

Technological Innovation and Entrepreneurship

Unit code and version	11408.1
Unit offering option	212828
Study level	Level 2 - Undergraduate Intermediate Unit
Credit points	3
Faculty	Faculty of Science and Technology
Discipline	Academic Program Area - Technology
Unit offering details	Semester 1, 2023 , ON-CAMPUS , UC - Canberra, Bruce
Unit convener name and contact details	Unit Convener: Dr. Damith Herath, room 6C28, ph (02) 6206 8324, damith.herath@canberra.edu.au
Administrative contact details	Student Central Building 1, Level B E: Student.Centre@canberra.edu.au T: 1300 301 727

Academic content

Unit description

This unit will present the concepts and principles of innovation and entrepreneurship, in both Information and Communication Technology (ICT) and Engineering context. Innovation will be explained as the process of introducing changes that add new values to an organisation, whilst entrepreneurship will be presented as the risk-taking appetite of systematically searching for opportunities arising from innovation and transforming those opportunities to deliver commercial benefit to the organisation and value-add to the broader communities. Innovation concepts and principles will be covered with innovation sources and types, innovation processes, and innovation management. The creation of an innovation culture will also be considered from the standpoints of leadership focus and organisational structure, together with promoting an innovative and ethical culture. The concepts and principles of entrepreneurship, and also intrapreneurship, will be introduced with a focus on the entrepreneurial environment and the new-venture creation processes, including due consideration of associated risks and the pathways to new company start-ups in accordance with the associated legal frameworks and an introduction to business, finance and operational plans, plus pitching to potential investors and utilising strategic networks. The unit also covers the needs for new ventures to transform their creativity and innovation potentials into market values, competitive edges, and the value propositions. The protection and management of Intellectual Property (IP) will also be addressed. This unit may utilise guest speakers and industry case studies. This unit may be co-taught with Technological Innovation and Entrepreneurship G.

Learning outcomes

After successful completion of this unit, students will be able to:

1. Identify the need for an innovative solution, generate alternative conceptual solutions, evaluate these solutions and also implement them;
2. Describe the basic elements of innovation, entrepreneurship and commercialisation;
3. Appraise decision making responsibilities at the interface between business and innovation;
4. Assess the dynamics of collaborative teams to work effectively within a team to accomplish tasks within given deadlines; and
5. Explain start-up company pathways, including legal structures, legal obligations, taxation and book keeping, and ethics and social responsibility issues etc.

Graduate attributes

1. UC graduates are professional
 - communicate effectively
 - display initiative and drive, and use their organisation skills to plan and manage their workload
 - employ up-to-date and relevant knowledge and skills
 - take pride in their professional and personal integrity
 - use creativity, critical thinking, analysis and research skills to solve theoretical and real-world problems
 - work collaboratively as part of a team, negotiate, and resolve conflict
2. UC graduates are global citizens
 - adopt an informed and balanced approach across professional and international boundaries
 - behave ethically and sustainably in their professional and personal lives
 - communicate effectively in diverse cultural and social settings
 - make creative use of technology in their learning and professional lives
 - think globally about issues in their profession
 - understand issues in their profession from the perspective of other cultures
3. UC graduates are lifelong learners
 - adapt to complexity, ambiguity and change by being flexible and keen to engage with new ideas
 - be self-aware
 - evaluate and adopt new technology
 - reflect on their own practice, updating and adapting their knowledge and skills for continual professional and academic development

Skills development

As students of the University of Canberra, you will develop your critical thinking skills, your ability to solve complex problems, your ability to work with others, your confidence to learn independently, your written communication skills, your spoken communication skills and a number of work-related knowledge and skills.

Prerequisites

None.

Corequisites

None.

Accreditation mapping

ACS Accreditation

This unit is part of courses accredited by the [Australian Computer Society \(ACS\)](#)

[Skills Framework for the Information Age \(SFIA\)](#)

This unit aligns with the following SFIA professional skills:

- [Innovation](#) INOV
- [Research](#) RSCH
- [Sustainability](#) SUST
- [Emerging technology monitoring](#) EMRG
- [Business modelling](#) BSMO
- [Requirements definition and management](#) REQM
- [Marketing](#) MKTG

SFIA skills are defined by levels of responsibility, based on autonomy, influence, complexity, business skills, and knowledge. Although this unit may cover knowledge and skills at higher levels, it is expected that graduates of undergraduate degrees will be capable of operating at Level 2 overall.

