

Unit Outline

ISAD3000 Capstone Computing Project 1 Semester 1, 2022

Unit study package code:	ISAD3000
Mode of study:	Internal
Tuition pattern summary:	<p>Note: For any specific variations to this tuition pattern and for precise information refer to the Learning Activities section.</p> <p>Individual Study: 1 x 9 Hours Weekly Workshop: 1 x 2 Hours Weekly</p> <p>This unit does not have a fieldwork component.</p>
Credit Value:	25.0
Pre-requisite units:	<p>MJRU-COMPT (v.0) Computing Major (BSc Science) or any previous version OR B-COMP (v.0) Bachelor of Computing or any previous version OR B-INFTEC (v.0) Bachelor of Information Technology or any previous version OR MJRH-ADCMP (v.0) Computing Major (BAdvSci) (Honours) or any previous version OR MJRU-COMPU (v.0) Computing Major (BSc Science) or any previous version</p>
Co-requisite units:	Nil
Anti-requisite units:	Nil
Result type:	Grade/Mark
Approved incidental fees:	Information about approved incidental fees can be obtained from our website. Visit fees.curtin.edu.au/incidental_fees.cfm for details.
Unit coordinator:	<p>Title: Dr Name: Hannes Herrmann Phone: 08 9266 3309 Email: Hannes.Herrmann@curtin.edu.au Location: Building: 314 - Room: 343 Consultation times: No set times. Feel free to drop past or e-mail for an appointment.</p>
Teaching Staff:	<p>Name: Aneesh Krishna Phone: 08 9266 3014 Email: A.Krishna@curtin.edu.au Location: Building: 314 - Room: 436</p>
Administrative contact:	<p>Name: Michelle Cutinha Phone: 08 9266 7428 Email: M.Cutinha@curtin.edu.au</p>

Location: Building: 314 - Room: 340

Learning Management System: [Blackboard](https://lms.curtin.edu.au) (lms.curtin.edu.au)

Acknowledgement of Country

We respectfully acknowledge the Indigenous Elders, custodians, their descendants and kin of this land past and present. The [Centre for Aboriginal Studies](#) aspires to contribute to positive social change for Indigenous Australians through higher education and research.

Coronavirus (COVID-19) Update

Curtin University is committed to supporting all our students and staff whether they are on campus, working remotely or overseas. Your health, safety and wellbeing are our priority and the continuing COVID-19 pandemic may require changes to the unit schedule, learning activities, delivery modes and assessment to provide flexible and safe options to our community. Curtin will endeavour to keep changes and disruptions to a minimum at all times. For current advice and further information visit <https://www.curtin.edu.au/novel-coronavirus/>.

Syllabus

Software engineering projects are selected and undertaken in consultation with a member of the academic staff, usually working in a small group in conjunction with an industry partner or a designated client. Projects are related to the design, implementation and testing of software systems with associated literature reviews. Team-oriented software engineering processes are applied during all phases of the project. Management activities are undertaken and a range of software engineering tools are applied to resolve problems arising during the execution of the software development process. The main focus of this unit is problem identification and the development of a project proposal. Students from each degree and major will be given tasks specific to that degree and major as part of their project work.

Introduction

Students work in assigned groups to complete a project that is as close as possible to ones that may be encountered in the workplace. Students will use formal development procedures, including sharing and merging code via a repository (BitBucket) and using a formal Agile development methodology. Each group works for a client who guides them in the progress and sets the requirements for the project. A supervisor from the Department of Computing tracks the group's progress and can provide advice as needed. Students whose project clients are industry partners will work onsite with the partner's development team and receive guidance from software professionals.

Groups undertake real projects, which means that real-life issues may occur. Students are strongly advised to treat this unit as a job, and to approach any issues appropriately. They should be sure to consult their supervisor if difficulties arise, and to keep all documentation updated. Students are expected to meet with their client for at least half an hour every week, and to spend at least ten hours per week on the project (including the non-contact weeks), but as with other units, students may be required to commit more than ten hours on some weeks. As with real life development, some flexibility may be required if problems arise, and students are encouraged to plan ahead accordingly.














