USC

COURSE OUTLINE

ICT120 Computer Networks

Course Coordinator: Keyvan Ansari (kansari@usc.edu.au) **School:** School of Science, Technology and Engineering

2021 | Semester 2

USC Sunshine Coast USC Moreton Bay	ON CAMPUS	Most of your course is on campus but you may be able to do some components of this course online.
Online	ONLINE	You can do this course without coming onto campus.

Please go to the USC website for up to date information on the teaching sessions and campuses where this course is usually offered.

1. What is this course about?

1.1. Description

Internet, the network of computers worldwide, has become an indispensable part of almost every business, school, and home. This course guides you to explore the fundamental technologies and solutions in network applications, hardware components, architectures, communication protocols, industrial standards, and system management. You will understand how networks, as small as an in-home local area network or as big as global Internet, are built and how they work to enable the information sharing and communications across devices. You will also gain hands-on experience in network simulations and traffic analysis which will help you utilise the learned knowledge into real-world practices.

1.2. How will this course be delivered?

ACTIVITY	HOURS	BEGINNING WEEK	FREQUENCY
ON CAMPUS			
Tutorial/Workshop 1 – In-class tutorial	2hrs	Week 2	11 times
Lecture – Zoom lecture	1hr	Week 1	12 times
ONLINE 1			
Tutorial/Workshop 1 – Interactive zoom tutorial	2hrs	Week 2	11 times
Lecture – Zoom lecture	1hr	Week 1	12 times

1.3. Course Topics

Introduction to Computer Networks.
Network Hardware Essentials.
Network Topologies and Technologies.
Network Media.
Network Protocols.
IP Addressing.
Network Reference Models and Standards.
Network Hardware in Depth.
Introduction to Network Security.
Wide Area Networking and Cloud Computing.
Network Management and Administration.
Troubleshooting and Support.

2. What level is this course?

> 100 Level (Introductory)

Engaging with discipline knowledge and skills at foundational level, broad application of knowledge and skills in familiar contexts and with support. Limited or no prerequisites. Normally, associated with the first full-time study year of an undergraduate program.

3. What is the unit value of this course?

> 12 units

4. How does this course contribute to my learning?

COURSE LEARNING OUTCOMES	GRADUATE QUALITIES
On successful completion of this course, you should be able to...	Completing these tasks successfully will contribute to you becoming...
1 Implement the foundation concepts of networks.	Knowledgeable Empowered
2 Explain fundamental networking concepts.	Empowered
3 Apply networking concepts to solve a business problem.	Creative and critical thinker
4 Demonstrate knowledge and uses of new areas of networking.	Knowledgeable Creative and critical thinker

5. Am I eligible to enrol in this course?

Refer to the USC Glossary of terms for definitions of "pre-requisites, co-requisites and anti-requisites".

5.1. Pre-requisites

> Not applicable

5.2. Co-requisites

> Not applicable

5.3. Anti-requisites

> Not applicable

5.4. Specific assumed prior knowledge and skills (where applicable)

> Not applicable

6. How am I going to be assessed?

6.1. Grading Scale

> Standard Grading (GRD)

High Distinction (HD), Distinction (DN), Credit (CR), Pass (PS), Fail (FL).

6.2. Details of early feedback on progress

case studies discussed in the tutorial provide early feedback.

6.3. Assessment tasks

DELIVERY MODE	TASK NO.	ASSESSMENT PRODUCT	INDIVIDUAL OR GROUP	WEIGHTING %	WHAT IS THE DURATION / LENGTH?	WHEN SHOULD I SUBMIT?	WHERE SHOULD I SUBMIT IT?
All	1	Quiz/zes	Individual	20%	One-hour	Week 5	Online Test (Quiz)
All	2	Report	Individual	50%	weeks 6-10	Week 10	Online Assignment Submission with plagiarism check
All	3	Examination - Centrally Scheduled	Individual	30%	one hour	Exam Period	Online Assignment Submission with plagiarism check

All - Assessment Task 1: Assessment Task 1

GOAL:	To demonstrate knowledge of foundation concepts of computer networks.	
PRODUCT:	Quiz/zes	
FORMAT:	This is an individual assessment that covers the first 4 weeks of content. Further details will be available on Blackboard in the assignment specification.	
CRITERIA:	**No.**	**Learning Outcome assessed**
	1 Comprehension and knowledge of foundation concepts of computer networks.	② ④

All - Assessment Task 2: Assessment Task 2

GOAL:	To demonstrate your ability to design and implement networking solutions according to business needs.	
PRODUCT:	Report	
FORMAT:	This is an individual assessment. A technical report explaining the networking solution for a specified business case study. Further details will be available on Blackboard in the assignment specification	
CRITERIA:	**No.**	**Learning Outcome assessed**
	1 Critical analysis of an organisation's networking requirements. Application of the networking concepts to the business problem. Justification of developed network solution. Written communication skills	① ③ ④

All - Assessment Task 3: Assessment Task 3:

GOAL:	To demonstrate your knowledge and understanding of computer networks.
PRODUCT:	Examination - Centrally Scheduled
FORMAT:	This is an individual assessment

CRITERIA:	No.		Learning Outcome assessed
	1	Application and communication of definitions and concepts used in networking design Discussion of the position of networking design in organisations Definition of a business problem and presentation of a networking solution to solve the problem	① ② ④

7. Directed study hours

A 12-unit course will have total of 150 learning hours which will include directed study hours (including online if required), self-directed learning and completion of assessable tasks. Directed study hours may vary by location. Student workload is calculated at 12.5 learning hours per one unit.

