

# SEC707 Digital Forensics 2: Advanced concepts in Digital Forensics

**School:** School of Science, Technology and Engineering

2026 | Trimester 2

UniSC Sunshine Coast  
UniSC Adelaide

**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, unless your program has specified a mandatory onsite requirement.

*Please go to [unisc.edu.au](http://unisc.edu.au) 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

This online course will introduce advanced concepts in digital forensics. You will learn a variety of complex and manual digital forensic processes necessary for the understanding of complex digital evidence. You will learn the meaning of various forensic artefacts and how they can be used to support an investigation. You will learn how to overcome various roadblocks to analysis such as the manual recovery of files and accessing encrypted files. You will further hone your ability to report and present digital evidence in a professional manner.

### 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         | 12 times  |
| <b>Tutorial/Workshop 1</b> – On campus workshop              | 2hrs  | Week 1         | 12 times  |
| <b>Seminar</b> – On campus seminar                           | 1hr   | Week 1         | 2 times   |
| <b>ONLINE</b>  |       |                |           |
| <b>Learning materials</b> – Asynchronous learning material.  | 2hrs  | Week 1         | 12 times  |
| <b>Tutorial/Workshop 1</b> – Online interactive zoom classes | 2hrs  | Week 1         | 12 times  |
| <b>Seminar</b> – Online seminar                              | 1hr   | Week 1         | 2 times   |

### 1.3. Course Topics

Value of Digital Evidence  
Storage Technologies  
Operating Systems and Applications  
Digital Device Seizure  
Extraction Methodologies  
Data Encoding

## 2. What level is this course?

700 Level (Specialised)

Demonstrating a specialised body of knowledge and set of skills for professional practice or further learning. Advanced application of knowledge and skills in unfamiliar contexts.

## 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 Demonstrate the differences in various digital technologies and operating systems.                                   | Knowledgeable  |
| 2 Analyse various encoding schemes, file systems, and applications.  | Creative and critical thinker  |
| 3 Justify digital forensic methodologies and processes.  | Knowledgeable  |
| 4 Collect and examine digital evidence in a safe and sanitary manner.  | Engaged  |
| 5 Produce detailed digital forensic reports and documentation in accordance with ethical and evidentiary requirements. | Knowledgeable<br>Ethical   |
| 6 Exploit relevant digital artefacts as a team to identify evidential material and solve complex crimes                | Creative and critical thinker  |

## 5. Am I eligible to enrol in this course?

Refer to the [UniSC Glossary of terms](#) for definitions of “pre-requisites, co-requisites and anti-requisites”.

### 5.1. Pre-requisites

SEC705

### 5.2. Co-requisites

Not applicable

### 5.3. Anti-requisites

Not applicable

### 5.4. Specific assumed prior knowledge and skills (where applicable)

Not applicable

### 5.5. Microcredential Information

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

Using marking rubrics, students will participate in continuous peer and self-assessment tasks. Opportunities will be provided during tutorials for peer-review of responses to online tutorial questions.

### 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        | Practical / Laboratory Skills         | Individual          | 20%         | Approx 250 - 300 Words per exercise | Throughout teaching period (refer to Format) | Online Submission                                  |
| All           | 2        | Report                                | Group               | 35%         | 2000 Words                          | Week 10                                      | Online Assignment Submission with plagiarism check |
| All           | 3        | Examination - not Centrally Scheduled | Individual          | 45%         | 3 hours.                            | Exam Period                                  | Online Test (Quiz)                                 |

#### All - Assessment Task 1: Practical Exercises

| <b>GOAL:</b>                 | To develop the knowledge and technical skill necessary to undertake digital forensic examinations.   |                           |  |                           |   |   |   |   |   |   |   |   |     |   |   |   |  |
|------------------------------|--|---------------------------|--|---------------------------|---|---|---|---|---|---|---|---|-----|---|---|---|--|
| <b>PRODUCT:</b>              | Practical / Laboratory Skills  |                           |  |                           |   |   |   |   |   |   |   |   |     |   |   |   |  |
| <b>AUTHORSHIP STATEMENT:</b> |  |                           |  |                           |   |   |   |   |   |   |   |   |     |   |   |   |  |
| <b>FORMAT:</b>               | Short practical or short-answer questions analysing artefacts by applying techniques learned in the weekly tutorials. Weeks 4, 6 and 8   |                           |  |                           |   |   |   |   |   |   |   |   |     |   |   |   |  |
| <b>CRITERIA:</b>             | <table border="1"> <thead> <tr> <th>No.</th> <th></th> <th>Learning Outcome assessed</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Demonstration of the differences in various technologies and operating systems.</td> <td>1</td> </tr> <tr> <td>2</td> <td>Analysis of various encoding schemes, file systems, and applications.</td> <td>2</td> </tr> <tr> <td>3</td> <td>Collection and examination of digital evidence in a safe and sanitary manner.</td> <td>3 4</td> </tr> <tr> <td>4</td> <td>Exploitation of relevant digital artefacts to solve complex problems.</td> <td>6</td> </tr> </tbody> </table> | No.                       |  | Learning Outcome assessed | 1 | Demonstration of the differences in various technologies and operating systems. | 1 | 2 | Analysis of various encoding schemes, file systems, and applications. | 2 | 3 | Collection and examination of digital evidence in a safe and sanitary manner. | 3 4 | 4 | Exploitation of relevant digital artefacts to solve complex problems. | 6 |  |
| No.                          |  | Learning Outcome assessed |  |                           |   |   |   |   |   |   |   |   |     |   |   |   |  |
| 1                            | Demonstration of the differences in various technologies and operating systems.  | 1                         |  |                           |   |   |   |   |   |   |   |   |     |   |   |   |  |
| 2                            | Analysis of various encoding schemes, file systems, and applications.  | 2                         |  |                           |   |   |   |   |   |   |   |   |     |   |   |   |  |
| 3                            | Collection and examination of digital evidence in a safe and sanitary manner.  | 3 4                       |  |                           |   |   |   |   |   |   |   |   |     |   |   |   |  |
| 4                            | Exploitation of relevant digital artefacts to solve complex problems.  | 6                         |  |                           |   |   |   |   |   |   |   |   |     |   |   |   |  |
| <b>GENERIC SKILLS:</b>       | Problem solving, Applying technologies   |                           |  |                           |   |   |   |   |   |   |   |   |     |   |   |   |  |

