S.19-58

SFU GRADUATE AND POSTDOCTORAL STUDIES

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MEMORANDUM

ATTENTION Senate

DATE March 14, 2019

FROM Jeff Derksen,
Chair of Senate Graduate Studies Committee (SGSC)

RE: Program Changes

For information:

Acting under delegated authority at its meeting of March 5, 2019, SGSC approved the following program changes, effective **Fall 2019**:

Faculty of Arts and Social Sciences

Department of Economics

1) Program change: Economics PhD

Department of Gender, Sexuality, and Women's Studies

2) Program changes: Gender, Sexuality and Women's Studies MA and PhD

Department of Liberal Studies

3) Program change (calendar revisions): Liberal Studies MA

Department of Psychology

4) Program changes (calendar revisions for TRAIN) Psychology MA and PhD

Faculty of Science

Biomedical Physiology and Kinesiology

5) New calendar entry: Translational and Integrative Neuroscience Specialization (TRAIN)
6) Program changes (calendar revisions for TRAIN): Biomedical Physiology and Kinesiology MSc and PhD

Department of Biological Sciences

7) Program changes (calendar revisions for TRAIN): Biological Sciences MSc and PhD

Department of Mathematics

8) Program changes (calendar revisions): Mathematics MSc and PhD
9) Program changes (calendar revisions): Applied and Computational Mathematics MSc and PhD

Senators wishing to consult a more detailed report of curriculum revisions may do so on the Senate Docushare repository at https://docushare.sfu.ca/dsweb/View/Collection-12682

SFU

FACULTY OF
ARTS AND SOCIAL SCIENCES

MEMO

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ATTENTION: Jeff Derksen, Dean
Graduate & Postdoctoral Studies

FROM : Sean Zwagerman, Chair
Faculty of Arts and Social Sciences Graduate Studies Committee

RE: FASSGSC Proposals

DATE: February 14, 2019

The Faculty of Arts and Social Sciences Graduate Committee met on January 31, 2019 and passed the attached motions. Please place these items on the agenda for the next SGSC meeting.

1. **Department of Economics**
   a) Deletion of the PhD Specialization and associated calendar changes
   ~~b) Deletion of ECON 988 and associated calendar changes~~
2. **Department of Gender, Sexuality and Women's Studies**
   ~~a) calendar changes for GSWS 800~~
   ~~b) calendar changes for GSWS 811~~
   ~~c) calendar changes for GSWS 812~~
   ~~d) calendar changes for GSWS 820~~
   ~~e) calendar changes for GSWS 823~~
   ~~f) calendar changes for GSWS 824~~
   g) calendar changes for MA program
   h) calendar changes for PhD program
3. ~~**Department of History**~~
   ~~a) new Graduate Certificate program and associated calendar changes~~
4. **Graduate Liberal Studies Program**
   a) the calendar changes to MA program

We would like the above changes to become effective Fall 2019.

Sean Zwagerman
Associate Dean, Faculty of Arts and Social Sciences

SFU

MEMO

ATTENTION	Sean Zwagerman, Chair, FASSGSC
FROM	Alexander Karaivanov, Graduate Chair, Dept. of Economics
RE	Curriculum changes
DATE	January 7, 2019

At its meeting of November 14, 2018, the Department of Economics approved the following program changes:

1. Delete the "Economics and Business Administrations" PhD specialization. Detailed text edits, rationale and revised calendar entry are attached.

2. ~~Delete the program course requirement ECON 988 Second Field Comprehensive Examination. Course deletion form, rationale and revised calendar entry are attached.~~

Please place this proposal on the agenda of the next meeting of the Faculty of Arts and Social Sciences Graduate Studies Curriculum Committee

Sincerely,

A. K

Alexander Karaivanov
Graduate Chair
Department of Economics

Calendar Entry Change for Economics (Doctor of Philosophy)

Summary of changes: 1. Deletion of the Economics and Business Administration specialization and associated text 2. Deletion of program requirement ECON 988 Second Field Comprehensive Examination (0) and associated note
Rationale for changes: 1. The Economics and Business Administration specialization has not been used for a long time (more than 15 years) and there is no current or projected demand by students to enroll or be admitted into it. There is no on-going collaboration with the Faculty of Business and there are no BUS courses listed in the specialization requirements. The specialization requirements are also outdated and out of sync with those of the Economics specialization in which all our current PhD students are enrolled. 2. Consistent with one of the recommendations of the recent department external review, this program change is intended to streamline the program requirements and help our PhD students begin active research faster. Complementary updates in the format or deadlines for ECON 987 (Field comprehensive examination), which would not require a calendar change, will be implemented at the department level.
Effective term and year: Fall 2019
Will this change impact current students? If yes, what is the plan for current students? 1. No, there are no PhD students currently enrolled in this specialization. 2. No. Only students entering in Fall 2019 or later will be subject to this change

