



COIT12201 *Electronic Crime and Digital Forensics*

Term 2 - 2019

Profile information current as at 26/04/2024 02:46 pm

All details in this unit profile for COIT12201 have been officially approved by CQUniversity and represent a learning partnership between the University and you (our student). The information will not be changed unless absolutely necessary and any change will be clearly indicated by an approved correction included in the profile.

General Information

Overview

This advanced unit provides you with a broad understanding of electronic crime and digital forensics in investigations of electronic criminal activities. In this unit, you will learn digital forensics procedures and tools, methods of using digital evidence in justice and legal issues in digital forensics. You will use industry leading software tools to conduct your own forensics investigation on realistic case studies. Completion of this unit enables you to pursue careers within an electronic crime investigation unit of law enforcement agencies, government departments and businesses.

Details

Career Level: *Undergraduate*

Unit Level: *Level 2*

Credit Points: 6

Student Contribution Band: 8

Fraction of Full-Time Student Load: 0.125

Pre-requisites or Co-requisites

Pre-requisite: (COIT11233 or COIT11238) and (COIT13147 or COIT12206)

Important note: Students enrolled in a subsequent unit who failed their pre-requisite unit, should drop the subsequent unit before the census date or within 10 working days of Fail grade notification. Students who do not drop the unit in this timeframe cannot later drop the unit without academic and financial liability. See details in the [Assessment Policy and Procedure \(Higher Education Coursework\)](#).

Offerings For Term 2 - 2019

- Brisbane
- Cairns
- Melbourne
- Online
- Rockhampton
- Sydney
- Townsville

Attendance Requirements

All on-campus students are expected to attend scheduled classes – in some units, these classes are identified as a mandatory (pass/fail) component and attendance is compulsory. International students, on a student visa, must maintain a full time study load and meet both attendance and academic progress requirements in each study period (satisfactory attendance for International students is defined as maintaining at least an 80% attendance record).

Website

[This unit has a website, within the Moodle system, which is available two weeks before the start of term. It is important that you visit your Moodle site throughout the term. Please visit Moodle for more information.](#)

Class and Assessment Overview

Recommended Student Time Commitment

Each 6-credit Undergraduate unit at CQUniversity requires an overall time commitment of an average of 12.5 hours of study per week, making a total of 150 hours for the unit.

Class Timetable

[Regional Campuses](#)

Bundaberg, Cairns, Emerald, Gladstone, Mackay, Rockhampton, Townsville

[Metropolitan Campuses](#)

Adelaide, Brisbane, Melbourne, Perth, Sydney

Assessment Overview

1. **In-class Test(s)**

Weighting: 20%

2. **Written Assessment**

Weighting: 30%

3. **Examination**

Weighting: 50%

Assessment Grading

This is a graded unit: your overall grade will be calculated from the marks or grades for each assessment task, based on the relative weightings shown in the table above. You must obtain an overall mark for the unit of at least 50%, or an overall grade of 'pass' in order to pass the unit. If any 'pass/fail' tasks are shown in the table above they must also be completed successfully ('pass' grade). You must also meet any minimum mark requirements specified for a particular assessment task, as detailed in the 'assessment task' section (note that in some instances, the minimum mark for a task may be greater than 50%). Consult the [University's Grades and Results Policy](#) for more details of interim results and final grades.

CQUniversity Policies

All University policies are available on the [CQUniversity Policy site](#).

You may wish to view these policies:

- Grades and Results Policy
- Assessment Policy and Procedure (Higher Education Coursework)
- Review of Grade Procedure
- Student Academic Integrity Policy and Procedure
- Monitoring Academic Progress (MAP) Policy and Procedure – Domestic Students
- Monitoring Academic Progress (MAP) Policy and Procedure – International Students
- Student Refund and Credit Balance Policy and Procedure
- Student Feedback – Compliments and Complaints Policy and Procedure
- Information and Communications Technology Acceptable Use Policy and Procedure

This list is not an exhaustive list of all University policies. The full list of University policies are available on the [CQUniversity Policy site](#).

Previous Student Feedback

Feedback, Recommendations and Responses

Every unit is reviewed for enhancement each year. At the most recent review, the following staff and student feedback items were identified and recommendations were made.

Feedback from Students evaluation feedback and co-lecturers email

Feedback

Some of the practical lab activities were not able to execute in CQU lab computers due to restrictions in lab computers.

Recommendation

The software used is selected to offer realistic lab activities using industry-leading technologies. Students will be given instructions and video demonstrations developed for running the software on personal devices or in a virtual environment.

