https://courseoutline.auckland.ac.nz/dco/course/SCIGEN/201/1213

SCIGEN 201 : Innovating in a Knowledge Society

Science

2021 Semester One (1213) (15 POINTS)

Course Prescription

Interdisciplinary examination of science innovation at policy, organisational and project levels including context, impacts and roles of business and research organisations, and ways innovations are presented and received. Case study analysis of the business environment including how innovation is both enabled and constrained in science-based organisations and society, and innovation strategies in science–based organisations.

Course Overview

Today's knowledge society requires science graduates who are innovative and entrepreneurial. On this course you will extend your skills and knowledge beyond what you learn in your chosen discipline by gaining knowledge and understanding of science innovation and the New Zealand science innovation system. You will develop basic competencies in: business, entrepreneurship and communication skills that are essential for successful innovation. You will critically examine how science innovations are presented to, and received by society and explore the challenges and opportunities of being engaged in science innovation.

Major topics include:
New Zealand's science innovation system.
Social license to operate
Challenging science innovations
Controversial science and stakeholder perspectives
Science Communication
Co-innovation
Networking and collaboration
Ideation and Effectuation
Entrepreneurship
Start Ups and Market Validation
Funding, protecting and commercialising science ideas

You will meet some interesting guest lecturers who are involved in science innovation or the services that

support science innovation. You will engage in 'science innovation' in the tutorials, where you will develop in a group an idea to address a societal issue and then pitch that idea in a dragon's den scenario as a group presentation.

Course Requirements

No pre-requisites or restrictions

Capabilities Developed in this Course

Capability 2: Critical Thinking
Capability 3: Solution Seeking
Capability 4: Communication and Engagement
Capability 5: Independence and Integrity
Capability 6: Social and Environmental Responsibilities

Graduate Profile: Bachelor of Science

Learning Outcomes

By the end of this course, students will be able to:

1. Understand and critically explore New Zealand's science 'innovation system' (Capability 2 and 5)
2. Develop competencies in basic business, entrepreneurial and communication skills (Capability 3 and 4)
3. Understand how science innovations are commercialised. (Capability 2)
4. Critically explore how collaboration and co-innovation can enable successful science innovation and develop your own personal collaboration skills by working in a team to develop an innovative idea or product (Capability 2, 3 and 4)
5. Explore the wider impacts of science innovations and understand why scientists are increasingly recognising the need to gain a 'social license to operate' (Capability 2 and 6)
6. Critically engage with case studies to identify the challenges and opportunities of engaging in science innovation (Capability 2, 5 and 6)

Assessments

Assessment Type	Percentage	Classification
Assignments	40%	Individual Coursework
Tutorials	10%	Individual Coursework
Presentation	10%	Group Coursework
Final Exam	40%	Individual Examination

4 types	100%

Assessment Type	Learning Outcome Addressed					
	1	2	3	4	5	6
Assignments	✔	✔	✔	✔	✔	✔
Tutorials		✔	✔	✔	✔	✔
Presentation		✔	✔	✔	✔	✔
Final Exam	✔	✔	✔	✔	✔	✔

Key Topics

New Zealand's science innovation system.
Social license to operate
Challenging science innovations
Controversial science and stakeholder perspectives
Science Communication
Co-innovation
Networking and collaboration
Ideation and Effectuation
Entrepreneurship
Start Ups and Market Validation
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Special Requirements

Tutorials (1 per week) are compulsory and are held on 10 weeks during the semester. Week 1 and week 12 do not have a tutorial.

Workload Expectations

This course is a standard 15 point course and students are expected to spend 10 hours per week involved in each 15 point course that they are enrolled in.

For this course, you can expect 24 hours of lectures (2 hours per week), 10 hours tutorials (1 hour per week - not week 1 and 12), 36 hours of reading and thinking about the content (during the semester) and 48 hours of work on assignments and/or test preparation (during the semester).

Delivery Mode

Campus Experience

Attendance is recommended at scheduled lectures and required at tutorials to complete and receive credit for components of the course. There is a 10% tutorial group engagement component in this course (with tutorial worksheets / quizzes) and a 10% 2 minute group presentation to present the 'innovation' the group develops in tutorials during the semester.
Lectures will be available as recordings. Other learning activities including tutorials will not be available as recordings.
The course will not include live online events including group discussions/tutorials.
Attendance on campus is required for the exam. There is NO mid year test.
The activities for the course are scheduled as a standard weekly timetable.

Learning Resources

All required learning resources are made available through canvas and the course talis reading list. You will be taught how to use the library online resources to access resources for your assignments.