FROM	TO
Program Requirements This program consists of required courses, elective courses, comprehensive exam, and a thesis for a minimum of 50 units. ~~This program can be completed with a specialization in economics, or economics and business administration.~~ Normally a student must complete at least five courses of regularly scheduled course work within this department; exceptions to this rule must be approved by the student's	Program Requirements This program consists of required courses, elective courses, comprehensive exam, and a thesis for a minimum of 50 units. Normally a student must complete at least five courses of regularly scheduled course work within this department; exceptions to this rule must be approved by the student's supervisory committee and the graduate program committee.

supervisory committee and the graduate program committee. ~~Economics Specialization~~ Students must complete all of ECON 803 - Microeconomic Theory II (4) ECON 804 - Advanced Topics in Microeconomic Theory (4) ECON 808 - Macroeconomic Theory (4) ECON 809 - Advanced Macroeconomic Theory (4) ECON 831 - Mathematical Economics (4) ECON 837 - Econometrics I (4) ECON 838 - Econometrics II (4) and two comprehensive exams in economic theory ECON 985 - Comprehensive Examination in Microeconomic Theory (0) ECON 986 - Comprehensive Examination in Macroeconomic Theory (0) and four graduate elective ECON courses and a field paper ECON 900 - PhD Field Paper (0) and a comprehensive field exam ECON 987 - Field Comprehensive Examination (0) ~~ECON 988 - Second Field Comprehensive Examination (0) *~~ and a thesis ECON 990 - PhD Thesis (6) ~~* this requirement will be waived if two field courses are completed both with a grade A-~~	Students must complete all of ECON 803 - Microeconomic Theory II (4) ECON 804 - Advanced Topics in Microeconomic Theory (4) ECON 808 - Macroeconomic Theory (4) ECON 809 - Advanced Macroeconomic Theory (4) ECON 831 - Mathematical Economics (4) ECON 837 - Econometrics I (4) ECON 838 - Econometrics II (4) and two comprehensive exams in economic theory ECON 985 - Comprehensive Examination in Microeconomic Theory (0) ECON 986 - Comprehensive Examination in Macroeconomic Theory (0) and four graduate elective ECON courses and a field paper ECON 900 - PhD Field Paper (0) and a comprehensive field exam ECON 987 - Field Comprehensive Examination (0) and a thesis ECON 990 - PhD Thesis (6)

or better Economics and Business Administration Specialization Students must complete ECON 831 - Mathematical Economics (4) and both of ECON 803 - Microeconomic Theory II (4) ECON 804 - Advanced Topics in Microeconomic Theory (4) or both of ECON 808 - Macroeconomic Theory (4) ECON 809 - Advanced Macroeconomic Theory (4) and one of ECON 985 - Comprehensive Examination in Microeconomic Theory (0) ECON 986 - Comprehensive Examination in Macroeconomic Theory (0) and eight graduate elective courses and both of ECON 987 - Field Comprehensive Examination (0) ECON 988 - Second Field Comprehensive Examination (0) and a thesis ECON 990 - PhD Thesis (6)	

SFU
DEPARTMENT OF GENDER, SEXUALITY & WOMEN'S STUDIES
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MEMORANDUM

ATTENTION	Dr. Sean Zwagerman, Associate Dean, FASS	**DATE**	January 10, 2019
FROM	Helen Leung	**PAGES**	1/12
RE:	Proposals for course and program changes		

On November 7, 2018, the Department of Gender, Sexuality & Women's Studies approved the following course and program changes:

~~1. GSWS 800: updating course title and calendar description~~

~~2. GSWS 811: updating course title~~

~~3. GSWS 812: updating course title~~

~~4. GSWS 820: updating course title and calendar description~~

~~5. GSWS 823: updating course title and calendar description~~

~~6. GSWS 824: updating course title and calendar description~~

7. MA Program: addition of one required course

8. PhD Program: deletion of one line in the calendar description for the Comprehensive Exams to accurately reflect students' options.

Please place these materials on the agenda of the next meeting of the Faculty of Arts and Social Sciences Graduate Studies Curriculum Committee.

Sincerely,

Helen Leung
Graduate Program Chair
Department of Gender, Sexuality & Women's Studies

Calendar Entry Change for Gender, Sexuality and Women's Studies, MA

Summary of change: Adding one course requirement to the two MA programs and updating titles of required courses.
Rationale for change: To identify core courses in the graduate curriculum and to slightly reduce the number of elective courses in order to ensure that students will complete the program with comprehensive knowledge of the intellectual foundation of the academic field. To update the titles of required courses to correspond with the course changes that are submitted concurrently.
Effective term and year: Fall, 2019
Will this change impact current students? If yes, what is the plan for current students? Students who were enrolled prior to Fall 2019 will be exempted from the new requirements and are allowed to graduate under the previous requirements. This exemption will be clearly noted in the departmental guidelines for graduate students.

