## School of Information and Physical Sciences

# COMP3851A: Computing and Information Sciences Work Integrated Learning Part A

Callaghan

Semester 1 - 2024

THE UNIVERSITY OF NEWCASTLE AUSTRALIA

COURSE OUTLINE

www.newcastle.edu.au

CRICOS Provider 00109J

# OVERVIEW

**Course Description**

This course is Part A of a multi-term sequence incorporating Work Integrated Learning (WIL). Part B must also be completed to meet the requirements of the sequence. This Work Integrated Learning course allows you to apply the theoretical knowledge and skills obtained during your studies with and for an organisation. Through these courses (Part A and Part B), you will work on a project related to the fields of computer science, data science, and/or information technology. The work is undertaken in an organisation (industry, research groups or laboratories) or as an innovative proposal that has been approved by the course coordinator. In your project you will develop an entrepreneurial prototype which requires you to incorporate computer science, data science, and/or information technology skills into their practices. This direct experience exposes you to the project management practices of managers and/or researchers. Under supervision and in a group work environment, you will undertake between 240 and 280 hours of project-based work, and a Work Integrated Learning Experience within the year, with one or more appropriate organisations. For the Work Integrated Learning Experience, you will undertake 140 hours (equivalent to nominally 4-weeks full-time) in a role relevant to the professional context of your program. This experience may be undertaken within a range of settings, including the private sector, government, other relevant organisations, or with an industry project partner. The student will have an active role in organising this experience, however, students will need to consult with the Course Coordinator prior to approaching companies or organisations. The Course Coordinator will ensure the experience is appropriate and does not adversely affect other existing activities or courses of the University. A nominated supervisor within the host organisation will be required.

**Academic Progress Requirements**

Nil

**Requisites**

Students cannot enrol in this course if they have successfully completed COMP3850.

This course is only available to students enrolled in the Bachelor of Information Technology [11497], Bachelor of Information Technology/Bachelor of Business [12238], Bachelor of Computer Science [40103], Bachelor of Mathematics/ Bachelor of Computer Science [10253], Bachelor of Data Science [40276], Bachelor of Data Science/Bachelor of Mathematics [40277], Bachelor of Data Science/Bachelor of Computer Science [40278] programs.

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| **Assumed Knowledge** | Successful completion of at least 140 units of study. |
| **Contact Hours** | **Callaghan**<br>**Lecture**<br>Face to Face On Campus<br>2 hour(s) per week(s) for 4 week(s)<br><br>**Placement**<br>Face to Face Off Campus<br>140 hour(s) per term<br>Students will be expected to attend 140 hours per term.<br>**Workshop**<br>Face to Face On Campus<br>2 hour(s) per week(s) for 13 week(s) starting Week 1 |
| **Unit Weighting** | 10 |
| **Workload** | Students are required to spend on average 120-140 hours of effort (contact and non-contact) including assessments per 10 unit course. |
| **Multi-Term Sequence Advice** | This course is part of a multi-term sequence. Both Part A and Part B must be completed to meet the requirements of the sequence. Part A and Part B must be completed in consecutive terms. Students must complete Part A before completing Part B. Students must complete the sequence within a twelve month period. If students complete Part A but are unable to complete Part B within the timeframe, they must re-enrol in Part A. Part A cannot be completed as a standalone course, it will only count towards your program once you have successfully completed Part B. |

# CONTACTS

**Course Coordinator**

**Callaghan**
Dr Alexandre Mendes
Alexandre.Mendes@newcastle.edu.au
0249216172
Consultation: Tuesday, 12PM-1PM, ES236 (or via Zoom - link available on Canvas)

**Teaching Staff**

Other teaching staff will be advised on the course Canvas site.

**School Office**

**School of Information and Physical Sciences**
SR233, Social Sciences Building
Callaghan
CESE-SIPS-Admin@newcastle.edu.au
+61 2 4921 5513
9am-5pm (Mon-Fri)

# SYLLABUS

**Course Content**

This course comprises activities based on planning, developing, reporting and critically reflecting on a major activity related to computer science, data science, and/or information technology. Students will:

1. Apply for, secure and start a project related to computer science, data science and/or information technology areas, approved by the course coordinator
2. Prepare a 'Program of Activity Agreement' which should be signed by the student, project supervisor and course coordinator

3. Collaborate to plan, carry out and report on an appropriate project
4. Complete at least 100 hours in Part A with an organisation which requires computer science, data science and/or information technology expertise (the total number of hours in Part A and B combined should be between 240 and 280 hours)
5. Record, report and critically reflect on the project undertaken
6. Prepare and deliver a seminar to describe the activities undertaken during the project
7. Describe and analyse ethical and technical issues relating to real world research and practice.
8. Complete a Pre-Work Integrated Learning module online.
9. Complete 140 hours of Work Integrated Learning Experience.

