



Faculty of Science

Office of the Dean
St. John's, NL Canada A1B 3X7
Tel: 709 864 8154 Fax: 709 864 3316
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MEETING OF THE FACULTY COUNCIL OF THE FACULTY OF SCIENCE

A regular meeting of the Faculty Council of the Faculty of Science will be held on Wednesday, February 19 at 1:00 p.m. by a hybrid model of WebEx and in-person (Room: C- 2045).

AGENDA

- 1. Regrets**
- 2. Adoption of the Minutes of December 4, 2024** (pages 2-5)
- 3. Business Arising from the Minutes**
- 4. Correspondence:** No Correspondence
- 5. Sustainable Science Commitment**
- 6. Reports of Standing Committees:**
 - A. Undergraduate Studies Committee:** No Reports
 - B. Graduate Studies Committee:**

Presented by Adrian Fiech, Chair, Graduate Studies Committee

 - a) Department of Computer Science, Special Topics Course, COMP 6780, Special Topics in Tactile Robotic Manipulation, approved by the Faculty of Science Graduate Committee and presented to Faculty Council for information only, Paper 6.B.a (pages 7-10).
 - C. Library Committee:** No business
- 7. Report of the Dean**
- 8. Question Period**
- 9. Adjournment**

Travis Fridgen, Ph.D.
Interim Dean of Science



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FACULTY OF SCIENCE FACULTY COUNCIL OF SCIENCE Minutes of Meeting of December 4, 2024

A meeting of the Faculty Council of the Faculty of Science was held on Wednesday, December 4, 2024, at 1:00 p.m. using a hybrid model of WebEx and in-person (C-2045).

FSC 3084 Present

Biology

A. Chaulk, S. Dufour, D. Harvey, D. Marshall, M. Rise

Biochemistry

V. Booth, M. Berry, R. Bertolo, J. Brunton, S. Christian

Chemistry

M. Katz, N. Ryan, S. Smith, H. Therien-Aubin

Computer Science

S. Bungay, A. Fiech. C. Hyde, C. Sullivan

Mathematics & Statistics

J. Alam, I. Booth, C. Cigsar, R. Haynes, J.C. Loredó-Osti, T. Sheel, S. Sullivan, Y. Yilmaz-Cigsar

Ocean Sciences

I. Fleming, P. Gagnon, J. Wroblewski

Physics & Physical Oceanography

D. Coombs, S. Curnoe, E. Hayden, I. Saika-Voivod, L. Zedel

Psychology

S. Blandford, D. Hallett, K. Hourihan, N. Penton

Dean of Science Office

J. Blundell, J. Bowering, T. Fridgen, M. Fitzpatrick, L. Frizzell, C. Hussey, G. Jackson, J. Kavanagh, P. MacCallum, J. Major, V. MacNab, T. Mackenzie, D. Nichols, R. Newhook, N. Squires, C. Thorpe

Representatives from other Faculties

B. Misiuk (HSS)

Student Representatives

F. Dominie, E. Gnam, F. Ishrak, E. Mohammadreza, F. Probandno

Regrets

T. Mackenzie

FSC 3085 Adoption of Minutes**Moved:** Minutes of the meeting of November 20, 2024, be adopted. *(Sullivan/Berry)* **Carried.****FSC 3086 Business Arising:** No Business**FSC 3087 Correspondence:** No Report**FSC 3088 Reports of Standing Committees:****A. Undergraduate Students Committee:**

Presented by Shannon Sullivan, Chair, Faculty of Science, Undergraduate Studies Committee

a. Department of Biochemistry

- i. HUBI 2001 and 3004 calendar change corrections
- ii. HUBI 4001 Biomolec. new course proposal
- iii. HUBI 4003 Pub Health Nutr. new course proposal
- iv. HUBI 4102 calendar change proposal
- v. HUBI 4240 calendar change proposal
- vi. HUBI 4300 calendar change proposal
- vii. HUBI 4801 and 4802 new course proposal
- viii. HUBI Concentration Course Lists

(Sullivan/Brunton) **Carried.**

b. Department of Biology

- i. BIOL 3712 proposal to cross list as OSCS 3712

(Sullivan/Rise) **Carried.**

c. Department of Computer Science

- i. Concentrations, reviewed and passed at Nov. 5th, 2024 Faculty Council
- ii. Computer Science degree allow MATH-1006
- iii. Computer Science and Physics joint major and joint honours program, Amendment, reviewed and passed at Nov. 5th, 2024 Faculty Council

(Sullivan/Bungay). **Carried.**

d. Department of Earth Science

- i. EASC 3172 amend course title
- ii. EASC 3420 amend prerequisite and course description
- iii. EASC 4907 new course proposal

(Sullivan/Brunton). **Carried.**

- e. Department of Mathematics and Statistics
 - i. MATH 4130 amend prerequisites
 - ii. STAT 2500 course update
 - iii. STAT 3521, 3585, 4530 prerequisites changes
 - iv. ECON and MATH Major revision
 - v. MATH and PHYS Major and Honours revisions
 - vi. COMP and MATH Major and Honours proposal
 - vii. MATH 4340 and 4341 prerequisites changes (Minor changes to be made, department will submit these changes to the Dean of Science office.)