### All - Assessment Task 2: Digital Forensic Report

|                              |  |   |
|------------------------------|--|---|
| <b>GOAL:</b>                 | To collaboratively design and execute an advanced digital forensic investigation, emphasising the enhancement of technical documentation and reporting skills as well as demonstrating both individual expertise and effective teamwork. |   |
| <b>PRODUCT:</b>              | Report   |   |
| <b>AUTHORSHIP STATEMENT:</b> |  |   |
| <b>FORMAT:</b>               | A digital forensic examination report and ancillary files. You will be provided with digital examination media and a case study. You will play the role of a digital forensic examiner within a team.                                    |   |
| <b>CRITERIA:</b>             | <b>No.</b>   | <b>Learning Outcome assessed</b>  |
|                              | 1  | Application of digital forensic methodologies to seize, secure, and document electronic evidence <b>3 4</b> |
|                              | 2  | Analysis of various encoding schemes, file systems, and applications. <b>2</b>                              |
|                              | 3  | Collection and examination of digital evidence in a safe and sanitary manner. <b>4</b>                      |
|                              | 4  | Production of digital forensic reports and documentation. <b>3 5</b>  |
|                              | 5  | Collaboration within a team to develop an informed expert opinion <b>6</b>                                  |
| <b>GENERIC SKILLS:</b>       | Collaboration, Problem solving   |   |

### All - Assessment Task 3: Final Exam

|                              |  |  |
|------------------------------|--|--|
| <b>GOAL:</b>                 | To demonstrate understanding of digital forensic theory. |  |
| <b>PRODUCT:</b>              | Examination - not Centrally Scheduled                    |  |
| <b>AUTHORSHIP STATEMENT:</b> |  |  |
| <b>FORMAT:</b>               | Online final exam  |  |
| <b>CRITERIA:</b>             | <b>No.</b>   | <b>Learning Outcome assessed</b>   |
|                              | 1  | Demonstration of the differences in various technologies and operating systems. <b>1</b> |
|                              | 2  | Analysis of various encoding schemes, file systems, and mobile applications. <b>2</b>    |
|                              | 3  | Justification of digital forensic methodologies and processes. <b>3</b>                  |
| <b>GENERIC SKILLS:</b>       | Problem solving, Applying technologies                   |  |

## 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. 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

You need regular access to the resource(s) below. Many texts are available as ebooks through the [Library](#) at no additional cost.

| REQUIRED? | AUTHOR  | YEAR | TITLE  | EDITION | PUBLISHER |
|-----------|---|------|--|---------|-----------|
| Required  | Bill Nelson,Amelia Phillips,Christopher Steuart | 2018 | Guide to Computer Forensics and Investigations | n/a     | n/a       |

### 8.2. Specific requirements

The course contains a large practical component which requires the student to have a computer with the following hardware requirements:

A modern Intel or AMD processor with at least 4 logical cores

8GB RAM

Minimum 300GB free storage space (for forensic image storage and forensic analysis software installation)

A dedicated graphics card.

Operating System:

Windows 7, 8.1, or Windows 10.

You may be required to download files in excess of 50GB.

## 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:

- (a) The final mark is in the percentage range 47% to 49.4%; and
- (b) The course is graded using the Standard Grading scale

### 10.3. Assessment: Submission penalties

Late submissions may be penalised up to and including the following maximum percentage of the assessment task's identified value, with weekdays and weekends included in the calculation of days late:

- (a) One day: deduct 5%;
- (b) Two days: deduct 10%;
- (c) Three days: deduct 20%;
- (d) Four days: deduct 40%;
- (e) Five days: deduct 60%;
- (f) Six days: deduct 80%;
- (g) Seven days: A result of zero is awarded for the assessment task.

The following penalties will apply for a late submission for an online examination:

Less than 15 minutes: No penalty

From 15 minutes to 30 minutes: 20% penalty

More than 30 minutes: 100% penalty

### 10.4. 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
- Central Examinations
- Deferred Examinations
- Student Conduct
- Students with a Disability

For more information, visit <https://www.usc.edu.au/explore/policies-and-procedures#academic-learning-and-teaching>

### 10.5. Student Charter

UniSC 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.

### 10.6. General Enquiries

For course-specific questions, contact your teaching staff or Course Coordinator.

For other enquiries or to access support, please contact Student Central:

- [UniSC Student Central](#)
- [UniSC Adelaide Student Central](#)