ZZCA9211 Digital Forensics - 2024

Published on the 24 Aug 2024

General Course Information

Course Code : ZZCA9211
Year : 2024
Term : Hexamester 5
Teaching Period : KR
Is a multi-term course? : No
Faculty : UNSW Canberra
Academic Unit : Canberra School of Professional Studies
Delivery Mode : Online
Delivery Format : Standard
Delivery Location : UNSW Canberra City
Campus : Canberra City
Study Level : Postgraduate
Units of Credit : 6

Useful Links

Handbook Class Timetable

Course Details & Outcomes

Course Description

Digital forensics is an under-represented area of cyber security. It encompasses the processes and technical understanding surrounding both the investigation of computer crimes and crimes where evidence remains on computing devices. This course provides a strong foundation for both those wanting to specialise in this area of cyber security, and those seeking to understand

the processes for improved incident response. Students will be able to forensically analyse digital devices and understand the ethical, legal and self care issues associated with cybercrime investigations.

Course Aims

This course equips students for understanding the role of, technical aspects and legislative requirements of digital forensics.

Relationship to Other Courses

Enrolment Requirements: ZZEN9217

Course Learning Outcomes

Course Learning Outcomes
CLO1 : Explain and apply a digital forensic mindset.
CLO2 : Explain the current theoretical principles that underpin the science of digital forensics.
CLO3 : Synthesise and apply current forensic procedures and techniques regarding the identification, collection, preservation and custody, and analysis of digital evidence.
CLO4 : Perform analysis of acquired digital devices.
CLO5 : Communicate results effectively in professional reports and as an expert witness.

Course Learning Outcomes	Assessment Item
CLO1 : Explain and apply a digital forensic mindset.	• Weekly quizzes • Lab exercises • Report and presentation
CLO2 : Explain the current theoretical principles that underpin the science of digital forensics.	• Weekly quizzes • Lab exercises • Report and presentation
CLO3 : Synthesise and apply current forensic procedures and techniques regarding the identification, collection, preservation and custody, and analysis of digital evidence.	• Weekly quizzes • Lab exercises • Report and presentation
CLO4 : Perform analysis of acquired digital devices.	• Weekly quizzes • Lab exercises • Report and presentation
CLO5 : Communicate results effectively in professional reports and as an expert witness.	• Weekly quizzes • Lab exercises • Report and presentation

Learning and Teaching Technologies

Moodle - Learning Management System | Blackboard Collaborate

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Weekly quizzes Assessment Format: Individual	25%	Due Date: Week 2,3,4,5,6. The quiz is open from the start of the hexa until the Monday due date (5pm of week following content wee
Lab exercises Assessment Format: Individual Short Extension: Yes (1 day)	35%	Start Date: Not Applicable Due Date: Week 4: 16 September - 22 September, Week 5: 23 September - 29 September
Report and presentation Assessment Format: Individual Short Extension: Yes (1 day)	40%	Start Date: Not Applicable Due Date: 08/10/2024 05:00 PM

Assessment Details

Weekly quizzes

Assessment Overview

Students will complete five fully online quizzes through Moodle related to the weekly content.

Course Learning Outcomes

- CLO1 : Explain and apply a digital forensic mindset.
- CLO2 : Explain the current theoretical principles that underpin the science of digital forensics.
- CLO3 : Synthesise and apply current forensic procedures and techniques regarding the identification, collection, preservation and custody, and analysis of digital evidence.
- CLO4 : Perform analysis of acquired digital devices.
- CLO5 : Communicate results effectively in professional reports and as an expert witness.

Assessment Length

15 minutes per week

Assignment submission Turnitin type

Not Applicable

Generative AI Permission Level

Simple Editing Assistance

In completing this assessment, you are permitted to use standard editing and referencing functions in the software you use to complete your assessment. These functions are described below. You must not use any functions that generate or paraphrase passages of text or other media, whether based on your own work or not.

If your Convenor has concerns that your submission contains passages of AI-generated text or media, you may be asked to account for your work. If you are unable to satisfactorily demonstrate your understanding of your submission you may be referred to UNSW Conduct & Integrity Office for investigation for academic misconduct and possible penalties.

For more information on Generative AI and permitted use please see [here](#).

Lab exercises

Assessment Overview

There are a series of practical hands-on sessions to go through different activities and technical processes that a forensic specialist might encounter. The primary purpose of this course is to provide you with the first principles to build practical/technical skills for conducting digital forensic investigation analysis across different environments, such as Windows, Linux, and Network systems. The labs have a series of associated questions that students will answer and are submitted in two groups throughout the course.

Course Learning Outcomes

- CLO1 : Explain and apply a digital forensic mindset.
- CLO2 : Explain the current theoretical principles that underpin the science of digital forensics.
- CLO3 : Synthesise and apply current forensic procedures and techniques regarding the identification, collection, preservation and custody, and analysis of digital evidence.
- CLO4 : Perform analysis of acquired digital devices.
- CLO5 : Communicate results effectively in professional reports and as an expert witness.