8. What resources do I need to undertake this course?

Please note: Course information, including specific information of recommended readings, learning activities, resources, weekly readings, etc. are available on the course Blackboard site– Please log in as soon as possible.

8.1. Prescribed text(s) or course reader

Please note that you need to have regular access to the resource(s) listed below. Resources may be required or recommended.

REQUIRED?	AUTHOR	YEAR	TITLE	PUBLISHER
Required	Greg Tomsho	2020	Guide to Networking Essentials	Cengage Learning

8.2. Specific requirements

Not applicable

9. How are risks managed in this course?

Health and safety risks for this course have been assessed as low. It is your responsibility to review course material, search online, discuss with lecturers and peers and understand the health and safety risks associated with your specific course of study and to familiarise yourself with the University's general health and safety principles by reviewing the online induction training for students, and following the instructions of the University staff.

10. What administrative information is relevant to this course?

10.1. Assessment: Academic Integrity

Academic integrity is the ethical standard of university participation. It ensures that students graduate as a result of proving they are competent in their discipline. This is integral in maintaining the value of academic qualifications. Each industry has expectations and standards of the skills and knowledge within that discipline and these are reflected in assessment.

Academic integrity means that you do not engage in any activity that is considered to be academic fraud; including plagiarism, collusion or outsourcing any part of any assessment item to any other person. You are expected to be honest and ethical by completing all work yourself and indicating in your work which ideas and information were developed by you and which were taken from others. You cannot provide your assessment work to others. You are also expected to provide evidence of wide and critical reading, usually by using appropriate academic references.

In order to minimise incidents of academic fraud, this course may require that some of its assessment tasks, when submitted to Blackboard, are electronically checked through SafeAssign. This software allows for text comparisons to be made between your submitted assessment item and all other work that SafeAssign has access to.

10.2. Assessment: Additional Requirements

Eligibility for Supplementary Assessment

Your eligibility for supplementary assessment in a course is dependent of the following conditions applying:

The final mark is in the percentage range 47% to 49.4%
The course is graded using the Standard Grading scale
You have not failed an assessment task in the course due to academic misconduct

10.3. Assessment: Submission penalties

Late submission of assessment tasks may be penalised at the following maximum rate:
- 5% (of the assessment task's identified value) per day for the first two days from the date identified as the due date for the assessment task.
- 10% (of the assessment task's identified value) for the third day - 20% (of the assessment task's identified value) for the fourth day and subsequent days up to and including seven days from the date identified as the due date for the assessment task.
- A result of zero is awarded for an assessment task submitted after seven days from the date identified as the due date for the assessment task. Weekdays and weekends are included in the calculation of days late. To request an extension you must contact your course coordinator to negotiate an outcome.

10.4. Study help

For help with course-specific advice, for example what information to include in your assessment, you should first contact your tutor, then your course coordinator, if needed.

If you require additional assistance, the Learning Advisers are trained professionals who are ready to help you develop a wide range of academic skills. Visit the Learning Advisers web page for more information, or contact Student Central for further assistance: +61 7 5430 2890 or studentcentral@usc.edu.au.

10.5. Wellbeing Services

Student Wellbeing provide free and confidential counselling on a wide range of personal, academic, social and psychological matters, to foster positive mental health and wellbeing for your academic success.

To book a confidential appointment go to Student Hub, email studentwellbeing@usc.edu.au or call 07 5430 1226.

10.6. AccessAbility Services

Ability Advisers ensure equal access to all aspects of university life. If your studies are affected by a disability, learning disorder mental health issue, , injury or illness, or you are a primary carer for someone with a disability or who is considered frail and aged, AccessAbility Services can provide access to appropriate reasonable adjustments and practical advice about the support and facilities available to you throughout the University.

To book a confidential appointment go to Student Hub, email AccessAbility@usc.edu.au or call 07 5430 2890.

10.7. Links to relevant University policy and procedures

For more information on Academic Learning & Teaching categories including:

- Assessment: Courses and Coursework Programs
- Review of Assessment and Final Grades
- Supplementary Assessment
- Administration of Central Examinations
- Deferred Examinations
- Student Academic Misconduct
- Students with a Disability

Visit the USC website: http://www.usc.edu.au/explore/policies-and-procedures#academic-learning-and-teaching

10.8. General Enquiries

In person:
- **USC Sunshine Coast** - Student Central, Ground Floor, Building C, 90 Sippy Downs Drive, Sippy Downs
- **USC Moreton Bay** - Service Centre, Ground Floor, Foundation Building, Gympie Road, Petrie
- **USC SouthBank** - Student Central, Building A4 (SW1), 52 Merivale Street, South Brisbane
- **USC Gympie** - Student Central, 71 Cartwright Road, Gympie
- **USC Fraser Coast** - Student Central, Student Central, Building A, 161 Old Maryborough Rd, Hervey Bay
- **USC Caboolture** - Student Central, Level 1 Building J, Cnr Manley and Tallon Street, Caboolture

Tel: +61 7 5430 2890
Email: studentcentral@usc.edu.au