COIT12201 *Electronic Crime and Digital Forensics*
Term 2 - 2022

Profile information current as at 25/04/2024 03:29 pm

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 - 2022

- 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. **Take Home Exam**
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 Unit evaluation.

Feedback
Students enjoyed working in groups and learning the skills needed for the forensic investigation assessment.

Recommendation
Continue offering the group assessment with forensic investigative tasks.

Feedback from Unit evaluation and staff observation.

Feedback
Students appreciated the variety of techniques, tools and legal/ethical implications covered in the unit.

Recommendation
Continue to cover the application of a variety of tools and techniques and legal/ethical issues related to digital forensics.

Feedback from Staff observation.

Feedback
Case studies used in the forensics investigation assessment are limited.

Recommendation
Explore new case studies for the assessment.

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.

The 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

— N/A Level ◦ Introductory Level • Intermediate Level • Graduate Level ◦ Professional Level ◦ Advanced Level

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 - Take Home Exam - 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 - Take Home Exam - 50%		•	•	•		•		•		

Textbooks and Resources

Textbooks

COIT12201

Prescribed

Guide to Computer Forensics and Investigations
Edition: 6th edn (2018) (2018)
Authors: B Nelson, A Phillips, C Steuart
Cengage Learning
Florence , KY , USA
ISBN: 9781337568944
Binding: Paperback

Additional Textbook Information
Both paper and eBook copies can now be purchased at 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)
- Computer forensic software and student data files (with "Lab Manual for Guide to Computer Forensics and Investigations (4th ed)" by A. Blitz)
- MindTap - Cloud based virtual lab integrated in Moodle unit website

Referencing Style

All submissions for this unit must use the referencing style: Harvard (author-date)
For further information, see the Assessment Tasks.

Teaching Contacts

Jahan Hassan Unit Coordinator
j.hassan@cqu.edu.au

Schedule

Week 1 - 11 Jul 2022

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

Week 2 - 18 Jul 2022

Module/Topic	Chapter	Events and Submissions/Topic
Forensic investigation examples and the Investigator's Office and Laboratory	Chapter 1 and Chapter 2	

Week 3 - 25 Jul 2022

Module/Topic	Chapter	Events and Submissions/Topic

Data Acquisition	Chapter 3	**Assessment 1(In-class test): Online Quiz 1**

Week 4 - 01 Aug 2022

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

Week 5 - 08 Aug 2022

Module/Topic	Chapter	Events and Submissions/Topic
Digital forensics tools	Chapter 6	**Assessment 1(In-class test): Online Quiz 2**

Vacation Week - 15 Aug 2022

Module/Topic	Chapter	Events and Submissions/Topic

Week 6 - 22 Aug 2022

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

Week 7 - 29 Aug 2022

Module/Topic	Chapter	Events and Submissions/Topic
Recovering Graphic Files	Chapter 8	**Assessment 1(In-class test): Online Quiz 3**

Week 8 - 05 Sep 2022

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

Week 9 - 12 Sep 2022

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	**Assessment 1(In-class test): Online Quiz 4**

Week 10 - 19 Sep 2022

Module/Topic	Chapter	Events and Submissions/Topic
Mobile Device Forensics Ethics	Chapter 12 and Chapter 16	**Assessment 2 (Written Assessment) Digital Forensic Investigation Due: Week 10 Friday 11:45 PM AEST** **Digital Forensics Investigation** Due: Week 10 Friday (23 Sept 2022) 11:45 pm AEST

Week 11 - 26 Sep 2022

Module/Topic	Chapter	Events and Submissions/Topic
Cloud Forensics and Report writing	Chapter 13 and Chapter 14	**Assessment 1(In-class test): Online Quiz 5**

Week 12 - 03 Oct 2022

Module/Topic	Chapter	Events and Submissions/Topic
Reflection and exam overview	Reflection of topics covered in Weeks 1-11, and exam advice	

