DALHOUSIE UNIVERSITY

# Faculty of Science Course Syllabus
# Department of Economics

*Economics 2211*
*Economics of Innovation*
*Fall 2026*

*Dalhousie University acknowledges that we are in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq People and pays respect to the Indigenous knowledges held by the Mi'kmaq People, and to the wisdom of their Elders past and present. The Mi'kmaq People signed Peace and Friendship Treaties with the Crown, and section 35 of the Constitution Act, 1982 recognizes and affirms Aboriginal and Treaty rights. We are all Treaty people.*

*Dalhousie University also acknowledges the histories, contributions, and legacies of African Nova Scotians, who have been here for over 400 years.*

## Course Instructor


**Instructor(s):** Jonathan J Simms jjjsimms@dal.ca *A-13, 6220 University Ave.*


**Lectures**: 17:35 – 20:25 Mondays Studley LSC-COMMON AREA C244

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## Course Description

This course examines the place of innovation in microeconomic policy space. It does so from two perspectives: the capacity of the private sector to recognize and address productivity gaps with investments in innovative products, processes and methods, on the one hand, and the capacity (i.e., limits) of government policy and program initiatives to promote innovation in their economies, on the other. NOTE: All Economics courses, unless stated otherwise, must have a minimum grade requirement of C for their prerequisite courses.

**Course Prerequisites**

ECON 1101 or ECON 1102, or by permission of the professor

**Required Course Materials**

Swann, G.M. Peter, "The Economics of Innovation", Cheltenham, UK, Northampton, Mass.: Edward Elgar Publishing Inc. 2009

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## Student Resources

Office Hours: Wednesday 4:00 to 5:00, by appointment. Room A-13, Economic House.

Writing Support: The Dalhousie University Writing Center is available to you, it is recommended that you reserve time well ahead of a paper deadline, for their service. https://dal.ca.libguides.com/writingcentre

Course Delivery: All lectures are delivered in-person.

## Course Structure

**Course Requirements**

This is a course for economics majors and those who have already declared a field of study in science, engineering and sustainability, and who would like to explore the implications of their anticipated pursuits in the context of the economy. To that end, class-related activities will include presentations and experiential events designed to introduce the practical aspects of science, technology, engineering and mathematics (STEMs) contributing innovations to productivity and growth in our modern, post-industrial economy.

The course assessments will be based on in-class tests, a group project and a final examination (see below). In each of the 8 Monday classes between **October 5 and December 7**, there will be a 20-minute test. You must write 5 of the 8. You can not write more than 5 tests. These short essay tests will be based on the readings for each week. You must do 3 of your 5 tests by **November 16**, inclusive. For the projects, groups of five students will have each member prepare a three- to-five page segment on a topic of the group's choosing; a detailed instruction sheet will be distributed and discussed in class. Groups must be confirmed and with a defined topic – short paragraph – by **October 19**. Projects must be delivered in softcopy by **24:00 (midnight), November 15** in a common "look and feel" – i.e., font and format – across their five segments. The final examination will be in essay format and will question your broad knowledge of the topics covered in the course.

The practical/experiential sessions will be of two varieties:

Field Trips. Field trips may be arranged according to the existing Faculty of Science practices and rules, with the possibility of additional fees for buses etc., if necessary, and these fees will be announced in advance. Such visits may be to one or more of the following: a research lab, a business, public sector facilities, and a non-governmental organization. These will be designed to introduce the economic considerations – both upstream and downstream - that are required for the pursuit of a new invention, introducing a new innovation, investing in a commercialization opportunity, or offering an environmentally sustainable product or production process.

Presentations: Guest Speakers/ Panel discussions on economics topics that pertain to the inputs, operations and outputs of innovation initiatives such as, intellectual property and patent law, management innovation, processing innovations, product and service innovations, and public policy (regulatory and program development).

## Assessment

| Component | Weight (% of final grade) | Date |
|---|---|---|
| ***In-class Tests (5@8% each)*** | *40* | *Choose 5 from 8 classes, in the Oct 5-Dec. 7 period.* |
| ***Group Project*** | *15* | *Due Nov 15 midnight (lates deducted 33%/ day)* |
| ***Final Exam*** | *45* | *TBA* |

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| ***Bonus*** | *10* | *Attendance at 3 of 5 field trips/presentations* |

**Conversion of numerical grades to Final Letter Grades follows the Dalhousie Common Grade Scale**

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|---|---|---|---|---|
| A+ (90-100) | B+ (77-79) | C+ (65-69) | D | (50-54) |
| A (85-89) | B (73-76) | C (60-64) | F | (<50) |
| A- (80-84) | B- (70-72) | C- (55-59) | | |

## Policies on Course Structure and Missed or Late Academic Requirements

Objectives:

To develop critical thinking skills by learning from the explorative modes of enquiry found across the innovative practices among scientists, entrepreneurs, leadership and management talents and from the creative responses to unintentional discoveries.