Assessment Length

5-8 hours

Assignment submission Turnitin type

This assignment is submitted through Turnitin and students can see Turnitin similarity reports.

Generative AI Permission Level

Simple Editing Assistance

In completing this assessment, you are permitted to use standard editing and referencing functions in the software you use to complete your assessment. These functions are described below. You must not use any functions that generate or paraphrase passages of text or other

media, whether based on your own work or not.

If your Convenor has concerns that your submission contains passages of AI-generated text or media, you may be asked to account for your work. If you are unable to satisfactorily demonstrate your understanding of your submission you may be referred to UNSW Conduct & Integrity Office for investigation for academic misconduct and possible penalties.

For more information on Generative AI and permitted use please see here.

Report and presentation

Assessment Overview

Students are asked to take on the role of a consultant leading their first digital forensics investigation. There is a scenario provided, and students will produce a report and associated video presentation.

Course Learning Outcomes

- CLO1 : Explain and apply a digital forensic mindset.
- CLO2 : Explain the current theoretical principles that underpin the science of digital forensics.
- CLO3 : Synthesise and apply current forensic procedures and techniques regarding the identification, collection, preservation and custody, and analysis of digital evidence.
- CLO4 : Perform analysis of acquired digital devices.
- CLO5 : Communicate results effectively in professional reports and as an expert witness.

Assessment Length

20 hours

Submission notes

Week 7, Tuesdya, 8 October Feb, 5 pm

Assignment submission Turnitin type

This assignment is submitted through Turnitin and students can see Turnitin similarity reports.

Hurdle rules

.

Generative AI Permission Level

Simple Editing Assistance

In completing this assessment, you are permitted to use standard editing and referencing functions in the software you use to complete your assessment. These functions are described below. You must not use any functions that generate or paraphrase passages of text or other media, whether based on your own work or not.

If your Convenor has concerns that your submission contains passages of AI-generated text or media, you may be asked to account for your work. If you are unable to satisfactorily demonstrate your understanding of your submission you may be referred to UNSW Conduct & Integrity Office for investigation for academic misconduct and possible penalties.
For more information on Generative AI and permitted use please see [here](#).

General Assessment Information

Generative AI Statement:

The University of New South Wales (UNSW) acknowledges the potential of Generative AI (GenAI) tools to enhance the learning experience while maintaining the academic integrity of its programs and, by extension, the value of degrees conferred. As we explore the optimal integration of GenAI, our policies will evolve accordingly.

For guidance on utilising GenAI, please refer to the Generative AI Statement on Moodle or the university's resources: [Chat GPT & Generative AI at UNSW | UNSW Current Students](#).

Three core principles underpin the university's approach:

1. Adhere to assessment instructions; failure to do so may result in a loss of marks.

2. Complete original work as required; we aim to assess your learning, not that of others or AI tools.

3. Acknowledge external sources, including AI-generated content when you incorporate ideas that are not your own, to maintain academic integrity.

In this course, the permitted level of GenAI use is classified as '*Drafting Assistance.*'

This means you may use software to generate initial drafts, ideas, or structures, but you must substantially develop or edit these to ensure the submitted work is your own. Retain/keep copies of initial drafts to demonstrate your originality to the lecturer if there is any uncertainty about your work originality.

Please note that submissions will be evaluated using AI-text detection tools. If any concerns arise regarding insufficient modification of AI-generated text, you may be required to explain your work. Failure to demonstrate understanding may result in referral to the UNSW Conduct & Integrity Office for investigation and potential penalties.

Assessment Tolerances:

Submissions are permitted a 10% tolerance for length, allowing for minor deviations from word or time limits without penalty."

<u>Grading Basis</u>

Standard

<u>Requirements to pass course</u>

In order to pass the course you must achieve an overall mark of at least 50%.

Course Schedule

Teaching Week/Module	Activity Type	Content
Week 0 : 19 August - 25 August	Online Activity	0-week
Week 1 : 26 August - 1 September	Online Activity	Week 1: Shifting to a digital forensics mindset
Week 2 : 2 September - 8 September	Online Activity	Week 2: Computer forensics and recovery tools
Week 3 : 9 September - 15 September	Online Activity	Week 3: Windows forensics and file system analysis
Week 4 : 16 September - 22 September	Online Activity	Week 4: Linux forensics
Week 5 : 23 September - 29 September	Online Activity	Week 5: Network forensics and practices
Week 6 : 30 September - 6 October	Online Activity	Week 6: Machine learning and intelligent forensics future trends

Attendance Requirements

Students are strongly encouraged to attend all classes and review lecture recordings.

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
	Marwa Keshk					No	Yes