This unit is the first part of the project, so it focusses on planning, research into technology and best-practice and design. Students will be given one or more tasks specific to their stream or major, but all students will be expected to be part of group software development because this is the focus of the degree.

This unit, in line with current research and university values, strives to achieve a positive and inclusive educational environment. This supports improved academic performance, increased confidence and creates a greater sense of safety and belonging. Your teaching team is committed to providing a safe and inclusive learning experience and requires students to take reasonable and appropriate measures to actively eliminate discrimination on the basis of ability; cultural and social background; and diverse sex, sexuality, and gender.







Unit Learning Outcomes

All graduates of Curtin University achieve a set of six Graduate Capabilities during their course of study. These inform an employer that, through your studies, you have acquired discipline knowledge and a range of other skills and capabilities which employers would value in a professional setting. Each unit in your course addresses the Graduate Capabilities through a clearly identified set of learning outcomes. They form a vital part in the process referred to as assurance of learning. The learning outcomes notify you of what you are expected to know, understand or be able to do in order to be successful in this unit. Each assessment for this unit is carefully designed to test your knowledge of one or more of the unit learning outcomes. On successfully completing all of the assessments you will have achieved all of these learning outcomes.

Your course has been designed so that on graduating you will have achieved all of Curtin's Graduate Capabilities through the assurance of learning processes in each unit.

On successful completion of this unit students can:		Graduate Capabilities addressed
1	Use project management skills to manage a software project of significant scope, and evaluate project outcomes	 
2	Reflect on, evaluate and communicate personal contributions to a project	 
3	Integrate existing technical knowledge and skills on a software project of significant scope	 
4	Analyse industry problems and construct a proposals to direct on-going work	  
5	Access and critically evaluate technical literature to solve new problems	 
6	Understand the ethical requirements of the computing industry and evaluate the ethical implications of a computer project	 

Curtin's Graduate Capabilities

	Apply discipline knowledge, principles and concepts		Innovative, creative and entrepreneurial		Effective communicators with digital competency
	Globally engaged and responsive		Culturally competent to engage respectfully with local First Peoples and other diverse cultures		Industry connected and career capable

Find out more about Curtin's Graduate Capabilities at the Curtin Learning and Teaching website: clt.curtin.edu.au

Learning Activities

Much of the learning in this unit takes place through private work or group discussion. Supervisors are available to assist with aspects of the progress relating to the unit such as use of BitBucket. Students should undertake this project only in the final two semesters of their study, and as such should already have many of the skills required; this unit requires that the students apply these skills to a real-world project. It is expected that a large amount of self-learning will be required, in a similar manner as will happen when the student obtains their first development job. The aim of this unit is to reduce the shock and rapid learning required when entering the workforce and to make students more job-ready.

Additional skills needed for the project, such as the use of Bitbucket repositories, will be covered in the weekly lectures and workshops, which may also include visits from professionals acting as invited speakers.

Learning Resources

Library Reading List

The Reading List for this unit can be accessed through Blackboard.

Other resources

You will be required to use a range of other free resources as raised in the weekly briefings.

Assessment

Assessment policy exemptions

- There are no exemptions to the assessment policy

Assessment schedule

	Task	Value %	Date Due	Unit Learning Outcome(s) Assessed	Late Assessments Accepted?*	Assessment Extensions Considered?*
1	Milestones	50%	Week: Ongoing (see calendar at end) Day: Varies (see calendar at end) Time: Normally at 5pm Western Australian Standard Time	1,2,3,4,5	Yes	No
2	Final Submission	40%	Week: 14 (Study Week) Day: Friday Time: 5pm	2,4,5,6	Yes	Yes
3	Practice Presentation	10%	Week: 13 and 14 Day: By appointment Time: By appointment	2,3,5	No	Yes

*Please refer to the Late Assessment and the Assessment Extension sections below for specific details and conditions.

