MEMORIAL UNIVERSITY

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 September 17, 2025 at 1:00pm by WebEx and in-person (Room: C-2045).

AGENDA

1. Adoption of the Minutes of April 16, 2025 (pages 2-4)
2. Business Arising from the Minutes
3. Correspondence
4. Reports of Standing Committees:
    A. Undergraduate Students Committee
    B. Graduate Studies Committee:
        a) Department of Computer Science, Calendar changes, Paper B.a. (Pages 5-8)
        b) Department of Physics and Physical Oceanography, Special Topics Course, PHYS 6913: Graduate Introduction to Stellar, approved by the Faculty of Science Graduate Committee and presented to Faculty Council for information only. Paper B.b. (Pages 9-12)
    C. Library Committee
5. Committee Matrix: The Faculty of Science Faculty Council Matrix is updated and posted on-line at Committees | Faculty of Science | Memorial University of Newfoundland.
6. Report of the Dean
7. Question Period
8. Adjournment

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FACULTY OF SCIENCE
FACULTY COUNCIL OF SCIENCE
Minutes of Meeting of April 16, 2025

A meeting of the Faculty Council of the Faculty of Science was held on Wednesday, April 16, 2025, at 1:00 p.m. using a hybrid model of WebEx and in-person (C-2039).

FSC 3110 Present

Biology
A. Chaulk, W. Gin, C. Graves, D. Harvey, H. Marshall, M. Rise

Biochemistry
M. Berry, S. Harding, J. Park, K. Wilson

Chemistry
C. Bottaro, L. Cahill M. Katz, F. Kerton, C. Kozak, E. Merschrod, N. Ryan, S. Smith, T. Stockmann, H. Therien-Aubin

Computer Science
S. Bungay, M. Hatcher, C. Hyde, M. Hamilton, T. Tricco

Earth Sciences
G. Dunning, A. Leitch, A. Malcolm, P. Morrill, S. Piercey, K. Welford

Mathematics & Statistics
J. Alam, C. Cigar, D. Dyer, Z. Fan, A. Hatefi, J.C. Loredo-Osti, K. Nirmakanna, T. Sheel, S. Sullivan, T. Stuckless, Y. Yilmaz

Ocean Sciences
I. Fleming, P. Gagnon, J. Greening, J. Wrobewski

Physics & Physical Oceanography
D. Coombs, M. Evstigneev, E. Hayden, J. LeBlanc, H. Neilson, I. Saika-Voivod, K. Shorlin, L. Zedel

Psychology
P. Bitton, K. Hourihan, C. Walsh, D. Wilson

Dean of Science Office
J. Bowering, D. Bennett, T. Fridgen, J. Gauld, C. Hussey, G. Jackson, J. Kavanagh, P. MacCallum, V. MacNab, T. Mackenzie, R. Newhook, N. Squires, C. Thorpe

Representatives from other Faculties
B. Misiuk (HSS), J. Dore (MED), C. Onodenalore (MI)

Student Representatives
N. Penton, J Lamarre, J. Minhas,

Regrets
J. Blundell, I. Booth

FSC 3111 Adoption of Minutes

Moved: Minutes of the meeting of March 19, 2025, be adopted. (*Sullivan/Berry*) **Carried**
Correction: Dr. M. Oh's name is spelled incorrectly and is to be fixed.

FSC 3112 Business Arising: No Business

FSC 3113 Correspondence: No Report

FSC 3114 Reports of Standing Committees:

A. Undergraduate Studies Committee:

Presented by Shannon Sullivan, Chair, Undergraduate Studies Committee

a. Department of Computer Science – Calendar Change, COMP Concentrations:
The Computer Science calendar changes were reviewed and passed by Faculty Council meeting on December 4, 2024.

b. Department of Biology – Calendar Change, New special topics course, BIOL 4920 – Special Topics in Cellular & Molecular Biology of Cancer, For Information Only.

c. Department of Mathematics and Statistics – Calendar change, New Program, Minor in Data Analytics – Amended Program Minor Statistics

(*Sullivan/Yilmaz)* **Carried.**

B. Graduate Studies Committee:

Presented by Terrence Tricco, Member of the Graduate Studies Committee

a. Departments of Mathematics and Statistics and Computer Science, Master of Data Science proposed calendar changes; Revision of capstone project (DSCI695A/695B) evaluation process – removal of evaluation by a faculty member other than the adviser

(*Tricco/Dyer*) **Carried.**

b. Departments of Mathematics and Statistics and Computer Science, Master of Data Science proposed calendar changes; Addition of existing COMP 6910 to MDSC elective courses

(*Tricco/Dyer*) **Carried.**

c. Department of Biochemistry, Special topics course, BIOC 6003, Critiquing Research II, approved by the Faculty of Science Graduate Committee and presented to Faculty Council for information only.

C. Library Committee: No Business

FSC 3115 Dean's Report

A heartfelt thank you to Travis for guidance and support over the last couple of weeks.

The provincial government recently provided their budget. However, there is no update yet regarding the Faculty of Science budget. When we have more information and details, we will share them with you.

FSC 3116 Questions

FSC 3117 Adjournment:

Meeting adjourned at 1:27 p.m.

44.9.1 Program of Study

1. Admission into the Ph.D. program in Computer Science is normally restricted to students holding a Master's Degree (or equivalent) in Computer Science or a closely related area. Others may be considered for admission. See General Regulations, Qualifications for Admission. International applicants are strongly encouraged to submit results of the (general) Graduate Record Examination (GRE) Test.

