

Unit Outline

ICT30010

eForensic Fundamentals

Semester 1 2022

Please read this Unit Outline carefully. It includes:

- PART A** Unit summary
- PART B** Your Unit in more detail
- PART C** Further information



PART A: Unit Summary

Unit Code(s)	ICT30010
Unit Title	eForensic Fundamentals
Duration	One Semester
Total Contact Hours	36 Hours
Requisites:	
Pre-requisites	TNE10006 Networks and Switching; or TNE10002 LAN Principles
Co-requisites	
Concurrent pre-requisites	
Anti-requisites	
Assumed knowledge	
Credit Points	12.5
Campus/Location	Hawthorn
Mode of Delivery	On campus
Assessment Summary	Continuous: 50% Post-unit Examination: 50%

Aims

This unit familiarises student with the workings of the various technologies used to undertake and investigate electronic misconduct. It provides an understanding of forensic tool kits and develops the skills to implement their use. Students will be presented with examples of e-forensic artefacts with each of the technologies.

Unit Learning Outcomes

Students who successfully complete this Unit should be able to:

1. Demonstrate knowledge of operating systems, networks, mobile technologies and Internet technologies and related forensic artefacts of each technology.
2. Demonstrate knowledge of the workings of a forensic tool kit.
3. Apply knowledge of the usage of forensic tool kits.
4. Identify incidents of electronic fraud
5. Identify, locate and develop strategies for the evaluation of data sources for e-forensic investigation.
6. Describe common malware types and their effects

Graduate Attributes

This unit may contribute to the development of the following Swinburne Graduate Attributes:

- Communication skills
- Teamwork skills

- Digital literacies

Content

- File formats, structure, source of production and file systems
- Networks: Client-server architecture, LANS, WANS, network protocols
- Mobile technologies: protocols, mobile software, user identification
- Internet: protocols, internet software, user identification
- Forensic tool kits
- Data extraction and forensic copying.
- Pattern matching
- Verification and validation
- Anti-forensic techniques
- Malware

PART B: Your Unit in more detail

Unit Improvements

Feedback provided by previous students through the Student Survey has resulted in improvements that have been made to this unit. Recent improvements include:

- Minor updates and clarification for lab instructions
- New lecture at the end for the capstone assignment

Unit Teaching Staff

Name	Role	Room	Phone	Email	Consultation Time
Mr Dragi Klimovski	Unit Convenor	EN607c	9214 8322	dklimovski@swin.edu.au	By arrangement
Mr Troy Pretty	Lecturer & Tutorial			tpretty@swin.edu.au	By arrangement
Mr Aldin Dautcehajic	Tutorial			adautcehajic@swin.edu.au	By arrangement
Mr Andrew Marriott	Tutorial			amarriott@swin.edu.au	By arrangement

Learning and Teaching Structure

Activity	Total Hours	Hours per Week	Teaching Period Weeks
Lectures (online)	12 hours	1 hour	Weeks 1 to 12
Laboratory/Tutorial (on campus)	24 hours	2 hours	Weeks 1 to 12

Week by Week Schedule

Week	Week Beginning	Teaching and Learning Activity	Student Task or Assessment
1	Feb 28	Lecture 1 Introduction to eForensics Lab 1 Introduction to Forensic Toolkits	Submit lab 1 report at end of lab class
2	Mar 7	Lecture 2 PC Architecture and Operating Systems Lab 2 Forensic Disk Copying	Submit lab 2 report at end of lab class
3	Mar 14	Lecture 3 Computer Forensics Lab 3 Basic File System Forensics (assessed by report)	
4	Mar 21	Lecture 4 Forensic Report Writing Lab 3 (continued)	Lab 3 report due 31 st March at 11:59PM
5	Mar 28	Lecture 5 Disk and File Systems Lab 4 Windows Forensics	Submit lab 4 report at end of lab class
6	Apr 4	Lecture 6 File Systems and Pattern Matching Lab 5 Introduction to Networks	Submit lab 5 report at end of lab class
Easter Break – Thursday 14th April until Wednesday 20th April classes resume Thursday 21st April			
7	Apr 18	Lecture 7 Malware Lab 6 Network Forensic Techniques (assessed by report)	