Detailed information on assessment tasks

- The milestones are submissions that showcase the design process of the student and their group during the semester. This includes tasks such as creating an SRS or contract specification and generating design documents. Most of the submissions are aimed at keeping the group on track and ensuring that written feedback is received. Many of the items will be re-submitted as part of the final submission, hopefully with appropriate improvements.

Note that where a student has contributed exceptionally well or poorly, the marks for the group components of the milestones may be moderated appropriately. This can happen after the initial marks are given, at the time that the co-supervisor moderates the marks. As usual, marks in Blackboard aren't final until they've been moderated.

In general, late assessments are accepted for the tasks in this category given the right circumstances and documentation. Because many of the assessments have a group component, assessment extensions (including from CAPs) are generally not available. Rather than get an extension, a student would normally be allowed to submit with less content and to report on any "extension" work in their next milestone report.

- This is the collated set of design documents for the project plus each student's specific information and contribution. This specifically includes such information as time tracking and minutes of meetings.

Note that where a student has contributed exceptionally well or poorly, the marks for the group components of the milestones may be moderated appropriately.

Since there is a group component to this assessment, extensions will only be considered if they can be shown not to disadvantage the rest of the group.

3. Each group and group member will be required to present the work that they have completed that semester. The presentations will be to a marking panel with minimal other audience in order to allow for feedback to be given. Marking will be as per the marking guide given on Blackboard and details will be discussed in the Presentation Skills workshop. Each group will need to arrange a time during week 13 or 14 with the marking panel.

Since there is a group component to this assessment, extensions will only be considered if they can be shown not to disadvantage the rest of the group. The whole group must present at once, so an extension will affect everyone.

Pass requirements

To pass the unit a student must:

- score 50% or more overall.

Note that your mark is directly impacted by the accepted hours. You are expected to put in a MINIMUM of 10 hours per week (including the non-teaching weeks) of constructive work. More details in the assessment specifications.

Assessment Moderation

Fair assessment through moderation

Moderation describes a quality assurance process to ensure that assessments are appropriate to the learning outcomes, and that students work is evaluated consistently by assessors. Minimum standards for the moderation of assessments are described in the Assessment and Student Progression Manual, available from policies.curtin.edu.au/findapolicy/

Pre-marking moderation

This unit complies with moderation of assessments as described in the Assessment and Student Progression Manual, available from policies.curtin.edu.au/findapolicy/.

You will find the rubrics for your assessments in the specification documents so you know how you'll be marked. Supervisors have access to a rubric in Blackboard and will use that for marking. You will be able to see these rubrics once you have your marks.

Intra-marking / Post-marking moderation

This unit complies with moderation of assessments as described in the Assessment and Student Progression Manual, available from policies.curtin.edu.au/findapolicy/.

Every group has a supervisor and co-supervisor. Marks are awarded by the supervisor but are not final until they have been moderated by the co-supervisor.

Late assessment

Where the submission of a late assessment is permitted, late penalties will be consistently applied in this unit.

Where a late assessment **is** permitted for an assessment item or the entirety of the unit (refer to the Assessment Schedule table in this Unit Outline) and the student does not have an approved assessment extension:

1. For assessment items submitted within the first 24 hours after the due date/time, students will be penalised by a deduction of 5% of the total marks allocated for the assessment task;
2. For each additional 24 hour period commenced an additional penalty of 10% of the total marks allocated for the assessment item will be deducted; and
3. Assessment items submitted more than 168 hours late (7 calendar days) will receive a mark of zero.

