SFU Office of Graduate Studies and Postdoctoral Fellows

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MEMORANDUM

ATTENTION	Senate	**DATE**	May 15 2015
FROM	Peter Liljedahl, Acting Dean of Graduate Studies	**No.**	GS2015.22, GS2015.24
RE:	Faculty of Science		

For the information of Senate:
Acting under delegated authority at its meeting of May 11, 2015, SGSC approved the following curriculum revisions effective **Spring 2016**:

Department of Chemistry
Course change (units): CHEM 898 **(effective Fall 2015)**
Course change (description): CHEM 801, CHEM 802

Department of Molecular Biology and Biochemistry
New course: MBB 729: RNA-Mediated Gene Regulation

SFU

MEMO

Faculty of Science

ATTENTION SGSC

FROM Carl Lowenberger, Associate Dean, Faculty of Science

RE Course Change Requests - Chemistry

DATE April 24, 2015

TIME 12:26:18 PM

The graduate Program in the Department of Chemistry seeks a number of changes:

1) Chem 898: Change from 6 units to 18 units to conform with GGR 1.7.2 that requires all master's degrees to have a minimum of 30 units.

The effective date for the change to Chem 898 should be Fall of 2015.

2) Chem 801: Change the course description to state that all MSc students must take this course in their first year.

3) Chem 802: Change the course description to be more specific and to indicate that this course cannot count towards the PhD program requirements.

The effective date for the changes to Chem 801 and 802 should be the Spring of 2016.

These changes have my approval and that of the Faculty of Science Graduate Studies Committee. Thank you for your consideration.

Carl Lowenberger

C. Lowenberger

DEPARTMENT OF CHEMISTRY

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MEMORANDUM

ATTENTION	Faculty of Science Graduate Studies Committee	**DATE**	April 15, 2015
FROM	Robert Britton	**PAGES**	1/1
RE:	Graduate Course Change		

The following graduate course change has been approved by the Department of Chemistry and is forwarded to the Faculty of Science Graduate Studies Committee for approval. Please include this course change on the next SCGS agenda.

Department of Chemistry

Graduate Course Change: CHEM 898

Proposal: CHEM 898 is changed from 6 units course to an 18 units course.

Reasoning: Students that graduate from the Department of Chemistry's M. Sc. Program do not have their M.Sc. degree recognized by the BC Teachers Qualification Service (BCTQC). The BCTQC only recognizes masters' degrees where 30 units are assigned to the degree. A simple remedy to this problem is to increase the units assigned to CHEM 898. Combined with 12 units of course work, this change would make the Chemistry M.Sc. degree a 30 units degree.

Dr. Robert Britton
Graduate Chair
Department of Chemistry

Enclose

cc

SFU SIMON FRASER UNIVERSITY
GRADUATE STUDIES & POSTDOCTORAL FELLOWS

Graduate Course Change

Attach a separate document if more space is required.

Course Subject/Number CHEM 898	Units 18
Course Title Master of Science - Thesis	
Rationale for Change: The BC Teachers Qualification Service does not accept a Master's degree where there are units assigned to the thesis unless the Master's degree is 30 units.	

Proposed Changes (Check all that apply)

☐ Course number ☑ Units* ☐ Title ☐ Description ☐ Prerequisite ☐ Other _____

Complete only the fields to be changed

FROM	TO
Course Subject/Number CHEM-898	Course Subject/Number CHEM-898
Units 6	Units* 18
Course Title MSc Thesis	Course Title (max 100 characters) MSc Thesis
Course Short Title	Course Short Title (max 30 characters)
Description	Description
Prerequisite	Prerequisite
Other	Other

* Program requirements may need to be revised when course units are changed. Please review the calendar and submit any relevant program revisions resulting from this course change.

REMINDER: All course changes must be identified on a cover memo and confirmed as approved when submitted to FGSC and SGSC.