FROM	TO
Program Requirements **Thesis Option** This program option consists of course work and a thesis for a minimum of 30 units Students must complete GSWS 811 - ~~Graduate~~ Professional Development Colloquium I (3) GSWS 812 - ~~Graduate~~ Professional Development Colloquium II (3) ~~and one of~~ GSWS 800 - ~~Methodology in Women's Studies~~ Research (5) GSWS 822 - Graduate Seminar in Feminist Theory (5) and an additional ~~9~~ units of graduate courses* and a thesis GSWS 898 – MA Thesis (10) **Course Intensive Option** This program option consists of courses and a field examination for a minimum of 36 units Students must complete GSWS 811 - ~~Graduate~~ Professional Development Colloquium I (3) GSWS 812 - ~~Graduate~~ Professional Development	Program Requirements **Thesis Option** This program option consists of course work and a thesis for a minimum of 30 units Students must complete GSWS 811 - Professional Development Colloquium I (3) GSWS 812 - Professional Development Colloquium II (3) GSWS 800 - **Toolkit in GSWS** Research (5) GSWS 822 - Graduate Seminar in Feminist Theory (5) and an additional **4** units of graduate courses* and a thesis GSWS 898 – MA Thesis (10) **Course Intensive Option** This program option consists of courses and a field examination for a minimum of 36 units Students must complete GSWS 811 - Professional Development Colloquium I (3) GSWS 812 - Professional Development Colloquium II (3)

Colloquium II (3) GSWS 822 - Graduate Seminar in Feminist Theory (5) and an additional ~~19~~ units of graduate courses* and a field examination GSWS 999 – MA Field Exam (6) * Two of these courses may be from gender, sexuality, and women's studies courses at the universities under the Western Deans' Agreement or relevant offerings in other Simon Fraser University departments, with the approval of the student's supervisory committee.	GSWS 822 - Graduate Seminar in Feminist Theory (5) **and one of** **GSWS 800 - Toolkit in GSWS Research (5)** **GSWS 826 – Graduate Seminar in Queer/Trans Studies (5)** and an additional **14** units of graduate courses* and a field examination GSWS 999 – MA Field Exam (6) * Two of these courses may be from gender, sexuality, and women's studies courses at the universities under the Western Deans' Agreement or relevant offerings in other Simon Fraser University departments, with the approval of the student's supervisory committee.

Calendar Entry Change for Gender, Sexuality and Women's Studies, PhD

Summary of change: A minor revision of the language about options for the PhD comprehensive exams in the calendar entry.
Rationale for change: We have streamlined our options for the comprehensive exams, which now must consist of a course syllabus and two exams. The calendar entry is revised so that it is consistent with the department's internal guidelines for graduate students.
Effective term and year: Fall, 2019
Will this change impact current students? If yes, what is the plan for current students? PhD students who were enrolled prior to Fall 2019 will be exempted from the new guidelines and are allowed to choose options under the previous guidelines. This exemption will be clearly noted in the departmental guidelines for graduate students.

FROM	TO
Other Information **Comprehensive examinations** Students must pass comprehensive examinations that consist of ~~three major scholarly/professional tasks~~ to be set by the student's supervisory committee in consultation with the student, approved by the Department of Gender, Sexuality, and Women's Studies graduate committee, and completed to the satisfaction of the supervisory committee. ~~One of the three tasks must be an exam or a review of the literature. Normally students complete course work before completing the comprehensive examinations within 6 terms.~~	Other Information **Comprehensive examinations** Students must pass comprehensive examinations that consist of **a course syllabus and two exams** to be set by the student's supervisory committee in consultation with the student, approved by the Department of Gender, Sexuality, and Women's Studies graduate committee, and completed to the satisfaction of the supervisory committee.

Memo to SGSC

To: Sean Zwagerman
From: Gary McCarron
Re: Calendar Revisions for Graduate Liberal Studies
Date: February 15, 2019

The following language changes have been approved by the Graduate Liberal Studies Program and are forwarded to the Senate Graduate Studies Committee for approval. These curriculum items should be effective for Fall term of 2019. Please include them on the next SGSC agenda.

Gary McCarron

Faculty Graduate Chair

Please note:

To view the Fall 2018 Academic Calendar go to www.sfu.ca/students/calendar/2018/fall.html

Graduate Liberal Studies Program | Faculty of Arts and Social Sciences
Simon Fraser University Calendar | Spring 2019

Liberal Studies

MASTER OF ARTS

This program, which leads to a master of arts, liberal studies (MALS), is for adults returning to part-time study. The program, which is affiliated with the Department of Humanities, is offered at Simon Fraser University Vancouver during evening and weekend hours.

In the best tradition of liberal education, the program addresses some of the great works of our intellectual and artistic heritage, studies the perennial concerns that have shaped our culture, and explores contemporary perspectives on traditional ideas and values. The interdisciplinary seminars offer wide reading, careful reflection, and intense discussion. They are taught by faculty who are chosen for their expertise and teaching excellence, and for their interest in interdisciplinary studies. The program emphasizes a community of inquiry and discussion over independent research and entails several special expectations within the graduate study general regulations. Students should expect to participate in out-of-class activities, such as pre-class dinners, that encourage interchange and enhance intellectual community.

Approved for part-time study, the program is designed for individuals having other obligations, and who may for that reason require greater or lesser amounts of time to complete the program.