Where late assessment **is NOT** permitted for an assessment item or the entirety of the unit (refer to the Assessment Schedule table in this Unit Outline) and the student does not have an approved assessment extension:

1. All assessment items submitted after the due date/time will receive a mark of zero.

Assessment extension

Where an application for an assessment extension **is** permitted for an assessment item(s) within this unit (refer to the Assessment Schedule table in this Unit Outline):

1. A student who is unable to complete an assessment item by/on the due date/time as a result of exceptional circumstances beyond the student's control, may apply for an assessment extension on the Assessment Extension Application Form as prescribed by the Academic Registrar. The form is available on the Forms page at <https://students.curtin.edu.au/essentials/forms-documents/forms/> and also within the student's OASIS (My Studies tab – Quick Forms) account.
2. The student will be expected to submit their application for an Assessment Extension with supporting documentation [via the online form](#).
3. Timely submission of this information supports the assessment process. For applications that are declined, delayed submission may have significant ramifications on the possible marks awarded.
4. An application may be accepted up to five working days after the due date/time of the assessment item where the student is able to provide a verifiable explanation as to why they were not able to submit the application prior to the assessment due date/time

Where an application for an assessment extension **is NOT** permitted for an assessment item(s) within this unit (refer to the Assessment Schedule table in this Unit Outline):

1. All assessment items submitted after the due date/time will be subject to late penalties or receive a mark of zero depending on the unit permitting late assessment submissions.

Deferred assessments

If your results show that you have been granted a deferred assessment you should immediately check OASIS for details.

Further assessment

Further assessments, if granted by the Board of Examiners, will be held between 13/07/2022 and 22/07/2022 . Notification to students will be made after the Board of Examiners meeting via the Official Communications Channel in OASIS.

It is the responsibility of the student to be available to complete the requirements of a further assessment. If your results show that you have been granted a further assessment you should immediately check OASIS for details.

Reasonable adjustments for students with disabilities/health circumstances likely to impact on studies

A [Curtin Access Plan](#) (CAP) is a document that outlines the type and level of support required by a student with a disability or health condition to have equitable access to their studies at Curtin. Carers for people with disability may also be eligible for support. This support can include alternative exam or test arrangements, study materials in accessible formats, access to Curtin's facilities and services or other support as discussed with an advisor from [AccessAbility Services](#).

Documentation is required from your treating Health Professional to confirm your health circumstances or carer responsibilities.

If you think you may be eligible for a CAP, please contact AccessAbility Services. If you already have a CAP please provide it to the Unit Coordinator in week 1 of each study period.

Referencing style

The referencing style for this unit is IEEE.

More information on this referencing style can be obtained at <https://ieeauthorcenter.ieee.org/wp-content/uploads/IEEE-Reference-Guide.pdf>

Privacy

As part of a learning or assessment activity, or class participation, your image or voice may be recorded or transmitted by equipment and systems operated by Curtin University. Transmission may be to other venues on campus or to others both in Australia and overseas.

Your image or voice may also be recorded by students on personal equipment for individual or group study or assessment purposes. Such recordings may not be reproduced or uploaded to a publicly accessible web environment. If you wish to make such recordings for study purposes as a courtesy you should always seek the permission of those who are impacted by the recording.

Recording of classes or course materials may not be exchanged or distributed for commercial purposes, for compensation, or for any other purpose other than personal study for the enrolled students in the unit. Breach of this may subject a student to disciplinary action under Statute No 10 – Student Disciplinary Statute.

If you wish to discuss this please talk to your Unit Coordinator.

Copyright

The course material for this unit is provided to you for your own research and study only. It is subject to copyright. It is a copyright infringement to make this material available on third party websites without the express written consent of Curtin University.

Academic Integrity (including plagiarism and cheating)

Academic Integrity

Curtin's [Student Charter](#), [Academic Integrity Program \(AIP\)](#), and core [Values](#) guide expectations regarding student behaviour and responsibilities. Information on these topics can be found on the [Academic Integrity Website](#).

Academic Integrity Warnings

An [Academic Integrity Warning](#) may be issued to a New-to-Curtin student in limited circumstances and only where misconduct is not involved.