To enhance knowledge and understanding of the key factors that account for innovative performance, at the firm level, and the heightened imperative for innovation in a growing economy.

To gain an awareness of the ways and means by which private sector and public sector roles and relationships co-operate vis-a-vis informal and formal innovation strategies.

Absences:

Students are expected to use the Student Declaration of Absence form for late or missed requirements, prior to the academic deadline. A student may submit a maximum of one (1) Student Declaration of Absence form.

Note that medical notes are not required, including for the final exam. Notification, prior to the start of the exam is required, if students cannot write the final exam. A make-up exam will be arranged with the professor.

Experiential:

As this is a more experientially oriented course, your attendance and participation are of particular value in gaining a first-hand understanding of the economics of innovation. Details regarding the arrangement of these events, and your confirmation of participation, will be outlined, in class.

## Course Policies related to Academic Integrity and Artificial Intelligence

Use of prepared notes, particularly any from generative AI and large language models (e.g., ChatGPT), in the writing of tests, or in the final exam, is not permitted. While their use will be permitted for the group project, copious footnotes and your reference sources will be required to support facts and insights.

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## Course Content

| Date | Lecture | Reading Modules |
|---|---|---|
| Sept 14 | Overview | Syllabus: The Imperative of Innovation<br><br>https://www.coursera.org/ca/articles/critical-thinking-skills |
| Sept 21 | Aspects | Swann *Ch 3-6.* |
| Sept 28 | Trends | Swann Ch 13, 20<br><br>https://www.youtube.com/watch?v=mF2CsUcwFrw<br><br>https://onlinelibrary.wiley.com/doi/10.1111/dech.70007 |
| Oct 5 | Firms | Swann Ch 9 – 11<br><br>Jong, Jeroen P.J. & Kemp, R. & Folkeringa, Mickey & Wubben, Emiel. (2003). Innovation and firm performance. EIM Business and Policy Research, Scales Research Reports. Pp39-59 https://www.researchgate.net/publication/5012651_Innovation_and_firm_performance |
| Oct 19 | Talent | Tamayo, J., Dooumi, L, Goel, S, Ondrejkovic, O.K., Sadun, R, Reskilling in the Age of AI, Harvard Business Review September-October 2023, pp 56-65<br><br>World Economic Forum, "The Future of Jobs Report, 2025<br>https://www.weforum.org/publications/the-future-of-jobs-report-2025 |

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| Oct 26 | Unleashing | Hill, L.A., Tedards, E., Wild, J., Why Great Innovations Fail To Scale, Harvard Business Review, March-April, 2026 pp74-85<br><br>Deloitte Center For Integrated Research, The neurodiversity advantage: How neuroinclusion can unleash innovation and create competitive edge. July 2024 https://www.deloitte.com/us/en/insights/topics/diversity-equity-inclusion/unleashing-innovation-with-neuroinclusion.html |
| Nov 2 | Governance | Organization for Economic Co-operation and Development, "Getting Technology Governance Right: Innovate More, Innovate Well". https://www.oecd.org/sti/science-technology-innovation-outlook/technology-governance/<br><br>Michael Peregrine (McDermott Will & Emery LLP) and Charles Elson (University of Delaware), "Twenty Years Later: "The Lasting Lessons of Enron" Harvard Law School Forum on Corporate Governance, April 5, 2021. https://corpgov.law.harvard.edu/2021/04/05/twenty-years-later-the-lasting-lessons-of-enron/ |
| Nov 16 | Consumers | Swann Ch 15<br><br>Jennifer Lee, "Is the customer always right? How consumers can help drive innovation", Deloitte, 2013 https://www2.deloitte.com/ca/en/pages/consumer-business/articles/consumer-driven-innovation.html<br><br>McKinsey and Company, "Will innovation finally add up for consumer-goods companies?" August 2020 https://www.mckinsey.com/industries/consumer-packaged-goods/our-insights/will-innovation-finally-add-up-for-consumer-goods-companies<br><br>The Economist, China's Audacious and Inventive New Entrepreneurs", September 2017 https://www.economist.com/briefing/2017/09/23/chinas-audacious-and-inventive-new-generation-of-entrepreneurs |
| Nov 23 | Diffusion | Swann Ch 16<br><br>Nick Skillicorn, Blog: "The Law of Diffusion of Innovation", Idea-To-Value Community, 2021 https://www.ideatovalue.com/inno/nickskillicorn/2021/01/the-law-of-diffusion-of-innovation<br><br>James W. Dearing and Jeffrey G. Cox, Diffusion Of Innovations Theory, Principles, And Practice, Health Affairs, Vol. 37, No. 2, February 2018. https://www.healthaffairs.org/doi/10.1377/hlthaff.2017.1104 |