Admission Requirements

Applicants must satisfy the liberal studies graduate program committee of academic suitability. In addition to the normal graduate admission requirements, applicants must demonstrate readiness through reference letters, written work samples, and normally an interview. Exceptionally, the graduate program committee may recommend admission to those who do not meet normal requirements but who, by reason of prior experience, strong credentials and demonstrated competence, are particularly suited.

Newly admitted students must attend an introductory short course prior to the beginning of the first course in the fall term.

Degree Requirements

Students complete seminar courses and choose one of three options: two extended essays and oral exam; one project and oral exam; and two additional courses and a field exam. Students may enrol in one or two courses per term. Exceptionally, and by agreement of the graduate program committee and the department involved, a student may complete two graduate courses in other departments toward this degree.

Courses

LS courses are intensive seminars. Core courses LS 800 and 801 develop a common readings base. The other six seminar courses may vary in approach and content each time they are offered, and will address a central tension in our intellectual lives, trace some of its sources, and consider its impact on our experience of the present. All courses are cross-disciplinary and may draw on faculty from across the University.

Extended Essays Option

Students who choose this option will complete a total of six courses and will also submit two extended essays for oral examination. The following two courses will be completed in the first two terms.

LS 800 - Reflections on Reason and Passion I (5)
LS 801 - Reflections on Reason and Passion II (5)

Students also complete

LS 898 - Liberal Studies Graduating Seminar (5)

The remaining two courses may be selected from among those offered in the program (see LS courses) except for LS 998 and 999.

Extended essays, developed from course work papers, may make significant use of non-written media, and is examined as specified in Graduate General Regulations "1.10.1 Thesis Examination" on page 225.

Project Option

Students who choose this option will complete six courses and will also submit one project for oral examination. The following two courses, which will be completed in the first two terms, are among the six required.

LS 800 - Reflections on Reason and Passion I (5)
LS 801 - Reflections on Reason and Passion II (5)

The remaining four courses may be selected from those offered in the program (see LS courses).

Field Examination Option

Students who choose this option will complete eight courses and will also write a field examination based on material that is covered in three of the completed courses. Field examination preparation is on the supervisory committee's advice. The following two courses, which will be completed in the first two terms, are among the eight required.

LS 800 - Reflections on Reason and Passion I (5)
LS 801 - Reflections on Reason and Passion II (5)

The remaining six courses may be selected from those offered in the program (see LS courses).

Supervisory Committee

Supervisory committees are arranged by the graduate program committee chair. With the dean of graduate studies' approval, the supervisory and exam process for the extended essays or project may be modified to emphasize collegial exchange.

Academic Requirements within the Graduate General Regulations

All graduate students must satisfy the academic requirements that are specified in the Graduate General Regulations, as well as the specific requirements for the program in which they are enrolled.

REVISED
CALENDAR ENTRY

Liberal Studies

MASTER OF ARTS

Description of Program

This program, which leads to a Master of Arts in Liberal Studies (MALS), is for adults returning to part-time study. The program, which is affiliated with the department of humanities, is offered at Simon Fraser University Vancouver during evening and weekend hours.

In the best tradition of liberal education, the program addresses some of the great works of our intellectual and artistic heritage, studies the perennial concerns that have shaped our culture, and explores contemporary perspectives on traditional ideas and values. The interdisciplinary seminars offer wide reading, careful reflection, and intense discussion. They are taught by faculty who are chosen for their expertise and teaching excellence, and for their interest in interdisciplinary studies. The program emphasizes a community of inquiry and discussion over independent research and entails several special expectations within the graduate study general regulations. Students should expect to participate in out-of-class activities, such as pre-class dinners, that encourage interchange and enhance intellectual community.

Approved for part-time study, the program is designed for individuals having other obligations, and who may for that reason require greater or lesser amounts of time to complete the program.

Admission Requirements

Applicants must satisfy the University admission requirements as stated in Graduate General Regulations 1.3 in the SFU Calendar. In addition to the normal graduate admission requirements, applicants must satisfy the liberal studies graduate program committee of academic suitability requirements and demonstrate readiness through reference letters, written work samples, and normally an interview. Exceptionally, the graduate program committee may recommend admission to those who do not meet normal requirements but whose strong credentials and demonstrated competence due to prior experience, are particularly suited.

Program Requirements

This program consists of course work and either two extended essays, a project, or a course work option for a minimum of 35 units.

Students must complete in the first two terms
LS 800 - Reflections on Reason and Passion I (5)
LS 801 - Reflections on Reason and Passion II (5)

and four graduate courses in Liberal Studies for a minimum of 20 units

and one of the three options below

Extended Essays Option

and two extended essays
LS 998 – MA Extended Essays (5)

REVISED
CALENDAR ENTRY

Project Option
and a project
LS 999 – MA Project (5)

Course Work Option

and an additional five units of graduate course work in Liberal Studies

and a graduating seminar
LS 898 - Liberal Studies Graduating Seminar (5)

Program Length

Students must complete the program requirements in nine terms.

Other Information

Course Work
Exceptionally, and by agreement of the graduate program committee and the department involved, a student may complete two graduate courses from other departments toward this degree.