Seoul Accord

The UC generic attributes address graduate attributes 1, 6, 7, 9, and 10 of the [Seoul Accord](#). The remaining graduate attributes that are covered in this unit are:

3. Problem Analysis
4. Design/Development of Solutions
5. Modern Tool Usage
8. Computing Professionalism and Society

EA Accreditation

This unit is part of courses accredited by [Engineers Australia \(EA\)](#)

This unit assesses and exposes students to the following Professional Engineer Stage 1 Competencies:

- 1.2 Conceptual understanding – Indicators Assessed: a
- 1.4 Discernment – Indicators Assessed: a, b
- 1.5 Knowledge – Indicators Assessed: b,c,e ; Exposed: a,d,f
- 1.6 Understanding – Indicators Assessed:d; Exposed a,b,c,e
- 2.3 Application of systematic engineering synthesis and design processes – Indicators Assessed: b,c; Exposed a,d

2.4 Application of systematic approaches – Indicators Assessed: b,c, d; Exposed a,f

3.1 Ethical conduct and professional accountability – Indicators Assessed: d; Exposed a,b,c

3.2 Effective oral and written communication in professional and lay domains – Indicators Assessed: a, b

3.3 Creative, innovative and pro-active demeanour – Indicators Assessed: a,b,c

3.4 Professional use and management of information – Indicators Assessed: a,b,c

3.5 Orderly management of self, and professional conduct - Indicators Assessed: a,b,d,e,f; Exposed c

3.6 Effective team membership and team leadership – Indicators Assessed: a,c, d, f; Exposed b,e

Timetable of activities

Week	Topic	Textbook Chapter	Notes/activities
1	Welcome and Introductions	-	No tutorials in week 1
2	Building Teams	10	Teams established and initial scoping work begins
3	Innovation	4	Team collaborations continue
4	Intellectual Property	5	Team collaborations continue
5	Technological Entrepreneurship	2	Report writing begins
6	Funding*	12	Report Writing Continues
7	Business Model	6	Group Report 1 due
8	Class Free Week		

9	Business Plan and Pitching*	9	Begin scoping for Part 2 of the project
10	Market Validation*	7	Team collaborations continue
11	Marketing*	8	Report draft finalise*
12	Technology Transfer*	3	Prepare for pitching/pitching. Report writing continues
13	Revisions/Guest Lecture		Elevator pitch due. Group report 2 due

Please note that the unit convenor reserves the right to change the content and the order of delivery in order to accommodate updated material, to integrate new developments in the field and any unforeseen circumstances.

Unit resources

Required texts

Evers, Natasha, James Cunningham, and Thomas Hoholm. Technology entrepreneurship: bringing innovation to the marketplace. Macmillan International Higher Education, 2020 (2nd Ed).

Materials and equipment

Computer and Internet access

Unit website

Each unit you are enrolled in has an online teaching site in the learning management system UCLearn. You access UCLearn through [MyUC](#).

Social Media

Social media will be used as part of the teaching and learning of this unit, and relates to websites and applications that allow students and staff to create and share material, or interact via social networking activities. This can take many forms including text, images, audio, video, gestures (such as 'liking', 'favouriting', 'following') and other multimedia communications. Students and staff should be aware that social media creates an environment for limitless communication, collaboration, dialogue and information exchange but that there should be an awareness of the 'amplificatory' effect of popular content, which can portray both positive and negative outputs. Students should note that social media is not at the control of the University and, therefore, changes may be made to learning or assessment materials at late notice as a consequence of changes to content or access to the social media platform. Students are warned that there may be possible disturbing content that can be viewed when using social media, that is outside the control of the University. Students who are concerned with the use of social media for privacy or other issues are advised to speak with their unit convener as soon as possible.

For further information please refer to the section on Social Media in the [Assessment Procedures](#).

Assessment

Assessment item details

Academic Integrity Module

Due date

Friday 17:00, Week 2

Weighting

0%

Assessment details

This is a hurdle assignment that needs to be completed before completing any of the other assignment items. Students only have to complete the academic integrity module once (for any unit) and only has to submit the evidence. Failing to complete this assignment will result in students failing the unit with an NC grade regardless of the final numerical result.

Addresses learning outcomes

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- 5. Explain start-up company pathways, including legal structures, legal obligations, taxation and book keeping, and ethics and social responsibility issues etc.

