


**GRADUATE STUDIES AND  
POSTDOCTORAL FELLOWS**

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GradStudies

**MEMORANDUM**

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ATTENTION	Senate	DATE	March 17, 2016
FROM	Wade Parkhouse, Dean of Graduate Studies	No.	GS2016.10
RE:	Faculty of Science		

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**For information:**

Acting under delegated authority at its meeting of March 7, 2016, SGSC approved the following curriculum revisions, effective **Fall 2016**.

**Faculty of Science**

Department of Molecular Biology and Biochemistry

New course: MBB 841 Genomics and Bioinformatics Colloquium

MEMO

Faculty of Science

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ATTENTION Wade Parkhouse, Dean, Graduate Studies

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FROM Peter Ruben, Associate Dean, Faculty of Science

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RE New Course Request - MBB

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DATE February 19, 2016

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TIME 12:46  
PM

The graduate program in the Department of Molecular Biology and Biochemistry seeks to initiate a new graduate course, MBB 841, "Genomics and Bioinformatics Colloquium". This 1 credit course may be repeated for up to a total of 3 credits.

I sought comments from other Faculties and no overlaps or concerns have been reported to me. This new course has my approval and that of the Faculty of Science Graduate Committee.



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P. Ruben



# New Graduate Course Proposal

Please save the form before filling it out to ensure that the information will be saved properly.

Course Subject (eg. PSYC)	MBB	Number (eg. 810)	841	Units (eg. 4)	1
Course title (max 100 characters including spaces and punctuation) Genomics and Bioinformatics Colloquium					
Short title (for enrollment/transcript - max 30 characters) Bioinformatics Colloquium					
Course description for SFU Calendar * Recent research articles on modern genomic techniques will be presented and discussed by students and faculty, with an emphasis on critical analysis of the concepts, experimental design, technologies and the practical application of bioinformatics algorithms. A student may not take more than 3 units of colloquia. It is recommended that students have previously taken one introductory computer-programming course (e.g. CMPT 102, 110, 120, 130 or equivalent) and one introductory statistics course (e.g. STAT 201, 270 or equivalent); or permission of the instructor.					
Rationale for introduction of this course The MBB Department has three main pillars of research, namely protein structure-function; cell/molecular biology; and genetics/genomics. This course will fill the need of many graduate students whose research focus is on the third pillar that is not currently represented by a colloquium course.					
Effective term and year Fall 2016			Course delivery (eg 3 hrs/week for 13 weeks) 1 hr/week for 13 weeks		
Frequency of offerings/year 1			Estimated enrollment/offering 6		
Equivalent courses [These are previously approved courses that replicate the content of this course to such an extent that students should not receive credit for both courses.]					
Prerequisite and/or Corequisite **					
Criminal record check required? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, then add this requirement as a prerequisite.					
Campus where course will be taught <input checked="" type="checkbox"/> Burnaby <input type="checkbox"/> Surrey <input type="checkbox"/> Vancouver <input type="checkbox"/> Great Northern Way <input type="checkbox"/> Off campus					
Course Components <input type="checkbox"/> Lecture <input checked="" type="checkbox"/> Seminar <input type="checkbox"/> Lab <input type="checkbox"/> Research <input type="checkbox"/> Practicum <input type="checkbox"/> Online <input type="checkbox"/>					
Grading Basis <input checked="" type="checkbox"/> Letter grades <input type="checkbox"/> Satisfactory/Unsatisfactory <input type="checkbox"/> In Progress/Complete			Capstone course? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Repeat for credit? *** <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Total completions allowed? <u>3</u>		Repeat within a term? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Required course? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Final exam required? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Additional course fees? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Combined with an undergrad course? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, identify which undergraduate course and what the additional course requirements are for graduate students:					

\* Course descriptions should be brief and should never begin with phrases such as "This course will..." or "The purpose of this course is..." If the grading basis is satisfactory/unsatisfactory include this in the description.

\*\* If a course is only available to students in a particular program, that should be stated in the prerequisite.

\*\*\* This mainly applies to a Special Topics or Directed Readings course.

**RESOURCES**

If additional resources are required to offer this course, the department proposing the course should be prepared to provide information on the source(s) of those additional resources.