CONTACT PERSON

Department / School / Program	Contact name	Contact email
Chemistry	Nathalie Fournier	chemgdin@sfu.ca

DEPARTMENTAL APPROVAL

Department Graduate Program Committee Dr. Robert Britton	Signature	Date April 16/15
Department Chair Dr. Steven Holdcroft	Signature	Date April 16, 2015

FACULTY APPROVAL

Faculty Graduate Studies Committee (FGSC) Dr. Carl Lowenberger	Signature	Date Apr 23/2015

SENATE GRADUATE STUDIES COMMITTEE APPROVAL

Senate Graduate Studies Committee (SGSC) Wade Parkhouse	Signature	Date April 30 2015

SFU DEPARTMENT OF CHEMISTRY

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MEMORANDUM

ATTENTION	Faculty of Science Graduate Studies Committee	**DATE**	April 13, 2015
FROM	Robert Britton	**PAGES**	1/1
RE:	Graduate Course Change		

The following graduate course changes have been approved by the Department of Chemistry and are forwarded to the Faculty of Science Graduate Studies Committee for approval. Please include these course changes on the next SCGS agenda.

Department of Chemistry

Graduate Course Change: CHEM 801, CHEM 802

Dr. Robert A. Britton
Graduate Chair
Department of Chemistry

Enclose

cc

SIMON FRASER UNIVERSITY
GRADUATE STUDIES & POSTDOCTORAL FELLOWS

Graduate Course Change

Attach a separate document if more space is required.

Course Subject/Number	CHEM 801	Units	3	Effective Term and Year	~~Fall 2015~~ Spring 2016
Course Title	Student Seminar				
Rationale for Change:					

Proposed Changes (Check all that apply)

☐ Course number ☐ Units* ☐ Title ☑ Description ☐ Prerequisite ☐ Other _____

Complete only the fields to be changed

FROM	TO
Course Subject/Number	Course Subject/Number
Units	Units*
Course Title	Course Title (max 100 characters)
Course Short Title	Course Short Title (max 30 characters)
Description Discussion of recent literature in chemistry through student seminars.	Description Discussion of recent literature in chemistry through student seminars. All M.Sc. students are required to enroll in this course during their first year in the Chemistry graduate program.
Prerequisite	Prerequisite
Other	Other

* Program requirements may need to be revised when course units are changed. Please review the calendar and submit any relevant program revisions resulting from this course change.

REMINDER: All course changes must be identified on a cover memo and confirmed as approved when submitted to FGSC and SGSC.

CONTACT PERSON

Department / School / Program	Contact name	Contact email
Chemistry	Nathalie Fournier	chemgdin@sfu.ca

DEPARTMENTAL APPROVAL

Department Graduate Program Committee Robert Britton	Signature	Date April 14/15
Department Chair Steven Holdcroft	Signature	Date April 14, 2015

FACULTY APPROVAL

Faculty Graduate Studies Committee (FGSC) Carl Lowenberger	Signature	Date April 15/2015

SENATE GRADUATE STUDIES COMMITTEE APPROVAL

Senate Graduate Studies Committee (SGSC) Wade Parkhouse	Signature	Date April 30, 2015

SIMON FRASER UNIVERSITY
GRADUATE STUDIES & POSTDOCTORAL FELLOWS

Graduate Course Change

Attach a separate document if more space is required.

Course Subject/Number	CHEM 802	Units	3	Effective Term and Year	~~Fall 2015~~ Spring 2016
Course Title	M.Sc. Research Proposal and Examination				
Rationale for Change:					

Proposed Changes (Check all that apply)

☐ Course number ☐ Units* ☐ Title ☑ Description ☐ Prerequisite ☐ Other _____

Complete only the fields to be changed

FROM	TO
Course Subject/Number	Course Subject/Number
Units	Units*
Course Title	Course Title (max 100 characters)
Course Short Title	Course Short Title (max 30 characters)
Description All M.Sc. students are required to enroll in this course during their first year in the Chemistry graduate program each student will present a written report on his/her research, make an oral presentation, and answer questions relating to their proposed research at the examination. Students will be evaluated on their written report, oral presentation and response to questions.	Description Each student will present a written report on his/her research, make an oral presentation, and answer questions relating to their proposed research at the examination. Students will be evaluated on their written report, oral presentation and response to questions. All M.Sc. students are required to enroll in this course during their first year in the Chemistry graduate program. This course cannot count towards the PhD program requirements.
Prerequisite	Prerequisite
Other	Other

* Program requirements may need to be revised when course units are changed. Please review the calendar and submit any relevant program revisions resulting from this course change.

