



## COURSE OUTLINE

# SEC301 Cyber Security

**Course Coordinator:** Dennis Desmond (ddesmond@usc.edu.au) **School:** School of Science, Technology and Engineering

2022 | Semester 1

USC Moreton Bay

**BLENDED  
LEARNING**

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

Securing data and cyber networks remains one of the most important aspects of modern computing. You will explore key cyber and information security theories, tools and practices including the NIST Cybersecurity Framework and how cyber criminals target individuals and businesses, unlawfully seizing data and identities. You will also identify the dark markets where stolen data, identities and Intellectual Property is traded and how international law enforcement agencies operate to locate and prosecute cyber criminals.

### 1.2. How will this course be delivered?

ACTIVITY	HOURS	BEGINNING WEEK	FREQUENCY
<b>BLENDED LEARNING</b>			
<b>Learning materials</b> – Asynchronous learning material	2hrs	Week 1	13 times
<b>Tutorial/Workshop 1</b> – On campus workshop	2hrs	Week 1	13 times
<b>ONLINE</b>			
<b>Learning materials</b> – Asynchronous learning material	2hrs	Week 1	13 times
<b>Tutorial/Workshop 1</b> – Online workshop	2hrs	Week 1	13 times

### 1.3. Course Topics

- Introduction to Cybercrime
- Who's who in the zoo- The Main Players
- Cybercrime Types and Methodologies
- Technical Cyber Analysis and Report Writing
- All About Hackers
- The Economic Impact
- Australian Cybercrime Enforcement Efforts
- International Cybercrime Enforcement Efforts
- Technology Acquisition and Adoption
- Victim Impacts
- Cyber Criminal Motivations
- Personal Security and Privacy in the Digital Age
- Cybersecurity and the cyber defence economy

## 2. What level is this course?

300 Level (Graduate)

Demonstrating coherence and breadth or depth of knowledge and skills. Independent application of knowledge and skills in unfamiliar contexts. Meeting professional requirements and AQF descriptors for the degree. May require pre-requisites where discipline specific introductory or developing knowledge or skills is necessary. Normally undertaken in the third or fourth 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 Analyse the digital cybersecurity environment from the attacker's and defender's perspectives.	Knowledgeable
2 Explain the range of technical and social engineering threats impacting individuals and organisations, and the controls and policies needed to secure against or mitigate them.	Knowledgeable
3 Rationalise the human and technical vulnerabilities in cyber and information security to understand human reasoning and prevent further attacks.	Creative and critical thinker
4 Justify cyber security and governance practices to manage key cyber security risks to an organisation	Empowered
5 Communicate cyber security principles and applications to a variety of technical and non-technical audiences.	Engaged

## 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

SEC100 and ICT220

### 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

On-going formative feedback will be provided in workshops throughout the course.

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	Report	Individual	30%	1,500 words	Week 4	Online Assignment Submission with plagiarism check
All	2	Written Piece	Group	30%	2000	Week 8	Online Assignment Submission with plagiarism check
All	3	Portfolio	Individual or Group	40%	50 Questions	Week 13	Online Submission

**All - Assessment Task 1:** Cybersecurity Assessment Written Report

<b>GOAL:</b>	Students will explain possible attack and intrusion methodologies that could be used to gain unauthorised access to corporate and personal data through technical and social engineering attacks	
<b>PRODUCT:</b>	Report	
<b>FORMAT:</b>	Written report	
<b>CRITERIA:</b>	<b>No.</b>	<b>Learning Outcome assessed</b>
	1	Mastery of Cyber security theory and standards <span style="float: right;">2 3 5</span>