Feedback from Students evaluation feedback

Feedback

The quiz questions were too difficult, hence, difficult to score within one try given for each quiz.

Recommendation

Keep the difficulty of the questions at the same level, but allow more than one attempt to complete each quiz.

Unit Learning Outcomes

On successful completion of this unit, you will be able to:

1. Define electronic crime and digital forensics
2. Describe the role of digital forensic professionals in investigation and prevention of electronic crime in business environments
3. Apply a systematic approach to the capture, recording, and analysis of events in a digital forensic investigation
4. Discuss the legal issues involved in a forensic investigation and in current professional forensic practice
5. Prepare a design and report for a digital forensic investigation.

Australian Computer Society (ACS) recognises the Skills Framework for the Information Age (SFIA). SFIA is in use in over 100 countries and provides a widely used and consistent definition of ICT skills. SFIA is increasingly being used when developing job descriptions and role profiles.

ACS members can use the tool MySFIA to build a skills profile at

<https://www.acs.org.au/professionalrecognition/mysfia-b2c.html>

This unit contributes to the following workplace skills as defined by SFIA. The SFIA code is included:

- Digital forensics (DGFS)
- Network Support (NTAS)
- Penetration testing (PENT)
- Problem Management (PBMG)
- Data Analysis (DTAN)
- Service Desk and Incident Management (USUP)

Alignment of Learning Outcomes, Assessment and Graduate Attributes



Alignment of Assessment Tasks to Learning Outcomes

| Assessment Tasks | Learning Outcomes | | | | |
|------------------------------|-------------------|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| 1 - In-class Test(s) - 20% | • | | | • | |
| 2 - Written Assessment - 30% | | • | • | • | • |
| 3 - Examination - 50% | • | • | • | | • |

Alignment of Graduate Attributes to Learning Outcomes

| Graduate Attributes | Learning Outcomes | | | | |
|---|-------------------|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| 1 - Communication | • | | | • | • |
| 2 - Problem Solving | | | • | | • |
| 3 - Critical Thinking | | • | • | | |
| 4 - Information Literacy | | | | • | • |
| 5 - Team Work | | | | | • |
| 6 - Information Technology Competence | • | | • | | |
| 7 - Cross Cultural Competence | | | | • | |
| 8 - Ethical practice | | • | | • | • |
| 9 - Social Innovation | | | | | |
| 10 - Aboriginal and Torres Strait Islander Cultures | | | | | |

Alignment of Assessment Tasks to Graduate Attributes

| Assessment Tasks | Graduate Attributes | | | | | | | | | |
|------------------------------|---------------------|---|---|---|---|---|---|---|---|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1 - In-class Test(s) - 20% | | • | | | | • | | • | | |
| 2 - Written Assessment - 30% | • | • | • | • | • | | • | • | | |
| 3 - Examination - 50% | | • | • | • | | | | • | | |

Textbooks and Resources

Textbooks

COIT12201

Prescribed

Guide to Computer Forensics and Investigations

Edition: 6th edn (2018)

Authors: B Nelson, A Phillips, C Steuart

Cengage Learning

Florence , KY , USA

ISBN: 9781337568944

Binding: Paperback

Additional Textbook Information

Copies can be purchased from the CQUni Bookshop here: <http://bookshop.cqu.edu.au> (search on the Unit code)

[View textbooks at the CQUniversity Bookshop](#)

IT Resources

You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)
- AccessData Registry Viewer,
- Autopsy
- Computer forensic software and student data files (with "Lab Manual for Guide to Computer Forensics and Investigations (4th ed)" by A. Blitz)
- FTK Imager
- Mini-WinFE,
- OSForensics
- ProDiscover Basic
- WinHex

Referencing Style

All submissions for this unit must use the referencing style: [Harvard \(author-date\)](#)

For further information, see the Assessment Tasks.

Teaching Contacts

Sunil Seneviratne Unit Coordinator

s.seneviratne@cqu.edu.au

Schedule

Week 1 - 15 Jul 2019

| Module/Topic | Chapter | Events and Submissions/Topic |
|---|-----------|------------------------------|
| Understanding the Digital Forensics Profession and Investigations | Chapter 1 | |

Week 2 - 22 Jul 2019

| Module/Topic | Chapter | Events and Submissions/Topic |
|--------------|---------|------------------------------|
|--------------|---------|------------------------------|

Forensic investigation examples and the Investigator's Office and Laboratory Chapter 1 and Chapter 2

Week 3 - 29 Jul 2019

| Module/Topic | Chapter | Events and Submissions/Topic |
|------------------|-----------|------------------------------------|
| Data Acquisition | Chapter 3 | Assignment 1: Online Quiz 1 |