2. Each student for the Ph.D. shall complete a program of graduate courses prescribed by the supervisory committee.

   The program of each student must consist of a minimum of ~~12~~ 6 credit hours in graduate courses, which will include ~~9~~ 3 credit hours from Computer Science~~, and the other 3 credits will be one of:~~

   ~~a. a course in Computer Science, or a related area, as established in the list of graduate electives; or~~

   ~~b. a course related to the student's area of research~~.

   ~~In addition to the 12 credits mentioned above, a~~A student is ~~strongly~~ recommended to take Comp 690A/B, if the student has not previously taken this course (or an equivalent). The supervisory committee may add more courses to the student's program of studies, if it deems this appropriate.

3. The student shall take the Comprehensive Examination within the time limits specified in General Regulations, Ph.D. and Psy.D. Comprehensive Examination. Students should consult the Departmental guidelines for a detailed description of the content of the Comprehensive Examination.

4. The Ph.D. Degree program will conclude with an oral defence of the thesis as described in General Regulations, Evaluation of Ph.D. and Psy.D. Theses.

44.9.1 Program of Study

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2. Each student for the Ph.D. shall complete a program of graduate courses prescribed by the supervisory committee.

   The program of each student must consist of a minimum of 6 credit hours in graduate courses, which will include 3 credit hours from Computer Science.

   A student is recommended to take Comp 690A/B, if the student has not previously taken this course (or an equivalent). The supervisory committee may add more courses to the student's program of studies, if it deems this appropriate.

3. The student shall take the Comprehensive Examination within the time limits specified in General Regulations, Ph.D. and Psy.D. Comprehensive Examination. Students should consult the Departmental guidelines for a detailed description of the content of the Comprehensive Examination.

4. The Ph.D. Degree program will conclude with an oral defence of the thesis as described in General Regulations, Evaluation of Ph.D. and Psy.D. Theses.

Rationale

This change will allow our Ph.D. students to begin their research at an earlier stage in their program. The modified requirement is also consistent with most other Faculty of Science departments (which typically require 2 courses at the Ph.D. level).

Request for Approval of a Graduate Course

Adobe Reader, minimum version 8, is required to complete this form.
Download the latest version: http://get.adobe.com/reader.

MEMORIAL UNIVERSITY
SCHOOL OF GRADUATE STUDIES

(1) Fill out the form completely and accurately, and save the form in PDF format. Make sure you specify the save location, e.g. Desktop.
(2) Review https://www.mun.ca/sgs/how-to-create-and-insert-a-digital-signature/ for instructions on how to digitally sign the form.
(3) Send the completed form and attachments to the appropriate faculty/school council in the first instance. If approved, they will forward to the School of Graduate Studies.

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

Course No.: Physics 6913

Course Title: Graduate Introduction to Astrophysics

I. To be completed for all requests:

A. Course Type:
☑ Lecture course
☐ Laboratory course
☐ Directed readings
☐ Lecture course with laboratory
☐ Undergraduate course[1]
☐ Other (please specify)

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? ☐ Yes ☑ No
(If yes, please contact munul@mun.ca for a resource consultation.)

E. Credit hours for this course: 3 hrs (whatever standard grad course is)

F. Course description (please attach course outline and reading list):
Please see attached

G. Method of evaluation:

	Percentage	
	Written	**Oral**
Class tests		15
Assignments	20	
Other (specify):	30	20
Final examination:		15
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:

		Instructor's initials
1.	duplication of thesis work	HW
2.	double credit	HW
3.	work that is a faculty research product	HW
4.	overlap with existing courses	Physics 3150

Recommended for offering in the: ☑ Fall ☐ Winter ☐ Spring 20 ___

Length of session if less than a semester: (i.e. accelerated timeframe)

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

Course instructor — Date: 20 August 2025

Approval of the head of the academic unit — Date: 2025-08-28

IV. I certify that this course proposal was approved by the Faculty or School Council.

Secretary, Faculty/School Council — Date: 2025-09-09

Revised: May 15, 2025.

Physics 6913: Graduate Introduction to Stellar

Astrophysics - Fall 2025

Instructor: Dr. Hilding Neilson
Office: C-2046
email: hneilson@mun.ca
Class: TBD
Official office hours: Mon 2 - 4 pm, or by appointment.
Webpage: www.hildingneilson.com

Course Outline

Astrophysics is the study of the stars, planets, galaxies, etc and requires building an understanding of how observations work, radiation physics. In this course, we will study various observational methods, the physics and interpretation of observations along with the methods astronomers use to measure distances and masses. We will then develop tools for understanding the properties and structures of stars, from nuclear fusion to the atmosphere.

This course excludes PHYSICS 3150.

https://www.nasa.gov/webbfirstimages

My Take:
The goal for this course is to provide a graduate boot camp in stellar astrophysics.

To accomplish this students will be expected to read specific chapters and works before a next lecture, write reflections about things they understand from the readings along with questions that arise from the readings. We will discuss them and the content in class and work on building an understanding the physics and methods used in astrophysics.

Readings

Carroll & Ostle, An Introduction to Modern Astrophysics (textbook), chapters 1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 13,14,15, 16
+ weekly journal article review

Grading

Midterm (oral) ……. 15%
Final exam (oral) ……. 15%
Participation/Reflections ……..10%
Assignments ……. 20%
Other - Written paper …….20%
Other - Prepared lecture ……. 10%
Other - Prepared lecture ……. 10%