(Sullivan/Booth) **Carried.**

- f. Department of Physics and Physical Oceanography
 - i. PHYS 3000 change to supplementary examination regulation

(Sullivan/Saika-Voivod). **Carried.**

- g. Department of Psychology
 - i. Calendar changes regulation 4.5.2 Honours dissertations, (There was a short discussion on how to submit Honours Theses to the Library, and it was suggested the FoS and the Library discuss how to modernize submission of the Honours Thesis.)
 - ii. Complete calendar change proposals
 - iii. Calendar changes packages – Library report (Reference from the Library, for information only.)

(Sullivan/Hourihan). **Carried.**

B. Graduate Studies Committee:

Presented by Adrian Fiech, Chair, Graduate Studies Committee

- a. Department of Chemistry
 - i. CHEM-6290, Special Topics Course, Nuclear Science, approved by the Faculty of Science Graduate Committee and presented to Faculty Council for information only.

C. Library Committee: No Business

FSC 3089 Dean's Report

Welcome and thank you to C. Thorpe for taking on the role of the Acting Associate Dean (Undergraduate and Administration), and D. Hallett for stepping in as Acting Head of Psychology. A warm thank you to S. Dufour for serving as the Acting Associate Dean (Undergraduate and Administration) for three years. Welcome back to M. Berry as Head of Biochemistry and thank you to R. Bertolo for stepping in as Head of Biochemistry for the last year. Also welcomed to P. Gagnon who will be assuming the role as Head of Ocean Sciences.

The Faculty of Science has three headship searches that are almost complete in the Departments of Chemistry, Earth Sciences and Mathematics and Statistics. A review has started for the Associate Dean (Graduate and Research) position.

The university has incurred more than a 9-million-dollar deficit budget this fiscal year. The university has paused all tenure-track positions and full time hiring for staff and has implemented a limited hiring process for staff positions. The exceptions to this hiring freeze is where there is targeted funding and not a part of this deficit.

FSC 3090 Questions

M. Berry announced the passing of Dr. Seán Brosnan. M. Berry will notify the faculty with further details once received.

R. Haynes asked what the University's discussions with the government has been about the 9-million-dollar shortfall. The Dean said the only update right now is the information he informed Faculty Council of today.

R. Haynes asked about the 3% decrease in the budget that was discussed earlier in the academic year. The Dean said the faculty prepared for a 3% decrease, however the Faculty of Science received approximately less than one percent decrease. This year the faculty is in a good fiscal position.

MUNSU expressed concern about the pause of faculty hires and how this would affect their classes and programs. The Dean explained that this is only a pause. MUNSU asked if this information is shared with the university community. The Dean said the President announced the 9-million-dollar deficit at senate early December.

M. Berry asked if MUN receives more money per student from Government than any other university and what happens with the money received? The Dean said that is his understanding and that it had been explained to him that it costs money to maintain a multi-campus facility.

FSC 3091 Adjournment:

Meeting adjourned at 2:03pm



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January 6, 2025

TO: Registrar's Office
School of Graduate Studies

FROM: Secretary, Faculty of Science Faculty Council

SUBJECT: Special Topics Courses – Faculty of Science

The special topics course listed below have been approved by the Faculty of Science Faculty Council Graduate Studies Committee:

1. COMP 6780 Special Topics in Tactile Robotic Manipulation

The Request for Approval of a Graduate Course forms are attached. If you require more information, please let me know.

A handwritten signature in blue ink that reads "Gina Jackson".

Gina Jackson
Secretary, Faculty of Science Faculty Council

cc: A. Fiech, Chair, Graduate Studies Committee
V. Prado da Fonseca, Department of Computer Science

**SCHOOL OF
GRADUATE STUDIES**

Adobe Reader, minimum version 8, is required to complete this form. Download the latest version: <http://get.adobe.com/reader>. (1) Save the form by clicking on the diskette icon on the upper left side of the screen; (2) Ensure that you are saving the file in PDF format; (3) Specify where you would like to save the file, e.g. Desktop; (4) Review the [How to create and insert a digital signature](#) webpage for step by step instructions; (5) Fill in the required data and save the file; (6) Send the completed form by email to: sgs@mun.ca.