Academic Misconduct

Staff members are required to report suspected misconduct. [Academic Misconduct](#) means conduct by a student that is dishonest or unfair in connection with any academic work. This includes all types of plagiarism, cheating, collusion, falsification or fabrication of content, and behaviours like falsifying medical certificates for extension. [Contract cheating](#), the use of file sharing, translation services/apps, paraphrasing tools (text-spinners) and assignment help websites also may be considered academic misconduct. The longer term personal, social, and financial consequences of misconduct can be severe, so please ask for help if you are unsure.

If your work is the subject of an inquiry, you will be given an opportunity to respond and appropriate support will be provided. Academic work under inquiry will not be graded until the process has concluded. Penalties for misconduct may include a warning, a reduced or nil grade, a requirement to repeat the assessment, an annulled grade (ANN) or termination from the course. For more information refer to [Statute No.10 Student Discipline and Academic Misconduct Rules](#).

Information and Communications Technology (ICT) Expectations

Curtin students are expected to have reliable internet access in order to connect to OASIS email and learning systems such as Blackboard and Library Services.

You may also require a computer or mobile device for preparing and submitting your work.

Some projects may have additional ICT requirements for groups to be able to apply for them, such as a certain number of members having Android phones or conditions on the ownership of intellectual property. If you apply for such a project you are agreeing to meet this requirement, and problems with this (for example if a phone is lost or breaks) must be addressed by the group.

Resources to be supplied by project sponsors are the responsibility of the department and the client. The school has a small budget that may be used to cover incidental costs with the approval of the UC.

For general ICT assistance, in the first instance please contact OASIS Student Support:

oasisapps.curtin.edu.au/help/general/support.cfm

For specific assistance with any of the items listed below, please contact The Learning Centre:

life.curtin.edu.au/learning-support/learning_centre.htm

- Using Blackboard, the I Drive and Back-Up files
- Introduction to PowerPoint, Word and Excel

Additional information

As mentioned above, this unit tests the skills learned during the course of your studies. As such, you must be as close as possible to completing your studies in order to enrol in this unit. Ideally you would be starting the final year of your studies, but in special cases you may be permitted to enrol if you have completed at least 300 credit points (for a 3-year degree) and not enrolling would unduly extend your studies. You may not enrol in this unit if you have completed less than 300 credit points or if you plan to still be taking units for your degree for more than three study periods (including this one). For example, you can't enrol in this unit in semester 1 of this year if you plan to still be in this degree in semester 2 of next year; in that case you should be taking this unit next year. In addition, you need special permission to enrol in this unit if you are not in the B.Sc. (Science) computing major, the Bachelor of Computing or the Bachelor of Technology.

You are generally expected to enrol in the second project unit, Capstone Computing Project 2, in the semester following your enrolment in this unit. If you are not able to do this (called having a *split project*) you must notify the unit co-ordinator, and this may impact on your choice of projects.

Enrolment

It is your responsibility to ensure that your enrolment is correct - you can check your enrolment through the eStudent option on OASIS, where you can also print an Enrolment Advice.

Student Rights and Responsibilities

It is the responsibility of every student to be aware of all relevant legislation, policies and procedures relating to their rights and responsibilities as a student. These include:

- the Student Charter
- Values and Signature Behaviours
- the University's policy and statements on plagiarism and academic integrity
- copyright principles and responsibilities
- the University's policies on appropriate use of software and computer facilities

Information on all of the above is available through the University's "Student Rights and Responsibilities" website at: students.curtin.edu.au/rights.

Note: In Australia and other jurisdictions, students are required to complete a screening check prior to undertaking any activities that include children (e.g. surveying children at a school as part of a project). If this applies to you, start by contacting your unit coordinator for advice.