Review/Exam Week - 10 Oct 2022

Module/Topic	Chapter	Events and Submissions/Topic

Exam Week - 17 Oct 2022

Module/Topic	Chapter	Events and Submissions/Topic

Term Specific Information

For any term-specific information, please contact your Unit coordinator via E-mail.
Unit Coordinator: Dr Jahan Hassan
E-mail: j.hassan@cqu.edu.au

Assessment Tasks

1 Online Quizzes

Assessment Type
In-class Test(s)

Task Description
The online quizzes are to complement the theoretical knowledge you learn from the lectures/textbook. These exercises will enhance your understanding and improve your skills in the related topics of Electronic Crime and Digital Forensics.

- There are five (5) weekly online quizzes arranged on weeks 3, 5, 7, 9, and 11.
- Each quiz is 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 you prepare for.
- You will be required to complete such tasks within a time limit.

More details of quiz instruction will be available through the Moodle unit website.

Assessment Due Date

Due in the same week (3, 5, 7, 9, 11) for each quiz. More details will be provided in the online quiz specification through Moodle unit website.

Return Date to Students

Immediately after the quizzes close.

Weighting
20%

Assessment Criteria
You are assessed against your abilities to:

- Understand the weekly content covered in lectures,
- Identify the links between lecture contents and lab exercises,
- Determine the best course of action for a specific investigation scenario.

Extensions are not allowed for the quizzes, because the answers will be released after the due date. If you miss attempting the quizzes, you cannot do it later.

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
Quizzes are to be attempted and submitted as individual assessment items.

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 Forensics Investigation

Assessment Type
Written Assessment

Task Description
This assessment task contains two parts:

- Part A: Practical (Hands-on) investigation (15%).
- Part B: a written report detailing the practical investigation in Part A and findings based on this investigation (15%).

The assessment requires you to

- Investigate a case with the provided digital forensic tools you will learn from this unit,
- Indicate the potential legal and ethical issues in the given case,
- Draft a report of your investigation with the process and your findings.

More details of this case study will be available through the Moodle unit website.

Assessment Due Date
Week 10 Friday (23 Sept 2022) 11:45 pm AEST

Return Date to Students
Week 12 Friday (7 Oct 2022)
Assessments will be returned through Moodle. Late submissions with or without extension approvals may be returned after the above date.

Weighting
30%

Assessment Criteria
You will be assessed against your abilities to:

- Apply suitable digital forensics methodologies,
- Use appropriate tools and techniques,
- Identify legal and ethical issues in the given case,
- Investigate in a formal process,
- Report the findings in a clear and cohesive manner.

More details of the marking criteria will be available through the Moodle unit website.

Referencing Style

- Harvard (author-date)

Submission
Online Group

Submission Instructions
Online group submission 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
- Information Technology Competence
- Cross Cultural Competence
- Ethical practice

3 Take-home exam

Assessment Type
Take Home Exam

Task Description
The final assessment will be a take-home exam as an online test presented in a form of a Moodle Quiz.
The arrangement for this exam will be available after Week 6.
Refer to the Moodle unit website for more details.

Assessment Due Date

Take-home exam will be held during the examination period. Specific date and time will be advised via Moodle.

Return Date to Students

Overall results become available on Certification Date (see Academic Calendar).

Weighting
50%

Assessment Criteria
Your answers will be marked based on the correct choice from a range of options, and for short answer items on technical correctness, completeness, clarity, originality, and relevance. Originality means the work is your own and is expressed in your own words. An answer is unacceptable (zero marks) if it is composed mostly or solely of quoted materials from other sources.

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
Refer to Moodle unit website for details.

Learning Outcomes Assessed

- Define electronic crime and digital forensics
- 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
- Prepare a design and report for a digital forensic investigation.

Graduate Attributes

- Problem Solving
- Critical Thinking
- Information Literacy
- Information Technology Competence
- Ethical practice

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