Faculty member(s) who will normally teach this course Ryan Morin
Additional faculty members, space, and/or specialized equipment required in order to offer this course

**CONTACT PERSON**

Department / School / Program MBB	Contact name Mimi Fourie	Contact email mbb@sfu.ca
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**DEPARTMENTAL APPROVAL**

**REMINDER:** New courses must be identified on a cover memo and confirmed as approved when submitted to FGSC/SGSC. Remember to also include the course outline.

Non-departmentalized faculties need not sign

Department Graduate Program Committee Mark Paetzel	Signature <i>[Signature]</i>	Date <i>[Date]</i>
Department Chair Nancy Hawkins	Signature <i>[Signature]</i>	Date <i>[Date]</i>

**LIBRARY REVIEW**

Library review done?  YES

Course form, outline, and reading list must be sent by FGSC to lib-courseassessment@sfu.ca for a review of library resources.

**OVERLAP CHECK**

Overlap check done?  YES  N/A

The course form and outline must be sent by FGSC to the chairs of each FGSC (fgsc-list@sfu.ca) to check for an overlap in content. An overlap check is not required for some courses (ie. Special Topics, Capstone, etc.)

**FACULTY APPROVAL**

This approval indicates that all the necessary course content and overlap concerns have been resolved, and that the Faculty/Department commits to providing the required Library funds and any other necessary resources.

Faculty Graduate Studies Committee (FGSC) <i>Peter Ruben</i>	Signature Peter C Ruben <small>Digitally signed by Peter C Ruben DN: cn=Peter C Ruben, o=Simon Fraser University, ou=Faculty of Science, email=pruben@sfu.ca, c=CA Date: 2016.02.19 12:45:52 -08'00'</small>	Date 19 February 2016
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**SENATE GRADUATE STUDIES COMMITTEE APPROVAL**

Senate Graduate Studies Committee (SGSC) Wade Parkhouse	Signature <i>[Signature]</i>	Date MAR 17 2016
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**ADMINISTRATIVE SECTION (for DGS office only)**

Course Attribute: \_\_\_\_\_  
 Course Attribute Value: \_\_\_\_\_  
 Instruction Mode: \_\_\_\_\_  
 Attendance Type: \_\_\_\_\_

If different from regular units:  
 Academic Progress Units: \_\_\_\_\_  
 Financial Aid Progress Units: \_\_\_\_\_

# MBB 841 G100

## Genomics and Bioinformatics Colloquium (1)

**Delivery Method: In Person**

### Overview

- **Course Times + Location:**  
TBA  
Burnaby
- **Instructor:**  
Ryan Morin  
[rdmorin@sfu.ca](mailto:rdmorin@sfu.ca)

## Description

### CALENDAR DESCRIPTION:

Recent research articles on modern genomic techniques will be presented and discussed by students and faculty, with an emphasis on critical analysis of the concepts, experimental design, technologies and the practical application of bioinformatics algorithms. A student may not take more than 3 units of colloquia. It is recommended that students have previously taken one introductory computer-programming course (e.g. CMPT 102, 110, 120, 130 or equivalent) and one introductory statistics course (e.g. STAT 201, 270 or equivalent); or permission of the instructor.

### COURSE DETAILS:

#### General Course Description and objectives:

Problems and methods presented in contemporary research literature, investigating emerging techniques for studying genetics, gene expression and regulation from a genomic perspective will be discussed. A strong emphasis will be on the diverse applications of genomic techniques spanning human health and disease, pathogenesis and molecular evolution. Bioinformatics methodologies for manipulating large genomic data sets will be a key focus.

#### Format

The student will select a new research article for presentation in consultation with the instructor. The student will research the topic, including other necessary articles, in addition to the lead article. The topic will be presented orally in a 50 minute session, with ample time for discussion. All students will be expected to read the lead paper and to participate in discussions.

The colloquium will also be open for attendance and participation by anyone (including post-docs, research associates and faculty) in MBB or from other departments at SFU.

## Grading

Evaluation in each category below will be based on the students grasp of knowledge and effective communication and presentation.

- Oral presentations 50%
- Class discussion 50%

## **Materials**

### **REQUIRED READING:**

None; material to be covered will be drawn directly from primary literature.