**Course Learning Outcomes**

**On successful completion of this course, students will be able to:**

1. Identify and plan the application of a suite of computer science, data science and/or information technology skills learnt in the program to a specific project

2. Critically set objectives and evaluate partial outcomes

3. Demonstrate and reflect upon the skills required for the workplace, including both written and verbal communication, and teamwork

4. Apply theoretical knowledge to practical workplace tasks

5. Critically reflect on the ethical and technical issues faced in the workplace

**Course Materials**

**Other Resources:**

- To be advised on Canvas

# COMPULSORY REQUIREMENTS

In order to pass this course, each student must complete ALL of the following compulsory requirements:

**Contact Hour Requirements:**

**Course Assessment Requirements:**

- Assessment 1 - Project Plan: Pass requirement - Must pass this assessment item to pass the course.
- Assessment 2 - Written Report: Pass requirement - Must pass this assessment item to pass the course.
- Assessment 3 - Seminar: Pass requirement - Must pass this assessment item to pass the course.
- Assessment 4 - Quizzes: Pass requirement - Must pass this assessment item to pass the course.

**Compulsory Placement and WHS Requirements:**

# SCHEDULE

# ASSESSMENTS

This course has 5 assessments. Each assessment is described in more detail in the sections below.

| | Assessment Name | Due Date | Involvement | Weighting | Learning Outcomes |
|---|---|---|---|---|---|
| **1** | Project Plan* | Week 5 (Friday, 11:59PM) | Group | 10% | 1, 2 |
| **2** | Written Report* | Week 13 (Friday, 11:59PM) | Combination | 60% | 1, 2, 3, 4, 5 |
| **3** | Seminar* | Week 13 (Friday, 11:59PM) | Group | 15% | 1, 2, 3, 4, 5 |
| **4** | Quizzes* | Weeks 1-13 (Friday, 11:59PM) | Individual | 15% | 1, 2, 3, 4, 5 |
| **5** | Supervisor Report | Week 14 (Friday, 11:59PM) | Individual | Formative | 1, 2, 3 |

* This assessment has a compulsory requirement.

**Late Submissions** The mark for an assessment item submitted after the designated time on the due date, without an approved extension of time, will be reduced by 10% of the possible maximum mark for that assessment item for each day or part day that the assessment item is late. Note: this applies equally to week and weekend days.

## Assessment 1 - Project Plan

**Assessment Type** Proposal / Plan
**Purpose** To report on the background of the project, aims and future activities of the semester. The goal of this proposal is to answer questions about feasibility of the project and its alignment with the expectations for a 3rd year level Computer Science / Information Technology / Data Science project. In addition is will expose any skills deficiencies that students might have and how those can be addressed.
**Description** This assessment item is to be written together with the supervisor of your project. A template will be provided on Canvas.
**Weighting** 10%
**Compulsory Requirements** Pass requirement - Must pass this assessment item to pass the course..
**Due Date** Week 5 (Friday, 11:59PM)
**Submission Method** Online
Note that if the deliverables related to the project (including any source code) are not provided to the company (or project supervisor) after requested, and/or not deployed to the client's infrastructure satisfactorily, the student might be given an "I" (Incomplete) grade until those steps are completed.
**Assessment Criteria** To be posted on Canvas together with the assessment specifications.
**Return Method** Online
**Feedback Provided** Online - .
**Opportunity to Reattempt** Students WILL NOT be given the opportunity to reattempt this assessment.