**All - Assessment Task 2:** Hacker Case Study Written Report – The Case of Gary McKinnon

<b>GOAL:</b>	The purpose of this task is to collaborate as a group to provide a written profile of a hacker, summarising the details of the case, analysing the hacker’s guilt or innocence based on the available reporting, and make a recommendation as to whether or not the individual should have been/should be, extradited from the U.K. and extradited to the United States for trial under Title 18, U.S.C., Section 1030.	
<b>PRODUCT:</b>	Written Piece	
<b>FORMAT:</b>	<p>Your group will review open source and authoritative references concerning the case of Gary McKinnon, a U.K. citizen accused of breaking into several U.S. government computers and causing damage to several computers as well as adversely affecting a Department of Defense network and stealing data. Students will choose to represent either the defence or the prosecution and produce a 2,000-word report articulating the amassed evidence and make recommendations accordingly based on their understanding and perspective of the facts presented.</p> <p>The group will collaborate as a team demonstrating their successful collaboration skills resulting in proof of collaboration being submitted showing their online communication. As a result of the team collaboration, each member will prepare an individual report, incorporating the shared knowledge from team members.</p>	
<b>CRITERIA:</b>	<b>No.</b>	<b>Learning Outcome assessed</b>
	1	Identification and explanation of a range of technical and social engineering methodologies <span style="float: right;">1 2</span>
	2	Identification and rationalisation of the human and technical vulnerabilities exploited in cybercrime <span style="float: right;">3</span>
	3	Communication of investigation results <span style="float: right;">5</span>

### All - Assessment Task 3: Scavenger Hunt

<b>GOAL:</b>	The goal of the task is to conduct online research to locate specific kinds of information and information types. This is an entirely online quiz, search and retrieval exercise designed to assist the student in developing online search skills, referencing skills, and report preparation using online resources. Students may perform this exercise individually or share their efforts with other students.		
<b>PRODUCT:</b>	Portfolio		
<b>FORMAT:</b>	The product to be presented is a 50 question online search and retrieval report which will incorporate a set of objects to be located and searched for. Students will provide the required information and the URL or IP address where the object was found together with the date and time group of the object's retrieval.		
<b>CRITERIA:</b>	<b>No.</b>		<b>Learning Outcome assessed</b>
	1	Identification and explanation of a range of technical and social engineering threats, their likelihood and impact on the case study organisation	2 3 4 5
	2	Application of control management framework	2 3
	3	Development of a business case for senior management	4
	4	Professional communication	5

## 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 Canvas 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	EDITION	PUBLISHER
Required	Christopher Hadnagy	2018	Social Engineering	n/a	John Wiley & Sons
Required	Matt Bishop	2018	Computer Security	n/a	Addison-Wesley Professional

### 8.2. Specific requirements

This course requires access to computers and specialised software which is provided at USC campuses for student use. If you elect to do this course online, you may either; attend a campus at which it is available, discuss alternative solutions with your course coordinator that would enable you to demonstrate the learning outcomes, or if you prefer you may acquire this software (if necessary at your own expense). Some software providers may offer discounted or free academic licensing.

## 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 Canvas, are electronically checked through Turnitin. This software allows for text comparisons to be made between your submitted assessment item and all other work to which Turnitin has access.

## 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. SafeUSC

USC is committed to a culture of respect and providing a safe and supportive environment for all members of our community. For immediate assistance on campus contact SafeUSC by phone: [07 5430 1168](tel:0754301168) or using the [SafeZone](#) app. For general enquires contact the SafeUSC team by phone [07 5456 3864](tel:0754563864) or email [safe@usc.edu.au](mailto:safe@usc.edu.au).

The SafeUSC Specialist Service is a Student Wellbeing service that provides free and confidential support to students who may have experienced or observed behaviour that could cause fear, offence or trauma. To contact the service call [07 5430 1226](tel:0754301226) or email [studentwellbeing@usc.edu.au](mailto:studentwellbeing@usc.edu.au).

## 10.5. 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](mailto:studentcentral@usc.edu.au).

## 10.6. 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](mailto:studentwellbeing@usc.edu.au) or call 07 5430 1226.

## 10.7. 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](mailto:AccessAbility@usc.edu.au) or call 07 5430 2890.

## 10.8. 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: <https://www.usc.edu.au/explore/policies-and-procedures#academic-learning-and-teaching>

## 10.9. Student Charter

USC is committed to excellence in teaching, research and engagement in an environment that is inclusive, inspiring, safe and respectful. The [Student Charter](#) sets out what students can expect from the University, and what in turn is expected of students, to achieve these outcomes.

## 10.10. 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](mailto:studentcentral@usc.edu.au)