Related graduate attributes

1. UC graduates are professional
 - take pride in their professional and personal integrity
2. UC graduates are global citizens
 - behave ethically and sustainably in their professional and personal lives

Elevator Pitch

Due date

To be arranged in Week 12/13 during respective tutorial sessions.

Weighting

15%

Additional information

Marking Criteria: The Marking rubric will be made available on Canvas.

Assessment details

During Week 12 tutorial timeslot, students will make a 30second oral presentation in the style of an elevator pitch.

More detail will be provided on Canvas.

Addresses learning outcomes

- 5. Explain start-up company pathways, including legal structures, legal obligations, taxation and book keeping, and ethics and social responsibility issues etc.

Related graduate attributes

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Peer Review

Due date

Week 7 & 12, Friday 5:00PM

Weighting

5%

Additional information

The Marking rubric will be made available on Canvas.

Assessment details

Each student of a group will be provided with the opportunity to provide constructive feedback to their peers in the group.

Addresses learning outcomes

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Group Report 1

Due date

Friday, 5pm Week 7

Weighting

20%

Additional information

The Marking rubric and assesment details will be made available on Canvas.

Assessment details

More detail will be provided on Canvas.

Addresses learning outcomes

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Weekly Online Quiz

Due date

Weekly as stipulated on Canvas

Weighting

30%

Additional information

A student must obtain at least 50% of this quiz in order to pass this unit

Assessment details

An open book online quiz with a selection of random questions pooled from the content covered within the week during the lectures and tutorial activities.

Addresses learning outcomes

After successful completion of this unit, students will be able to:

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 - be self-aware

- reflect on their own practice, updating and adapting their knowledge and skills for continual professional and academic development

Group Report 2

Due date

Week 13 Friday 5:00PM (with multiple pre-submission deadlines)

Weighting

30%

Additional information

The Marking rubric will be made available on Canvas.

Assessment details

In project groups, students will apply lecture and tutorial material to take a concept through the innovation process to the point of providing a business plan for the proposed venture.

The project will comprise a number of staged deliverables (gateways) to ensure progress toward the final deliverable.

More detail will be provided on Canvas.

Addresses learning outcomes

After successful completion of this unit, students will be able to:

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Extensions

Students can apply for an extension to the submission due date for an assessment item due to extenuating, evidenced circumstances (specific details are found in the [Assessment Procedures](#)). An extension must be applied for before the due date. Documentary evidence (e.g. medical certificate) will be expected for an extension to be granted, however this will not guarantee that the application will be successful. The Unit Convener or relevant Program Director/Course Convener will decide whether to grant an extension and the length of the extension.

An Assignment Extension form is available from the [Student Forms](#) page.

Late submissions

The following late submission period and penalty is applicable to any teaching period commencing after 1 April 2024.

To support the provision of timely feedback to students within the unit, late penalties will apply for summative assessments where late submission is permitted. Late submissions without an approved extension or reasonable adjustment will result in a penalty of a mark reduction of 10% of the maximum available marks for the assessment item per day (or part thereof) up to and including three calendar days. If a student submits more than three calendar days late without an approved extension or reasonable adjustment, the student will be allocated a mark of zero for that assessment, with no feedback provided.

Approval of extensions based on extenuating circumstances will be dependent upon the production of supporting documentation and at the discretion of the unit convener.

For teaching periods commencing prior to 1 April 2024, a late penalty of 5 % of the maximum available marks for the assessment item per day (or part thereof) was applied up to and including seven calendar days. An assignment submitted over 7 days late will not be accepted.

Special assessment requirements

An aggregate mark of 50% is required to pass the unit.

In addition,

- (a) it is required to obtain at least 50% of the online quiz AND
- (b) Complete the Academic Integrity assessment item on unit's Canvas

The final grade of a student is determined according to the following table:

85 <= Final marks <= 100 and online quiz marks >= 50%	Final grade = HD
75 <= Final marks < 85 and online quiz marks >= 50%	Final grade = DI
65 <= Final marks < 75 and online quiz marks >= 50%	Final grade = CR
50 <= Final marks < 65 and online quiz marks >= 50%	Final grade = P
Final marks < 50 or online quiz marks < 50%	Final grade = FAIL (NX, NC, or NN)

Supplementary assessment

Refer to the [Assessment Policy](#) and [Assessment Procedures](#)

Academic integrity

Students have a responsibility to uphold University standards on ethical scholarship. Good scholarship involves building on the work of others and use of others' work must be acknowledged with proper attribution made. Cheating, plagiarism, and falsification of data are dishonest practices that contravene academic values. Refer to the University's [Student Charter](#) for more information.