## Assessment 2 - Written Report

**Assessment Type** Report
**Purpose** To report on the activities undertaken by the student during the semester.
**Description** A report on the overall project including the (a) background, (b) aims, (c) methods/design, (d) results, (e) ethical considerations, (f) individual contributions and (g) self-learning activities. For group projects, parts (a)-(e) will be written by the group (20%) and parts (f)-(g) will be individual (40%).
**Weighting** 60%
**Compulsory Requirements** Pass requirement - Must pass this assessment item to pass the course..
**Due Date** Week 13 (Friday, 11:59PM)
**Submission Method** Online
Note that if the deliverables related to the project (including any source code) are not provided to the company (or project supervisor) after requested, and/or not deployed to the client's infrastructure satisfactorily, the student might be given an "I" (Incomplete) grade until those

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| | steps are completed. |
| **Assessment Criteria** | To be posted on Canvas together with the assessment specifications. A marking guide will be provided on Canvas. If the project results are not at the level expected for a 3rd year level project, students might be given an extension (instead of a fail grade), and the resubmission will be capped at 50% of the maximum score. |
| **Return Method** | Online |
| **Feedback Provided** | Online - . |
| **Opportunity to Reattempt** | Students WILL NOT be given the opportunity to reattempt this assessment. |

## Assessment 3 - Seminar

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| **Assessment Type** | Presentation |
| **Purpose** | To demonstrate organizational and presentation skills by the student. |
| **Description** | This task will require individual students and groups to prepare a professional presentation where they will present the results of the project. Each presentation will be between 10 and 30 minutes long, depending on whether it is a single-student project or a group project. |
| **Weighting** | 15% |
| **Compulsory Requirements** | Pass requirement - Must pass this assessment item to pass the course.. |
| **Due Date** | Week 13 (Friday, 11:59PM) |
| **Submission Method** | Online |
| **Assessment Criteria** | To be posted on Canvas together with the assessment specifications. |
| **Return Method** | |
| **Feedback Provided** | |
| **Opportunity to Reattempt** | Students WILL NOT be given the opportunity to reattempt this assessment. |

## Assessment 4 - Quizzes

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| **Assessment Type** | Quiz |
| **Purpose** | These assessments will help students stay focused on their specific project activities, help them with project management tasks, and increase their preparedness for the workplace. |
| **Description** | Description of the contributions by each individual towards the project. Those contributions will cover self-learning, organizational/development activities related to the deliverables, and overall responsibilities within the team. Students also need to report on the use of project management tools and submit meeting minutes. |
| **Weighting** | 15% |
| **Compulsory Requirements** | Pass requirement - Must pass this assessment item to pass the course.. |
| **Due Date** | Weeks 1-13 (Friday, 11:59PM) |
| **Submission Method** | Online |
| **Assessment Criteria** | To be posted on Canvas together with the assessment specifications. |
| **Return Method** | Online |
| **Feedback Provided** | Online - . |
| **Opportunity to Reattempt** | Students WILL NOT be given the opportunity to reattempt this assessment. |

## Assessment 5 - Supervisor Report

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|---|---|
| **Assessment Type** | Report |
| **Purpose** | To obtain feedback from the supervisor about the student's performance. |
| **Description** | The feedback is related to the characteristics that graduates need to have in order to succeed in the workplace, including technical and transferable skills, and professionalism. |
| **Weighting** | |
| **Due Date** | Week 14 (Friday, 11:59PM) |
| **Submission Method** | Specific Location<br>This is a formative assessment and will not contribute to your final grade. The supervisor will e-mail the feedback directly to the course coordinator. |
| **Assessment Criteria** | To be sent to supervisor with the report specifications. |
| **Return Method** | Not Returned |
| **Feedback Provided** | No Feedback - . |

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| **Opportunity to Reattempt** | Students WILL NOT be given the opportunity to reattempt this assessment. |

# ADDITIONAL INFORMATION

**Grading Scheme**

This course is Part A of a multi-term sequence. A grade will be awarded at the completion of Part B.

**Placement Requirements**

This is a placement course covered by the Student Placement Policy. Refer to http://newcastle.edu.au/policy/000768.html for further information.

**Communication Methods**

Communication methods used in this course include:

- Canvas Course Site: Students will receive communications via the posting of content or announcements on the Canvas course site.
- Email: Students will receive communications via their student email account.
- Face to Face: Communication will be provided via face to face meetings or supervision.

**Course Evaluation**

Each year feedback is sought from students and other stakeholders about the courses offered in the University for the purposes of identifying areas of excellence and potential improvement.

**Oral Interviews (Vivas)**

As part of the evaluation process of any assessment item in this course an oral examination (viva) may be conducted. The purpose of the oral examination is to verify the authorship of the material submitted in response to the assessment task. The oral examination will be conducted in accordance with the principles set out in the Oral Examination (viva) Procedure. In cases where the oral examination reveals the assessment item may not be the student's own work the case will be dealt with under the Student Conduct Rule.