Extended Essays
The extended essays, developed from course work papers, may make significant use of non-written media. They are examined as specified in Graduate General Regulations 1.10.1 and must be submitted to the library.

MA Project
The project is examined as specified in Graduate General Regulations 1.10.1 and must be submitted to the library.

Academic Requirements within the Graduate General Regulations

All graduate students must satisfy the academic requirements that are specified in the Graduate General Regulations, as well as the specific requirements for the program in which they are enrolled.

SFU

FACULTY OF
ARTS AND SOCIAL SCIENCES

MEMO

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ATTENTION: Carl Lowenberger,
Associate Dean, Faculty of Science

FROM : Sean Zwagerman, Chair
Faculty of Arts and Social Sciences Graduate Studies Committee

RE: TRAIN Graduate Specialization

DATE: 19 November, 2018

By electronic ballot, The Faculty of Arts and Social Sciences Graduate Committee endorsed on 19 November, 2018 the Department of Psychology's support for the Translational and Integrative Neuroscience (TRAIN) graduate specialization.

Sean Zwagerman
Associate Dean, Faculty of Arts and Social Sciences

Cover Memo to FGSC

To: Faculty of Arts and Social Sciences Graduate Studies Committee
From: Kate Slaney, Graduate Program Committee Chair, Psychology
Re: new TRAIN graduate specialization
Date: November 8th, 2018

I am writing to support the proposed new Translational and Integrative Neuroscience (TRAIN) graduate specialization with associated new courses submitted from the Department of Biomedical Physiology and Kinesiology within the Faculty of Science. The specialization has been approved by the graduate program committee and Department of Psychology. The complete package for the specialization is being submitted through the Faculty of Science Graduate Studies Committee (Carl Lowenberger, Acting Associate Dean) for approval.

Kate Slaney
Graduate Program Committee Chair, Psychology

Calendar Entry Change for Psychology MA

Summary of change: Include general information regarding TRAIN integration into course requirements
Rationale for change: With the introduction of the TRAIN specialization, the Department of Psychology would like to allow the opportunity for students to take NEUR courses without specifying what core or area requirements will be substituted. This will be left to the arrangement with the student's supervisor.
Effective term and year: Fall 2019
Will this change impact current students? If yes, what is the plan for current students? No

FROM	TO
# Other Information ## Transfer from MA to PhD Students with a previous master's degree can apply mid-program to the fast-track PhD program (http://www.psyc.sfu.ca/grad); students who are accepted are not required to complete an MA thesis. Students in the MA program will not be permitted to enroll in PhD course work until they are admitted to the PhD, or receive approval from their senior supervisor, area coordinator and graduate program chair. ## Satisfactory Performance It is the policy of the Department of Psychology that a grade of less than B (3.0) on any course is deemed unsatisfactory. Any graduate student who obtains a grade of less than B (3.0) in two or more courses or who fails to maintain a cumulative grade point average (CGPA) of at least 3.5, may be	# Other Information ## Transfer from MA to PhD Students with a previous master's degree can apply mid-program to the fast-track PhD program (http://www.psyc.sfu.ca/grad); students who are accepted are not required to complete an MA thesis. Students in the MA program will not be permitted to enroll in PhD course work until they are admitted to the PhD, or receive approval from their senior supervisor, area coordinator and graduate program chair. ## Satisfactory Performance It is the policy of the Department of Psychology that a grade of less than B (3.0) on any course is deemed unsatisfactory. Any graduate student who obtains a grade of less than B (3.0) in two or more courses or who fails to maintain a cumulative grade point average (CGPA) of at least 3.5, may be

required to withdraw from the program. Additionally, students who receive unsatisfactory ratings on their annual evaluations, whether due to grades, inadequate progress through the program or unethical behavior, may be withdrawn from the program (as per Graduate General Regulation 1.8.2).	required to withdraw from the program. Additionally, students who receive unsatisfactory ratings on their annual evaluations, whether due to grades, inadequate progress through the program or unethical behavior, may be withdrawn from the program (as per Graduate General Regulation 1.8.2).
A student in the clinical psychology program whose behaviour raises the question of possible violations of the ethical codes binding the profession (CPA Code of Ethics, and CPBC Code of Conduct) will be advised of the nature of the problem behaviour in writing, and requested to meet with the clinical committee in a confidential closed session to determine the facts. Access to clinical clients may be immediately suspended pending the outcome of this meeting. The student will be invited to present any information and to respond to any questions. Whether or not the student attends, the committee members subsequently will meet in camera to consider the facts, and to decide on a recommendation to make to the graduate studies committee (GSC) of the department. Possible outcomes of this process include limitation of clinical training work, restriction of contact with clinical clients or research participants, remedial work, and recommendation of termination from the program. Issues pertaining to ethical integrity of students in the Psychology Graduate Program are subject to the same codes of conduct and will follow the same procedures as described above, but will be handled directly by the graduate studies committee.	A student in the clinical psychology program whose behaviour raises the question of possible violations of the ethical codes binding the profession (CPA Code of Ethics, and CPBC Code of Conduct) will be advised of the nature of the problem behaviour in writing, and requested to meet with the clinical committee in a confidential closed session to determine the facts. Access to clinical clients may be immediately suspended pending the outcome of this meeting. The student will be invited to present any information and to respond to any questions. Whether or not the student attends, the committee members subsequently will meet in camera to consider the facts, and to decide on a recommendation to make to the graduate studies committee (GSC) of the department. Possible outcomes of this process include limitation of clinical training work, restriction of contact with clinical clients or research participants, remedial work, and recommendation of termination from the program. Issues pertaining to ethical integrity of students in the Psychology Graduate Program are subject to the same codes of conduct and will follow the same procedures as described above, but will be handled directly by the graduate studies committee.
A student may appeal the decision to the GSC of the department. The GSC will adjudicate the appeal using procedures	A student may appeal the decision to the GSC of the department. The GSC will adjudicate the appeal using procedures