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| Nov 30 | Social Context | Swann Ch 21<br><br>Diana Porumboiu, Blog: "Social Innovation - The What, Why and How", Viima Solutions, April 2021.<br>https://www.viima.com/blog/social-innovation |
| Dec 7 | Innovation & Gov't | Swann Ch 22<br><br>Innovation, Science and Economic Development Canada, Building a Nation of Innovators, Government of Canada 2019<br>https://ised-isde.canada.ca/site/innovation-better-canada/en/building-nation-innovators |
| Dec 8 | Summary/ Review | An overview of topics and preparation for exam. |

# University Policies and Statements

## Recognition of Mi'kmaq Territory

Dalhousie University would like to acknowledge that the University is on Traditional Mi'kmaq Territory. The Elders in Residence program provides students with access to First Nations elders for guidance, counsel, and support. Visit or e-mail the Indigenous Student Centre at 1321 Edward St or elders@dal.ca. Additional information regarding the Indigenous Student Centre can be found at:
https://www.dal.ca/campus_life/communities/indigenous.html

## Internationalization

At Dalhousie, 'thinking and acting globally' enhances the quality and impact of education, supporting learning that is "interdisciplinary, cross-cultural, global in reach, and orientated toward solving problems that extend across national borders." Additional internationalization information can be found at:
https://www.dal.ca/about-dal/internationalization.html

## Academic Integrity

At Dalhousie University, we are guided in all our work by the values of academic integrity: honesty, trust, fairness, responsibility, and respect. As a student, you are required to demonstrate these values in all the work you do. The University provides policies and procedures that every member of the university community is required to follow to ensure academic integrity. Additional academic integrity information can be found at:
https://www.dal.ca/dept/university_secretariat/academic-integrity.html

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## Accessibility

The Student Accessibility Centre is Dalhousie's centre of expertise for matters related to student accessibility and accommodation. If there are aspects of the design, instruction, and/or experiences within this course (online or in-person) that result in barriers to your inclusion, please contact the Student Accessibility Centre (https://www.dal.ca/campus_life/academic-support/accessibility.html) for all courses offered by Dalhousie with the exception of Truro. For courses offered by the Faculty of Agriculture, please contact the Student Success Centre in Truro (https://www.dal.ca/about-dal/agricultural-campus/student-success-centre.html)

## Conduct in the Classroom – Culture of Respect

Substantial and constructive dialogue on challenging issues is an important part of academic inquiry and exchange. It requires willingness to listen and tolerance of opposing points of view. Consideration of individual differences and alternative viewpoints is required of all class members, towards each other, towards instructors, and towards guest speakers. While expressions of differing perspectives are welcome and encouraged, the words and language used should remain within acceptable bounds of civility and respect.

## Diversity and Inclusion – Culture of Respect

Every person at Dalhousie has a right to be respected and safe. We believe inclusiveness is fundamental to education. We stand for equality. Dalhousie is strengthened in our diversity. We are a respectful and inclusive community. We are committed to being a place where everyone feels welcome and supported, which is why our Strategic Direction prioritizes fostering a culture of diversity and inclusiveness (Strategic Priority 5.2). Additional diversity and inclusion information can be found at: http://www.dal.ca/cultureofrespect.html

## Student Code of Conduct

Everyone at Dalhousie is expected to treat others with dignity and respect. The Code of Student Conduct allows Dalhousie to take disciplinary action if students don't follow this community expectation. When appropriate, violations of the code can be resolved in a reasonable and informal manner - perhaps through a restorative justice process. If an informal resolution can't be reached, or would be inappropriate, procedures exist for formal dispute resolution. The full Code of Student Conduct can be found at: https://www.dal.ca/dept/university_secretariat/policies/student-life/code-of-student-conduct.html

## Fair Dealing Policy

The Dalhousie University Fair Dealing Policy provides guidance for the limited use of copyright protected material without the risk of infringement and without having to seek the permission of copyright owners. It is

intended to provide a balance between the rights of creators and the rights of users at Dalhousie. Additional information regarding the Fair Dealing Policy can be found at:
https://www.dal.ca/dept/university_secretariat/policies/academic/fair-dealing-policy-.html

## Originality Checking Software

The course instructor may use Dalhousie's approved originality checking software and Google to check the originality of any work submitted for credit, in accordance with the Student Submission of Assignments and Use of Originality Checking Software Policy. Students are free, without penalty of grade, to choose an alternative method of attesting to the authenticity of their work and must inform the instructor no later than the last day to add/drop classes of their intent to choose an alternate method. Additional information regarding Originality Checking Software can be found at:
https://www.dal.ca/dept/university_secretariat/policies/academic/student-submission-of-assignments-and-use-of-originality-checking-software-policy-.html

## Student Use of Course Materials

Course materials are designed for use as part of this course at Dalhousie University and are the property of the instructor unless otherwise stated. Third party copyrighted materials (such as books, journal articles, music, videos, etc.) have either been licensed for use in this course or fall under an exception or limitation in Canadian Copyright law. Copying this course material for distribution (e.g., uploading to a commercial third-party website) may lead to a violation of Copyright law.