**Academic Misconduct**

All students are required to meet the academic integrity standards of the University. These standards reinforce the importance of integrity and honesty in an academic environment. Academic Integrity policies apply to all students of the University in all modes of study and in all locations. For the Student Academic Integrity Policy, refer to https://policies.newcastle.edu.au/document/view-current.php?id=35.

**Adverse Circumstances**

The University acknowledges the right of students to seek consideration for the impact of allowable adverse circumstances that may affect their performance in assessment item(s). Applications for special consideration due to adverse circumstances will be made using the online Adverse Circumstances system where:

1. the assessment item is a major assessment item; or
2. the assessment item is a minor assessment item and the Course Co-ordinator has specified in the Course Outline that students may apply the online Adverse Circumstances system;
3. you are requesting a change of placement; or
4. the course has a compulsory attendance requirement.

Before applying you must refer to the Adverse Circumstance Affecting Assessment Items Procedure available at:
https://policies.newcastle.edu.au/document/view-current.php?id=236

**Important Policy Information**

The Help button in the Canvas Navigation menu contains helpful information for using the Learning Management System. Students should familiarise themselves with the policies and procedures at https://www.newcastle.edu.au/current-students/respect-at-uni/policies-and-procedures that support a safe and respectful environment at the University.

# Graduate Profile Statements

The following table illustrates how this course contributes towards building the skills students will need to work in their profession.

**Level of capability**

- Level 1 indicates an introduction to a topic at a university level
- Levels 2 and 3 indicate progressive reinforcement of that topic
- Level 4 indicates skills commensurate with a graduate – entry to professional practice

| Graduate attribute | University of Newcastle Bachelor of Computer Science Graduate Profile Statements | Taught | Practised | Assessed | Level of capability |
|---|---|---|---|---|---|
| 1 | Knowledge of basic science and computer science fundamentals | | | | |
| 2 | In depth technical competence in the discipline of computer science | | | | |
| 3 | An ability to carry out problem analysis, requirements capture, problem formulation and integrated software development for the solution of a problem | X | X | X | 3 |
| 4 | Capacity to continue developing relevant knowledge, skills and expertise in computer science throughout their careers | | | | |
| 5 | An ability to communicate effectively with other Computer Scientists, Software Engineers, other professional disciplines, managers and the community generally | X | X | X | 3 |
| 6 | Ability to undertake and coordinate large computer science projects and to identify complex problems, their formulation and solution | X | X | X | 3 |
| 7 | Ability to function effectively as an individual, a team member in multidisciplinary and multicultural teams and as a leader/manager with capacity to assist and encourage those under their direction | X | X | X | 3 |
| 8 | Understanding of social, cultural, global and business opportunities of the professional computer scientist; understanding the need for and principles of sustainability and adaptability | X | X | X | 3 |
| 9 | Understanding of professional and ethical responsibilities and a commitment to them | X | X | X | 3 |
| 10 | Understanding of entrepreneurship; need of and process of innovation, as well as the need of and capacity for lifelong learning | X | X | X | 3 |

| | University of Newcastle Information Technology Graduate Profile Statements | Taught | Practiced | Assessed | Level of Capability |
|---|---|---|---|---|---|
| 1 | Demonstrate a comprehensive understanding of the discipline of information technologies with an emphasis on net-centric applications, information management, and user requirements for ethical professional practice. | X | X | X | 3 |
| 2 | Apply critical reasoning and systems thinking to understand and support the operation and constraints of contemporary enterprises and their dynamic environment. | X | X | X | 3 |
| 3 | Work independently and collaboratively to locate, manage and organise information and resources and apply evidence-based methodologies to create, modify and maintain designs and design solutions. | X | X | X | 3 |
| 4 | Use creativity, problem solving skills, project management skills and technical expertise to analyse, interpret, evaluate and generate solutions to complex technical and organisational problems. | X | X | X | 3 |
| 5 | Demonstrate professional judgement and responsibility by communicating information technology principles, practices, standards to specialist and non-specialist audience clearly and persuasively. | X | X | X | 3 |

*This course outline was approved by the Head of School. No alteration of this course outline is permitted without Head of School approval. If a change is approved, students will be notified and an amended course outline will be provided in the same manner as the original.*