To: Dean, School of Graduate Studies
From: Faculty/School/Department/Program
Subject: Regular Course Special/Selected Topics Course

Course No.:

Course Title: Special Topics in Tactile Robotic Manipulation

I. To be completed for all requests:

A. Course Type:

<input type="checkbox"/> Lecture course <input type="checkbox"/> Laboratory course <input checked="" type="checkbox"/> Directed readings	<input type="checkbox"/> Lecture course with laboratory <input type="checkbox"/> Undergraduate course ¹ <input type="checkbox"/> Other (please specify)
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B. Can this course be offered by existing faculty? Yes No

C. Will this course require new funding (including payment of instructor, labs, equipment, etc.)? Yes No
 If yes, please specify:

D. Will additional library resources be required (if yes, please contact munul@mun.ca for a resource consultation)? Yes No

E. Credit hours for this course: 3

F. Course description (please attach course outline and reading list):
 This graduate-level course explores cutting-edge research and foundational concepts in tactile robotic manipulation. Students will engage with key literature in the field, participate in discussions, and undertake a research project or a critical literature review to deepen their understanding of tactile sensing, robotic control, and manipulation strategies.

G. Method of evaluation:

	Percentage	
	Written	Oral
Class tests		25
Assignments	25	
Other (specify): Presentation		25
Final examination: Report	25	
Total	100	

¹ Must specify the additional work at the graduate level

II. To be completed for special/selected topics course requests only

For special/selected topics courses, there is no evidence of:

- | | |
|--------------------------------------------|-------------------------------------|
| 1. duplication of thesis work | Instructor's initials
<u>VPF</u> |
| 2. double credit | <u>VPF</u> |
| 3. work that is a faculty research product | <u>VPF</u> |
| 4. overlap with existing courses | <u>VPF</u> |

Recommended for offering in the Fall Winter 2025 Spring 20__

Length of session if less than a semester:

III. This course proposal has been prepared in accordance with General Regulations governing the School of Graduate Studies

Vinicius Prado da Fonseca Digitally signed by Vinicius Prado da Fonseca
Date: 2024.12.15 07:20:31 -05'00'

Course instructor

15-Dec-2024

Date

Adrian Fiech Digitally signed by Adrian Fiech
Date: 2025.01.06 07:51:02
+01'00'

Approval of the head of the academic unit

Date

IV. This course proposal was approved by the Faculty/School/Council



Secretary, Faculty/School/Council

6-JAN-2025

Date

Computer Science 6780

Special Topics in Tactile Robotic Manipulation

Department of Computer Science

Instructor: Dr. Vinicius Prado da Fonseca
Office: EN-2012
Office Hours: TBD
e-mail: vpradodafons@mun.ca

Course Overview:

This graduate-level course explores cutting-edge research and foundational concepts in tactile robotic manipulation. Students will engage with key literature in the field, participate in discussions, and undertake a research project or a critical literature review to deepen their understanding of tactile sensing, robotic control, and manipulation strategies.

Current Course Prerequisites/Credit Restrictions:

Basic knowledge of Fundamental of Computer Science, Data Structures, and Programming

Course Description:

This graduate-level course offers an in-depth exploration of tactile robotic manipulation, focusing on integrating tactile sensing technologies with robotic control strategies. Tactile sensing, which involves detecting and interpreting physical interactions through touch, plays a critical role in enabling robots to perform delicate and complex manipulation tasks. By mimicking the human sense of touch, tactile sensing allows robots to perceive surface textures, measure forces, and adapt to unstructured environments. Students will examine key challenges and advancements in this field by critically analyzing contemporary research literature. The course combines theoretical understanding with practical applications, encouraging students to address real-world problems in robotics through a research project or a comprehensive literature review.

Course Topics:

1. Introduction to Tactile Robotic Manipulation
2. Tactile Sensors: Technologies and Mechanisms
3. Data Processing and Interpretation
4. Control Strategies for Tactile Manipulation
5. Applications and Case Studies
6. Emerging Trends and Future Directions

Course Objectives:

- Understand the state-of-the-art tactile sensing technologies and their applications in robotics.
- Critically analyze research papers to identify strengths, limitations, and future research directions.
- Develop insights into the integration of tactile sensing with robotic manipulation algorithms.
- Explore open challenges and potential research opportunities in tactile robotic manipulation.

Textbook:

- *“Robotic tactile sensing: technologies and system.”* by Dahiya, Ravinder S., and Maurizio Valle. Vol. 1. Springer, 2013.

Evaluation:

The final grade in this course will be determined as follows:

Assignments	25%
Presentation	25%
Meetings/Discussion	25%
Literature Review Report	25%

Format:

Meetings, three hours per week.

Lecture Time: TBD
Lecture Room: TBD