REMINDER: All course changes must be identified on a cover memo and confirmed as approved when submitted to FGSC and SGSC.

CONTACT PERSON

Department / School / Program	Contact name	Contact email
Chemistry	Nathalie Fournier	chemgdin@sfu.ca

DEPARTMENTAL APPROVAL

Department Graduate Program Committee Robert Britton	Signature	Date April 17/15
Department Chair Steven Holdcroft	Signature	Date April 14, 2015

FACULTY APPROVAL

Faculty Graduate Studies Committee (FGSC) Carl Lowenberger	Signature	Date April 15/2015

SENATE GRADUATE STUDIES COMMITTEE APPROVAL

Senate Graduate Studies Committee (SGSC) Wade Parkhouse	Signature	Date April 30, 2015

SFU

MEMO

Faculty of Science

ATTENTION Wade Parkhouse, Dean of Graduate Studies

FROM Carl Lowenberger, Associate Dean, Faculty of Science

RE New Course Request – MBB729: RNA-Mediated Gene Regulation"

DATE April 9, 2015

TIME 12:39:52 PM

The graduate program in the Department of Molecular Biology and Biochemistry seeks to initiate a new course, MBB 729, "RNA-Mediated Gene Regulation". This course will complement material being offered in MBB 721 (nucleic acids) and normally will be combined with the undergraduate course MBB 429. The Department seeks to make the course available to graduate students for credit.

This is a highly specialized course 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.

Carl Lowenberger

MOLECULAR BIOLOGY AND BIOCHEMISTRY
Memorandum

To: Chair, Faculty Graduate Studies Committee, Faculty of Science	**From:** Michel Leroux – Chair, MBB Graduate Studies Committee
Re: New Graduate Course Proposal – MBB 729	**Date:** February 16, 2015

We are requesting approval of this new Graduate Course, MBB 729: RNA-mediated Gene Regulation.

Attached please find the following for MBB 729:

1. New grad course proposal form
2. Course outline
3. Library Report

Sincerely,

Dr. M.R. Leroux

SIMON FRASER UNIVERSITY
GRADUATE STUDIES & POSTDOCTORAL FELLOWS

New Graduate Course Proposal

Attach a separate document if more space is required.

Course Subject (eg. PSYC) MBB	Number (eg. 810) 729	Units (eg. 4) 3

Course title (max 100 characters including spaces and punctuation)
RNA-mediated Gene Regulation

Short title (for enrollment/transcript - max 30 characters)
RNA-mediated Gene Regulation

Course description for SFU Calendar *
RNA plays an important role in gene regulation. This course will explore recent primary literature studying the biochemistry of these processes.

Rationale for introduction of this course
see attached

Term of initial offering Spring 2016	Course delivery (eg 3 hrs/week for 13 weeks) 4 lecture hours per week for 13 weeks
Frequency of offerings/year 1	Estimated enrollment/offering 5

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.)
Students who have taken MBB 420 or MBB 829 under the same title cannot take this course for further credit.

Prerequisite and/or Corequisite **

Educational Goals (optional)

Criminal record check required? ☐ Yes ☑ No If yes, then add this requirement as a prerequisite.