Week 4 - 05 Aug 2019

| Module/Topic | Chapter | Events and Submissions/Topic |
|--------------------------------------|-----------|------------------------------|
| Processing crime and incident scenes | Chapter 4 | |

Week 5 - 12 Aug 2019

| Module/Topic | Chapter | Events and Submissions/Topic |
|-------------------------|-----------|------------------------------------|
| Digital forensics tools | Chapter 6 | Assignment 1: Online Quiz 2 |

Vacation Week - 19 Aug 2019

| Module/Topic | Chapter | Events and Submissions/Topic |
|--------------|---------|------------------------------|
|--------------|---------|------------------------------|

Week 6 - 26 Aug 2019

| Module/Topic | Chapter | Events and Submissions/Topic |
|--|-------------------------|------------------------------|
| Understanding Windows, Linux and Macintosh Systems | Chapter 5 and Chapter 7 | |

Week 7 - 02 Sep 2019

| Module/Topic | Chapter | Events and Submissions/Topic |
|--------------------------|-----------|------------------------------------|
| Recovering Graphic Files | Chapter 8 | Assignment 1: Online Quiz 3 |

Week 8 - 09 Sep 2019

| Module/Topic | Chapter | Events and Submissions/Topic |
|---|-----------|------------------------------|
| Digital Forensics Analysis and Validation | Chapter 9 | |

Week 9 - 16 Sep 2019

| Module/Topic | Chapter | Events and Submissions/Topic |
|--|---------------------------|------------------------------------|
| Virtual Machine Forensics, Live Acquisitions, and Network Forensics E-mail and Social Media Investigations | Chapter 10 and Chapter 11 | Assignment 1: Online Quiz 4 |

Week 10 - 23 Sep 2019

| Module/Topic | Chapter | Events and Submissions/Topic |
|-------------------------|------------|---|
| Mobile Device Forensics | Chapter 12 | Assessment 2 Digital Forensic Investigation Due: Week 10 Friday (27 Sep. 2019) 12:55 pm AEST Digital Forensic Investigation Due: Week 10 Friday (27 Sept 2019) 12:55 pm AEST |

Week 11 - 30 Sep 2019

| Module/Topic | Chapter | Events and Submissions/Topic |
|------------------------------------|---------------------------|------------------------------------|
| Cloud Forensics and Report writing | Chapter 13 and Chapter 14 | Assignment 1: Online Quiz 5 |

Week 12 - 07 Oct 2019

| Module/Topic | Chapter | Events and Submissions/Topic |
|------------------------------|----------------------------|------------------------------|
| Ethics and Final Exam review | Chapter 16 and exam advice | |

Review/Exam Week - 14 Oct 2019

| Module/Topic | Chapter | Events and Submissions/Topic |
|--------------------------------|---------|------------------------------|
| Exam Week - 21 Oct 2019 | | |
| Module/Topic | Chapter | Events and Submissions/Topic |

Term Specific Information

Welcome to COIT12201 - Term 2 2019!

During the term, if you are enrolled in an on campus face-to-face class, please contact the respective lead lecturer conducting the unit on that campus with your questions. The Unit Contact details can be found on the unit page on Moodle ("Information" box, top left column).

Distance students should contact me, the unit coordinator, if you have any questions which are not suitable to be asked through the online unit forums.

There is much reading to cover during the term, so you are encouraged to get your copy of the recommended textbook early, and do not miss out any classes and assessments.

I am looking forward to your active participation in class and through the online Q and A forums throughout the term.

Have an enjoyable term!

Sunil Seneviratne

Unit Coordinator - T2, 2019 COIT12201 Electronic Crime and Digital Forensics

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Assessment Tasks

1 Online Quiz(zes)

Assessment Type

In-class Test(s)

Task Description

The Quizzes are to complement the theoretical knowledge learned from the lectures/textbook. They provide you with exercises to practice your knowledge and skills of the related topics.

- There are five (5) weekly Online Moodle Quizzes
- Each quiz worth 4% of the total grade.
- The quizzes are open book, implying that you are allowed to consult the prescribed textbook, lab manuals, lecture notes, and notes prepared by you.
- There may be a time limit to finish the quiz.

More detail instructions regarding the quizzes will be provided on Moodle during the term.