outlined in Graduate General Regulation 1.8.2 Review of Unsatisfactory Progress. The grounds for appeal are errors or unfairness in the procedures that were followed.

Thesis

Students are required to present a written thesis proposal to their supervisory committee before the end of their fourth term in the program. After the thesis has been submitted an oral defence will be scheduled. Students are expected to have completed their thesis by the end of their second year in the program. For further information and regulations, see Graduate General Regulations 1.9.2.

Supervisory Committees

For the thesis, students establish a supervisory committee before the end of their first term. The supervisory committee will normally consist of at least two Department of Psychology tenure-track or tenured faculty members, one of whom will be the senior supervisor and committee chair. Other individuals who are considered necessary by the student and senior supervisor may serve on the committee.

outlined in Graduate General Regulation 1.8.2 Review of Unsatisfactory Progress. The grounds for appeal are errors or unfairness in the procedures that were followed.

Translational and Integrative Neuroscience (TRAIN) Specialization

Students interested in taking NEUR 800 and NEUR 801 to fulfill their graduate course requirements need to consult with the senior supervisor and graduate program chair.

For more information on TRAIN, please see Translational and Integrative Neuroscience.

Thesis

Students are required to present a written thesis proposal to their supervisory committee before the end of their fourth term in the program. After the thesis has been submitted an oral defence will be scheduled. Students are expected to have completed their thesis by the end of their second year in the program. For further information and regulations, see Graduate General Regulations 1.9.2.

Supervisory Committees

For the thesis, students establish a supervisory committee before the end of their first term. The supervisory committee will normally consist of at least two Department of Psychology tenure-track or tenured faculty members, one of whom will be the senior supervisor and committee chair. Other individuals who are considered necessary by the student and

	senior supervisor may serve on the committee.

Calendar Entry Change for Psychology PhD

Summary of change: Include general information regarding TRAIN integration into course requirements
Rationale for change: With the introduction of the TRAIN specialization, the Department of Psychology would like to allow the opportunity for students to take NEUR courses without specifying what core or area requirements will be substituted. This will be left to the arrangement with the student's supervisor.
Effective term and year: Fall 2019
Will this change impact current students? If yes, what is the plan for current students? No

FROM	TO
[...] Other Information Satisfactory Performance Each graduate student's performance in research and course work is assessed at least once a year, with a formal annual review being conducted every spring. Each student receives feedback on his/her progress following this review. It is the policy of the Department of Psychology that a grade of less than B (3.0) on any course is deemed unsatisfactory. Any graduate student who obtains a grade of less than B (3.0) in two or more courses, or who fails to maintain a cumulative grade point average (CGPA) of at least 3.5, may be required to withdraw from the program. Additionally, students who receive unsatisfactory ratings on their annual evaluations, whether due to grades, inadequate progress through the program or unethical behavior, may be withdrawn	[...] Other Information Satisfactory Performance Each graduate student's performance in research and course work is assessed at least once a year, with a formal annual review being conducted every spring. Each student receives feedback on his/her progress following this review. It is the policy of the Department of Psychology that a grade of less than B (3.0) on any course is deemed unsatisfactory. Any graduate student who obtains a grade of less than B (3.0) in two or more courses, or who fails to maintain a cumulative grade point average (CGPA) of at least 3.5, may be required to withdraw from the program. Additionally, students who receive unsatisfactory ratings on their annual evaluations, whether due to grades, inadequate progress through the program or unethical behavior, may be withdrawn