Student Equity


There are a number of factors that might disadvantage some students from participating in their studies or assessments to the best of their ability, under standard conditions. These factors may include a disability or medical condition (e.g. mental illness, chronic illness, physical or sensory disability, learning disability), significant caring responsibilities, pregnancy, religious practices, living in a remote location, or another reason. If you believe you may be unfairly disadvantaged on these or other grounds please contact the appropriate service below. It is important to note that the staff of the University may not be able to meet your needs if they are not informed of your individual circumstances, so please get in touch with the appropriate service if you require assistance.

To discuss your needs in relation to:

- Disability or medical conditions, contact AccessAbility Services: <https://students.curtin.edu.au/personal-support/disability/>
 - Elite athletes, contact Elite Athlete Coordinator: <https://stadium.curtin.edu.au/sport/academy/elite-athlete-program/>
 - All other grounds, contact the Student Wellbeing Advisory Service: <https://students.curtin.edu.au/personal-support/counselling-guidance/wellbeing/>
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Recent unit changes

Students are encouraged to provide unit feedback through **eVALUate**, Curtin's online student feedback system. For more information about **eVALUate**, please refer to evaluate.curtin.edu.au/info/.

 <p>Give feedback on the My Studies tab and you could win prizes eVALUate</p>	To view previous student feedback about this unit, search for the Unit Summary Report at https://evaluate.curtin.edu.au/student/unit_search.cfm . See https://evaluate.curtin.edu.au/info/dates.cfm to find out when you can eVALUate this unit.
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Recent changes to this unit include:

The previous version of this unit - Software Engineering Project 1 - has been merged with much of the material from Project Design and Management as part of a course structure change and to improve student learning of the project design process. This was done partially in response to student and industry feedback.

In 2022, the following changes will be made:

- The last milestone now includes coding.
- Blackboard page redesigned.

In 2021, the following changes were made:

- Minor changes to the specifications.

In 2020, the following changes were made:

- Moved away from sprints to a milestone-based approach for CCP 1. This will make it easier for students to know what they are aiming for and for staff to standardise assessment across groups and locations.
- Added specific requirements for project handover.
- Changed the assessment structure to be fully compliant with the changes to the assessment manual. This means reducing the amount of work submitted during the semester but including a final submission, which will include previously submitted work.

In 2019, the following changes were made:

- Sprints change from taking two weeks to taking three weeks, based on industry feedback and workload constraints.
- The ethics application has been replaced by a group dynamics exercise.

In 2018, the following changes were made:

- There will be no big end-of-semester presentation event. Instead, each group will present only to the marking panel (and optionally the client(s)) in order that verbal feedback can be given. We feel that this is an important part in improving the presentations for the big end-of-second-semester presentation event and for student learning.

In 2017, the following changes were made:

- The assessment details on Blackboard have been restructured to reduce confusion.
- The final submission has been broken up and attached to the scrum reports to maximize feedback given to students.
- All assessments will go through Blackboard to make it easier for a co-supervisor or co-marker to access all relevant student work.

Program calendar

Week	Begin Date	Briefing/Workshop	Assessment
Orientation	21 February	Orientation Week	
1.	28 February	Briefing: Welcome, Groups, Projects, Introduction	Milestone 1: Application
2.	7 March	Briefing: Agile / Scrum, Writing the SRS	
3.	14 March	Briefing: Tasks, Time Estimation	
4.	21 March	Workshop: SRS	Milestone 2: SRS/Contract
5.	28 March	Briefing: The Technology Stack	
6.	4 April	Workshop: TIS	
7.	11 April	Briefing: Software Architecture, Licenses	Milestone 3: Technology Investigation Summary
8.	18 April	Tuition Free Week	
9.	25 April	Briefing: Professional Ethics, Risk Management	
10.	2 May	Workshop: SAS	Milestone 4: Software Architecture Specification
11.	9 May	Briefing: Handover	
12.	16 May	TBA	
13.	23 May	Seminar: IP and Commercialization	Milestone 5: Handover, Presentations
14.	30 May	Study Week	Final Submission, Presentations

This calendar is subject to change. An up-to-date version will be available on the unit's Blackboard page.