Student Feedback

During the course Class Representatives in each class can take feedback to the staff responsible for the course and staff-student consultative committees.

At the end of the course students will be invited to give feedback on the course and teaching through a tool called SET or Qualtrics. The lecturers and course co-ordinators will consider all feedback.

Your feedback helps to improve the course and its delivery for all students.

In 2019 we listened to student feedback from SET and also from a student focus group that we ran after the course exam in which we sought student input to the ongoing course development. As a result in 2020 we made significant changes to the course from previous years with more integration of the "business" and "science" lectures, now being inter-woven every two weeks (as opposed to the previous 6 weeks of business and 6 weeks of science). We included more guests in the lecture programme. The 40% of assignments are now both individual assignments.

We transferred the group work to the tutorials with students engaging in the development of an innovative idea over the semester which is pitched in a dragon's den group presentation in week 10 to give more relevant, fun, innovative and hands on learning in tutorials.

These changes to the curricula and assessment were very well received in semester 1 2020 - and even during the COVID lockdown periods.

Digital Resources

Course materials are made available in a learning and collaboration tool called Canvas which also includes reading lists and lecture recordings (where available).

Please remember that the recording of any class on a personal device requires the permission of the instructor.

Academic Integrity

The University of Auckland will not tolerate cheating, or assisting others to cheat, and views cheating in coursework as a serious academic offence. The work that a student submits for grading must be the student's own work, reflecting their learning. Where work from other sources is used, it must be properly acknowledged and referenced. This requirement also applies to sources on the internet. A student's assessed work may be reviewed against online source material using computerised detection mechanisms.

Copyright

The content and delivery of content in this course are protected by copyright. Material belonging to others may have been used in this course and copied by and solely for the educational purposes of the University under license.

You may copy the course content for the purposes of private study or research, but you may not upload onto any third party site, make a further copy or sell, alter or further reproduce or distribute any part of the course content to another person.

Inclusive Learning

All students are asked to discuss any impairment related requirements privately, face to face and/or in written form with the course coordinator, lecturer or tutor.

Student Disability Services also provides support for students with a wide range of impairments, both visible and invisible, to succeed and excel at the University. For more information and contact details, please visit the Student Disability Services' website http://disability.auckland.ac.nz

Special Circumstances

If your ability to complete assessed coursework is affected by illness or other personal circumstances outside of your control, contact a member of teaching staff as soon as possible before the assessment is due.

If your personal circumstances significantly affect your performance, or preparation, for an exam or eligible written test, refer to the University's aegrotat or compassionate consideration page https://www.auckland.ac.nz/en/students/academic-information/exams-and-final-results/during-exams/aegrotat-and-compassionate-consideration.html.

This should be done as soon as possible and no later than seven days after the affected test or exam date.

Learning Continuity

In the event of an unexpected disruption we undertake to maintain the continuity and standard of teaching and learning in all your courses throughout the year. If there are unexpected disruptions the University has contingency plans to ensure that access to your course continues and your assessment is fair, and not

compromised. Some adjustments may need to be made in emergencies. You will be kept fully informed by your course co-ordinator, and if disruption occurs you should refer to the University Website for information about how to proceed.

Level 1: Delivered normally as specified in delivery mode.
Level 2: You will not be required to attend in person. All teaching and assessment will have a remote option. The following activities will also have an on campus/in person option: Lectures and office hours. Tutorials will be held on campus within the guidelines if possible.
Level 3/4: All teaching activities and assessments are delivered remotely.

Student Charter and Responsibilities

The Student Charter assumes and acknowledges that students are active participants in the learning process and that they have responsibilities to the institution and the international community of scholars. The University expects that students will act at all times in a way that demonstrates respect for the rights of other students and staff so that the learning environment is both safe and productive. For further information visit Student Charter https://www.auckland.ac.nz/en/students/forms-policies-and-guidelines/student-policies-and-guidelines/student-charter.html.

Disclaimer

Elements of this outline may be subject to change. The latest information about the course will be available for enrolled students in Canvas.

In this course you may be asked to submit your coursework assessments digitally. The University reserves the right to conduct scheduled tests and examinations for this course online or through the use of computers or other electronic devices. Where tests or examinations are conducted online remote invigilation arrangements may be used. The final decision on the completion mode for a test or examination, and remote invigilation arrangements where applicable, will be advised to students at least 10 days prior to the scheduled date of the assessment, or in the case of an examination when the examination timetable is published.

Once the course begins, we ask that enrolled students please use the course resources AND course guide provided on canvas.