Assessment Due Date

Week 3, week 5, week 7, week 9 and week 11 online via Moodle

Return Date to Students

Week 3, week 5, week 7, week 9 and week 11 online via Moodle

Weighting

20%

Assessment Criteria

The students are assessed mainly against their ability to:

1. understand the weekly content covered in lectures,
2. identify the links between lecture content and lab activities,

3. determine the best course of action for a specific investigation scenario.
There will be no extensions allowed for any of the quizzes.

Referencing Style

- [Harvard \(author-date\)](#)

Submission

Online

Submission Instructions

Online via Moodle

Learning Outcomes Assessed

- Define electronic crime and digital forensics
- Discuss the legal issues involved in a forensic investigation and in current professional forensic practice

Graduate Attributes

- Problem Solving
- Information Technology Competence
- Ethical practice

2 Digital Forensic Investigation

Assessment Type

Written Assessment

Task Description

This assessment is divided into two parts:

Part A: Practical (Hands-on) investigation (50%)

Part B: Write a report detailing your practical investigation in Part A and findings based on this investigation (50%).

The assessment requires you to

1. investigate a case using digital forensic tools that you are legally allowed to use,
2. write a report that will detail your investigation process, tools, and techniques,
3. analyse the case based on your investigation and present your findings in the report,
4. detail the legal and ethical issues involved in a forensic investigation.

Details about this assessment are available on Moodle.

Assessment Due Date

Week 10 Friday (27 Sept 2019) 12:55 pm AEST

Online via Moodle

Return Date to Students

Week 12 Monday (7 Oct 2019)

Online via Moodle

Weighting

30%

Assessment Criteria

The students are assessed mainly against their ability to:

1. apply the digital forensics methodologies
2. identify appropriate tools and techniques
3. report the findings in a clear and cohesive manner
4. identify legal and ethical issues relevant to the investigation
5. conduct an investigation in a legal and ethical manner.

Referencing Style

- [Harvard \(author-date\)](#)

Submission

Online Group

Submission Instructions

Online via Moodle

Learning Outcomes Assessed

- Describe the role of digital forensic professionals in investigation and prevention of electronic crime in business environments
- Apply a systematic approach to the capture, recording, and analysis of events in a digital forensic investigation
- Discuss the legal issues involved in a forensic investigation and in current professional forensic practice
- Prepare a design and report for a digital forensic investigation.

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Team Work
- Cross Cultural Competence
- Ethical practice

Examination

Outline

Complete an invigilated examination.

Date

During the examination period at a CQUniversity examination centre.

Weighting

50%

Length

180 minutes

Exam Conditions

Open Book.

Materials

Dictionary - non-electronic, concise, direct translation only (dictionary must not contain any notes or comments).

Academic Integrity Statement

As a CQUniversity student you are expected to act honestly in all aspects of your academic work.

Any assessable work undertaken or submitted for review or assessment must be your own work. Assessable work is any type of work you do to meet the assessment requirements in the unit, including draft work submitted for review and feedback and final work to be assessed.

When you use the ideas, words or data of others in your assessment, you must thoroughly and clearly acknowledge the source of this information by using the correct referencing style for your unit. Using others' work without proper acknowledgement may be considered a form of intellectual dishonesty.

Participating honestly, respectfully, responsibly, and fairly in your university study ensures the CQUniversity qualification you earn will be valued as a true indication of your individual academic achievement and will continue to receive the respect and recognition it deserves.

As a student, you are responsible for reading and following CQUniversity's policies, including the [Student Academic Integrity Policy and Procedure](#). This policy sets out CQUniversity's expectations of you to act with integrity, examples of academic integrity breaches to avoid, the processes used to address alleged breaches of academic integrity, and potential penalties.

What is a breach of academic integrity?

A breach of academic integrity includes but is not limited to plagiarism, self-plagiarism, collusion, cheating, contract cheating, and academic misconduct. The Student Academic Integrity Policy and Procedure defines what these terms mean and gives examples.

Why is academic integrity important?

A breach of academic integrity may result in one or more penalties, including suspension or even expulsion from the University. It can also have negative implications for student visas and future enrolment at CQUniversity or elsewhere. Students who engage in contract cheating also risk being blackmailed by contract cheating services.

Where can I get assistance?

For academic advice and guidance, the [Academic Learning Centre \(ALC\)](#) can support you in becoming confident in completing assessments with integrity and of high standard.

What can you do to act with integrity?



Be Honest

If your assessment task is done by someone else, it would be dishonest of you to claim it as your own



Seek Help

If you are not sure about how to cite or reference in essays, reports etc, then seek help from your lecturer, the library or the Academic Learning Centre (ALC)



Produce Original Work

Originality comes from your ability to read widely, think critically, and apply your gained knowledge to address a question or problem