  
                                     **ICE1**  
                                     **INEXCH1**  
                                     **SABRD1**

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