Campus where course will be taught ☑ Burnaby ☐ Surrey ☐ Vancouver ☐ Great Northern Way ☐ Off campus

Course Components ☑ Lecture ☐ Seminar ☐ Lab ☐ Research ☐ Practicum ☐ Online ☐ _____

Grading Basis ☑ Letter grades ☐ Satisfactory/Unsatisfactory ☐ In Progress/Complete		Capstone course? ☐ Yes ☑ No
Repeat for credit? *** ☐ Yes ☑ No	Total repeats allowed? 0	Repeat within a term? ☐ Yes ☑ No
Required course? ☐ Yes ☑ No	Final exam required? ☐ Yes ☑ No	Additional course fees? ☐ Yes ☑ No

Combined with an undergrad course? ☑ Yes ☐ No If yes, identify which undergraduate course and what the additional course requirements are for graduate students:
MBB 429; see attached course outlines for difference in grading between MBB 429 & MBB 729

* 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 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
Peter Unrau, Dipankar Sen
Additional faculty members, space, and/or specialized equipment required in order to offer this course

CONTACT PERSON

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

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 Michel Leroux	Signature	Date Jan. 6, 2015
Department Chair Lynne Quarmby	Signature	Date Feb 20 2015

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

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.

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) Chair Lowenberger	Signature	Date Feb 23/2015.

SENATE GRADUATE STUDIES COMMITTEE APPROVAL

Senate Graduate Studies Committee (SGSC) Peter Liljedahl	Signature	Date May 20 2015

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 729-3 RNA-mediated Gene Regulation

Rationale for introduction of this course:

In MBB, students are taught about the catalytic and substrate recognition properties of protein and about the information encoding role of DNA. They have little appreciation for the dual roles of RNA, which performs cellular functions that span those of protein and DNA often simultaneously. An explicit aim of this course is to complement the material taught in MBB 721 (Nucleic Acids) by studying the biochemistry of a broad range of regulatory RNAs. This course will normally be combined with MBB 429.

MOLECULAR BIOLOGY AND BIOCHEMISTRY

Fall 2015 - MBB 729 G100

RNA-mediated Gene Regulation (3)

Overview

- *Instructor: Peter Unrau*

Description

Calendar Description:

RNA plays an important role in gene regulation. This course will explore recent primary literature studying the biochemistry of these processes.

Course Details:
3 lecture hours + 1 tutorial hour / week

Topics

1. RNA interference in plants and animals.
2. CRISPR bacterial antiviral defense.
3. Transcriptional and translational regulation – riboswitches, tmRNA, IRES elements, 6S RNA, etc.
4. Post-transcriptional processing – editing, capping and splicing. Naturally occurring ribozymes.

Grading

Essay	50
Final exam	25
Presentation to undergraduates	25

Materials

Required Reading:

None. This course is based on primary literature (journal articles). Supplementary material will be made available from selected texts or journal articles.

Recommended Reading:

Bloomfield, Crothers and Tinoco. ***Nucleic Acids Structures, Properties and Functions***, 2000. University Science Books. This text is a great nucleic acid resource.
ISBN: 0-935702-49-0

Prerequisites:

n/a

MOLECULAR BIOLOGY AND BIOCHEMISTRY MBB
429-3 RNA-mediated gene regulation

Instructor:

Description/topics: RNA plays an important role in gene regulation. This course will explore recent primary literature studying the biochemistry of these processes.

3 lecture hours/week; 1 tutorial hour/week; 0 lab hours

Lecture topics will include but are not limited to:

5. RNA interference in plants and animals.
6. CRISPR bacterial antiviral defense.
7. Transcriptional and translational regulation -riboswitches, tmRNA, IRES elements, 6S RNA etc.
8. Post-transcriptional processing – editing, capping and splicing. Naturally occuring ribozymes.

Grading: **Undergraduate: 30% short essays, 30% final exam, 30% short quizzes, 10% class participation.**

Required texts: None. This course is based on primary literature (journal articles). Supplementary material will be made available from selected texts or journal articles.

Recommended texts: Bloomfield, Crothers and Tinoco. Nucleic Acids Structures, Properties and Functions, 2000. University Science Books (ISBN 0-935702-49-0)

Prerequisite: Pre-requisites: MBB 331 or premission of instructor. MBB 323 / CHEM 360 recommended.