8	Apr 25	Lecture 8 Mobile Technologies Lab 6 (continued)	
9	May 2	Lecture 9 Time Zones, Time Lines and Event Correlation Capstone lab	Lab 6 report due 5 th May at 11:59PM
10	May 9	Lecture 10 Anti-Forensics Capstone lab	
11	May 16	Lecture 11 Capstone Assignment Capstone lab	
12	May 23	Lecture 12 Unit Review Capstone lab	Capstone report due 5.00 pm last day of semester

Assessment

a) Assessment Overview

Tasks and Details	Individual or Group	Weighting	Unit Learning Outcomes that this assessment task relates to	Assessment Due Date
1. Lab reports	Individual	50%	1,2,3,4,5,6	Throughout semester
2. Examination	Individual	50%	1,2,3,4,5,6	Formal Exam Period

b) Minimum requirements to pass this Unit

As the minimum requirements of assessment to pass a unit and meet all Unit Learning Outcomes to a minimum standard, a student must achieve:

- (i) an aggregate mark of 50% or more, and
- (ii) at least 40% in the final exam.

Students who do not successfully achieve hurdle requirement (ii) will receive a maximum of 45% as the total mark for the unit.

c) Examinations

This unit has an official examination. You will be expected to be available for the entire examination period including any Special Exam period.

You may take a summary sheet of one A4 page into the exam. You can take any calculator into the exam.

d) Submission Requirements

Assignments and other assessments are generally submitted online through the Canvas assessment submission system which integrates with the Turnitin plagiarism checking service.

Please ensure you keep a copy of all assessments that are submitted.

In cases where a hard copy submission is required an Assessment Cover Sheet must be submitted with your assignment. The standard Assessment Cover Sheet is available from the Current Students web site (see Part C).

e) Extensions and Late Submission

Late Submissions - Unless an extension has been approved, late submissions will result in a penalty. You will be penalised 10% of your achieved mark for each working day the

task is late, up to a maximum of 5 working days. After 5 working days, a zero result will be recorded.

f) Referencing

To avoid plagiarism, you are required to provide a reference whenever you include information from other sources in your work. Further details regarding plagiarism are available in Section C of this document.

Referencing conventions required for this unit are IEEE or Harvard.

Helpful information on referencing can be found at
<http://www.swinburne.edu.au/library/referencing/>

g) Groupwork Guidelines

There is no groupwork for this unit.

Required Textbook(s)

There are no required textbooks for this unit.

Recommended Reading Materials

A list of reading materials will be made available on Canvas

PART C: FURTHER INFORMATION



For further information on any of these topics, refer to Swinburne's Current Students web page <http://www.swinburne.edu.au/student/>.

Student behaviour and wellbeing

All students are expected to: act with integrity, honesty and fairness: be inclusive, ethical and respectful of others; and appropriately use University resources, information, equipment and facilities. All students are expected to contribute to creating a work and study environment that is safe and free from bullying, violence, discrimination, sexual harassment, vilification and other forms of unacceptable behaviour.

The [Student Charter](#) describes what students can reasonably expect from Swinburne in order to enjoy a quality learning experience. The Charter also sets out what is expected of students with regards to your studies and the way you conduct yourself towards other people and property.

You are expected to familiarise yourself with University regulations and policies and are obliged to abide by these, including the [Student Academic Misconduct Regulations](#), [Student General Misconduct Regulations](#) and the [People, Culture and Integrity Policy](#). Any student found to be in breach of these may be subject to disciplinary processes.

Examples of expected behaviours are:

- conducting yourself in teaching areas in a manner that is professional and not disruptive to others
- following specific safety procedures in Swinburne laboratories, such as wearing appropriate footwear and safety equipment, not acting in a manner which is dangerous or disruptive (e.g. playing computer games), and not bringing in food or drink
- following emergency and evacuation procedures and following instructions given by staff/wardens in an emergency response

Canvas

You should regularly access the Swinburne learning management system, Canvas, which is available via the Current Students webpage or <https://swinburne.instructure.com/>. Canvas is updated regularly with important unit information and communications.