To enhance understanding of academic integrity, all students are expected to complete the Academic Integrity Module (AIM) at least once during their course of study. You can access this module within [UCLearn \(Canvas\)](#) through the 'Academic Integrity and Avoiding Plagiarism' link in the [Study Help site](#).

Use of Text-Matching Software

The University of Canberra uses text-matching software to help students and staff reduce plagiarism and improve understanding of academic integrity. The software matches submitted text in student assignments against material from various sources: the internet, published books and journals, and previously submitted student texts.

Student responsibility

Learner engagement

Activity	Estimated hours
Weekly lecture: 2 hours per week x 12 weeks	24
Weekly tutorials: 1 hour per week x 11 weeks	11
Review of lectures and teaching materials on Canvas, plus preparation of tutorials	25
Group Report 1	15
Group Report 2	22
Weekly Online Quiz (including review and preparation)	25
In class group activities (unfacilitated) 1hr per week x 11 weeks	11
Out of class group activities, conversations and networking	16
Peer Review	1
Total:	150

Inclusion and engagement

It is strongly recommended that students who need assistance in undertaking the unit because of disability or an ongoing health condition register with the [Inclusion and Engagement Office](#) as soon as possible so that reasonable adjustment arrangements can be made.

Participation requirements

Your participation in interactive activities will enhance your understanding of the unit content and therefore the quality of your assessment responses. Lack of participation may result in your inability to satisfactorily pass assessment items.

Withdrawal

If you are planning to withdraw please discuss with your Unit Convener. UC College students must also seek advice from the College.

Required IT skills

General IT skills.

This unit involves online meetings in real time using the Virtual Room in your UCLearn teaching site. The Virtual Room allows you to communicate in real time with your lecturer and other students. To participate verbally, rather than just typing, you will need a microphone. For best audio quality we recommend a microphone and speaker headset. For more information and to test your computer, go to the Virtual Room in your UCLearn site and 'Join Course Room'. This will trigger a tutorial to help familiarise you with the functionality of the virtual room.

Work integrated learning

None

Student feedback

All students enrolled in this unit will have opportunities to provide anonymous feedback on the unit through the InterFace Student Experience Questionnaire (ISEQ). The request for your feedback will be posted on your InterFace page at least twice during a teaching period. InterFace can be accessed through MyUC.

Changes to unit based on student feedback

Constructive student feedback forms an integral part of continually assessing and improving the content and delivery of the unit.

Unit content and assessment arrangements have been refined based on previous feedback.

Authority of this unit outline

This unit outline must be read in conjunction with the University of Canberra's Policies and Procedures, including the [Assessment Policy](#) and associated [Procedure](#). The Assessment Policy and Assessment Procedure include information on matters such as plagiarism, grade descriptors, moderation, feedback, and deferred exams.

Any change to the information contained in the Academic content and Assessment sections of this document, will only be made by the Unit Convener if the written agreement of the Program Director and a majority of students has been obtained; and if written advice of the change is then provided on the teaching site in UCLearn. If this is not possible, written advice of the change must be then forwarded to each student enrolled in the unit at their registered term address. Any individual student who believes themselves to be disadvantaged by a change is encouraged to discuss the matter with the Unit Convener.

Authority Text

Main

Exception – Potential changes to a unit's learning activities and assessment items (Approved Academic Board 2020)

In the event of Australian Government and/or ACT Government directive, such as those requiring physical distancing and restrictions on movement because of a pandemic, learning activities and/or assessment items in some units may change. These changes will not be updated in the published Unit Outline but will be communicated to students via the unit's UCLearn (Canvas) teaching site. The new learning activities and/or assessment items will continue to meet the unit's learning outcomes, as described in the Unit Outline.

New learning activities and/or assessment items will be available on the unit's UCLearn (Canvas) teaching site. Please contact the Unit Convener with any questions.

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UC acknowledges the Ngunnawal people, traditional custodians of the lands where Bruce campus is situated. We wish to acknowledge and respect their continuing culture and the contribution they make to the life of Canberra and the region. We also acknowledge all other First Nations Peoples on whose lands we gather.