from the program (as per Graduate General Regulation 1.8.2). A student in the clinical psychology program whose behavior raises the question of possible violations of the ethical codes binding the profession (CPA Code of Ethics, and CPBC Code of Conduct) will be advised of the nature of the problem behavior in writing, and requested to meet with the clinical committee in a confidential closed session to determine the facts. Access to clinical clients may be immediately suspended pending the outcome of this meeting. The student will be invited to present any information and to respond to any questions. Whether or not the student attends, the committee members subsequently will meet in camera to consider the facts, and to decide on a recommendation to make to the graduate studies committee (GSC) of the department. Possible outcomes of this process include limitation of clinical training work, restriction of contact with clinical clients or research participants, remedial work, and recommendation of termination from the program. Issues pertaining to ethical integrity of students in the Psychology Graduate Program are subject to the same codes of conduct and will follow the same procedures as described above, but will be handled directly by the graduate studies committee. A student may appeal the decision to the GSC of the department The GSC will adjudicate the appeal using procedures outlined in Graduate General Regulation 1.8.2 Review of Unsatisfactory Progress. The grounds for appeal are errors or unfairness in the procedures that were followed.	from the program (as per Graduate General Regulation 1.8.2). A student in the clinical psychology program whose behavior raises the question of possible violations of the ethical codes binding the profession (CPA Code of Ethics, and CPBC Code of Conduct) will be advised of the nature of the problem behavior in writing, and requested to meet with the clinical committee in a confidential closed session to determine the facts. Access to clinical clients may be immediately suspended pending the outcome of this meeting. The student will be invited to present any information and to respond to any questions. Whether or not the student attends, the committee members subsequently will meet in camera to consider the facts, and to decide on a recommendation to make to the graduate studies committee (GSC) of the department. Possible outcomes of this process include limitation of clinical training work, restriction of contact with clinical clients or research participants, remedial work, and recommendation of termination from the program. Issues pertaining to ethical integrity of students in the Psychology Graduate Program are subject to the same codes of conduct and will follow the same procedures as described above, but will be handled directly by the graduate studies committee. A student may appeal the decision to the GSC of the department The GSC will adjudicate the appeal using procedures outlined in Graduate General Regulation 1.8.2 Review of Unsatisfactory Progress. The grounds for appeal are errors or unfairness in the procedures that were followed.

Thesis

Before starting thesis research, the candidate presents a formal proposal for evaluation. The candidate must present a thesis proposal before the end of the second program year, and is expected to complete the thesis within four years of program entrance. The completed thesis will be defended in oral examination. Judgment will be made by an examining committee. For further information, see Graduates General Regulations 1.9.4.

Supervisory Committee

For the PhD thesis, students establish a supervisory committee by the end of the second term following program admission. The PhD supervisory committee will consist of a Department of Psychology tenure-track or tenured faculty member who will be the senior supervisor and committee chair, and two or more additional members, at least one of whom must be a tenure-track or tenured faculty member in the Department of Psychology.

[...]

Translational and Integrative Neuroscience (TRAIN) Specialization

Students interested in taking NEUR 800 and NEUR 801 to fulfill their graduate course requirements need to consult with the senior supervisor and graduate program chair.

For more information on TRAIN, please see Translational and Integrative Neuroscience.

Thesis

Before starting thesis research, the candidate presents a formal proposal for evaluation. The candidate must present a thesis proposal before the end of the second program year, and is expected to complete the thesis within four years of program entrance. The completed thesis will be defended in oral examination. Judgment will be made by an examining committee. For further information, see Graduates General Regulations 1.9.4.

Supervisory Committee

For the PhD thesis, students establish a supervisory committee by the end of the second term following program admission. The PhD supervisory committee will consist of a Department of Psychology tenure-track or tenured faculty member who will be the senior supervisor and committee chair, and two or more additional members, at least one of whom must be a tenure-track or tenured faculty member in the Department of Psychology.

[...]

SFU

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MEMORANDUM

ATTENTION	Senate Graduate Studies Committee	DATE	February 13, 2019
FROM	Michael Silverman, Associate Dean of Research and Graduate Studies	PAGES	1
RE:	Calendar Entry for Translational and Integrative Neuroscience Specialization		

The following curriculum items have been approved by the Faculty of Science and are forwarded to the Senate Graduate Studies Committee for approval. These curriculum items should be effective for **Fall 2019.** Please include them on the next SGSC agenda.

Faculty of Science

Department of Biomedical Physiology and Kinesiology

~~1) Motion to create a new acronym: NEUR~~

~~2) New courses: NEUR 800 – Foundations of Cellular and Molecular Neuroscience~~
~~NEUR 801 – Foundations of Systems Neuroscience~~
~~NEUR 802- Translational and Integrative Neuroscience Workshop~~

3) Calendar Entry (standalone): Translational and Integrative Neuroscience Specialization

4) Calendar revisions: Biomedical Physiology and Kinesiology MSc and PhD

~~5) Course changes (deletion): BPK 825~~
~~BPK 861~~
~~BPK 865~~

Department of Biological Sciences

1) Calendar revisions: Biological Sciences MSc and PhD

Michael A. Silverman

Michael Silverman, Ph.D.
Faculty Graduate Chair

Enclosure

cc:

Cover Memo to FSGC

To: Faculty of Science Graduate Studies Committee
From: Tom Claydon, Graduate Program Committee Chair BPK
Re: new TRAIN graduate specialization
Date: June 27th, 2018

The following new Translational and Integrative (TRAIN) graduate specialization with associated new courses and course deletions have been approved by the Department of Biomedical Physiology and Kinesiology and are forwarded to the Senate Graduate Studies Committee for approval. These curriculum items should be effective for Fall 2019. Please include them on the next SGSC agenda.