Communication

All communication will be via your Swinburne email address. If you access your email through a provider other than Swinburne, then it is your responsibility to ensure that your Swinburne email is redirected to your private email address.

Academic Integrity

Academic integrity is about taking responsibility for your learning and submitting work that is honestly your own. It means acknowledging the ideas, contributions and work of others; referencing your sources; contributing fairly to group work; and completing tasks, tests and exams without cheating.

Swinburne University uses the Turnitin system, which helps to identify inadequate citations, poor paraphrasing and unoriginal work in assignments that are submitted via Canvas. Your Unit Convenor will provide further details.

Plagiarising, cheating and seeking an unfair advantage with regards to an exam or assessment are all breaches of academic integrity and treated as academic misconduct.

Plagiarism is submitting or presenting someone else's work as though it is your own without full and appropriate acknowledgement of their ideas and work. Examples include:

- using the whole or part of computer program written by another person as your own

- using the whole or part of somebody else's written work in an essay or other assessable work, including material from a book, journal, newspaper article, a website or database, a set of lecture notes, current or past student's work, or any other person's work
- poorly paraphrasing somebody else's work
- using a musical composition or audio, visual, graphic and photographic work created by another
- using realia created by another person, such as objects, artefacts, costumes, models
- submitting assessments that have been developed by another person or service (paid or unpaid), often referred to as contract cheating
- presenting or submitting assignments or other work in conjunction with another person or group of people when that work should be your own independent work, This is regardless of whether or not it is with the knowledge or consent of the other person(s). Swinburne encourages students to talk to staff, fellow students and other people who may be able to contribute to a student's academic work but where an independent assignment is required, the work must be the student's own
- enabling others to plagiarise or cheat, including letting another student copy your work or by giving access to a draft or completed assignment

The penalties for academic misconduct can be severe, ranging from a zero grade for an assessment task through to expulsion from the unit and, in the extreme, exclusion from Swinburne.

Student support

Swinburne offers a range of services and resources to help you complete your studies successfully. Your Unit Convenor or studentHQ can provide information about the study support and other services available for Swinburne students.

Special consideration

If your studies have been adversely affected due to serious and unavoidable circumstances outside of your control (e.g. severe illness or unavoidable obligation), you may be able to apply for special consideration (SPC).

Applications for Special Consideration will be submitted via the SPC online tool normally no later than 5.00pm on the third working day after the submission/sitting date for the relevant assessment component.

Accessibility needs

Sometimes students with a disability, a mental health or medical condition or significant carer responsibilities require reasonable adjustments to enable full access to and participation in education. Your needs can be addressed by Swinburne's AccessAbility Services by negotiating and distributing an 'Education Access Plan'. The plan makes recommendations to university teaching and examination staff. You must notify AccessAbility Services of your disability or condition within one week after the commencement of your unit to allow the University to make reasonable adjustments.

Review of marks

An independent marker reviews all fail grades for major assessment tasks. In addition, a review of assessment is undertaken if your final result is between 45 and 49 or within 2 marks of any grade threshold.

If you are not satisfied with the result of an assessment, you can ask the Unit Convenor to review the result. Your request must be made in writing within 10 working days of receiving the result. The Unit Convenor will review your result to determine if your result is appropriate.

If you are dissatisfied with the outcomes of the review, you can lodge a formal complaint.

Feedback, complaints and suggestions

In the first instance, discuss any issues with your Unit Convenor. If you are dissatisfied with the outcome of the discussion or would prefer not to deal with your Unit Convenor, then you can complete a feedback form. See <https://www.swinburne.edu.au/corporate/feedback/>

Advocacy

Should you require assistance with any academic issues, University statutes, regulations, policies and procedures, you are advised to seek advice from an Independent Advocacy Officer at Swinburne Student Life.

For an appointment, please call 03 9214 5445 or email advocacy@swin.edu.au For more information, please see <https://www.swinburne.edu.au/current-students/student-services-support/advocacy/>