Department of Biomedical Physiology and Kinesiology

New calendar entry to create the TRAIN specialization

~~*New courses: NEUR 800 (3), NEUR 801 (3), NEUR 802 (0)*~~

~~*Course deletions: BPK 861 (3), BPK 865 (3), BPK 825 (3)*~~

The proposal includes the generation of a new specialization (TRAIN), which is similar in structure to the current existing Interdisciplinary Oncology Graduate Specialization (IOGS). The new specialization will be taught by instructors from multiple departments and faculties at SFU and offers courses to graduate students in different units. It is expected that the specialization will be attractive to students working in multiple areas within the neuroscience field and will provide a rich and stimulating graduate education experience. Interested students will be admitted to a home department and will then register in the specialization, which will be overseen by a steering committee. Listing the specialization in the calendar as a separate entry, outside of departmental entries, allows the description to appear (and be managed) in a single place in the calendar. The attached proposed new calendar entry describing the TRAIN specialization and new courses have been approved by the Department of Biological Sciences and the Department of Physchology, both of whom see enrollment interest from graduate students in their own programs.

T.C

Tom Claydon
Graduate Program Committee Chair, BPK

Translational and Integrative Neuroscience (TRAIN)

Graduate Specialization

Description of Program

The nervous system shapes who we are, what we do, and how we think, feel, and move. TRAIN is a graduate level multi-departmental specialization that integrates with existing SFU departmental graduate programs (Masters and Doctoral) and is ideal for graduate students interested in interdisciplinary training in neuroscience. Graduate students in this specialization will develop strong problem-solving, critical-thinking, and communication skills to serve their future careers. Whether your aim is fundamental research, clinical application, industry-related, or any combination, you will leave with a broad understanding of the pathway from discovery to application to commercialization.

Understanding the function of the brain and its disorders has become increasingly important. Although neuroscientists have made excellent progress, we still have much to learn, and we must work to translate fundamental knowledge into effective interventions and health technologies. Translational neuroscience research is the integration of, and transfer of knowledge between, basic-, clinical-, and community-based research; the design and testing of behavioural-, drug-, and neurostimulation-based interventions in clinical populations; and the development, testing, and commercialization of health technologies. Importantly, translation also involves communicating novel findings and promoting general neuroscientific concepts to the public. Our researchers are at the forefront of these endeavours, which have the potential to greatly benefit society. SFU is ideally situated to provide this graduate training, given its strong track record of health innovation and state-of-the-art neuroscience equipment. Accordingly, a critical component of the TRAIN graduate specialization is the series of translation-oriented workshops and activities students will engage in throughout their degree(s).

Overall, the goals of the Graduate Specialization in Translational and Integrative Neuroscience (TRAIN) are threefold: (1) to provide integrative and interdisciplinary training in neuroscience at both Masters and Doctoral levels; (2) to prepare graduate students for careers within academia as well as for clinical and industrial research settings; and (3) to instil a translational mind-set in its graduates.

Admission Requirements

To receive the TRAIN Specialization, a student must be in a thesis-based Masters or Doctoral program at SFU and receive a grade of B+ or higher in both NEUR 800 and NEUR 801.

Program Requirements

This specialization consists of course work and a workshop for a minimum of 6 units.

Masters Requirements for TRAIN Specialization

Students must complete all of
NEUR 800 – Foundations of Cellular and Molecular Neuroscience (3)
NEUR 801 – Foundations of Systems Neuroscience (3)

and participate in at least two TRAIN workshops (NEUR 802) over the course of their degree.

Doctoral Requirements for TRAIN Specialization

Students must complete all of
NEUR 800 – Foundations of Cellular and Molecular Neuroscience (3)
NEUR 801 – Foundations of Systems Neuroscience (3)

and participate in at least four TRAIN workshops (NEUR 802) over the course of their degree.

Program Length

Students must complete the specialization requirements within the time limits of their master or doctoral program.

Other Information

Students have to consult with home departments to determine how NEUR courses will fit within their program requirements.

Academic Requirements within the Graduate General Regulations

All graduate students must satisfy the academic requirements that are specified in the graduate general regulations, as well as the specific requirements for the program in which they are enrolled.

Calendar Entry Change for BPK MSc

Summary of change: • Replacement of STAT 890 with STAT 603 in program requirements • Addition of optional Specialization in Translational and Integrative Neuroscience Specialization (TRAIN)
Rationale for change: The STAT 603 revisions are in response to Statistics and & Actuarial Science recently approved course changes TRAIN is a new, inter-departmental and inter-faculty Specialization in Translational and Integrative Neuroscience
Effective term and year: Fall 2019
Will this change impact current students? If yes, what is the plan for current students? No

FROM	TO
[...]	[...]
# Program Requirements	# Program Requirements
This program consists of courses, a thesis proposal, and a thesis for a minimum of ~~30~~ units. If a supervisory committee deems that preparation is inadequate, more than the minimum requirements may be required.	This program consists of courses, a thesis proposal, and a thesis for a minimum of **31** units. If a supervisory committee deems that preparation is inadequate, more than the minimum requirements may be required.
Students must complete	Students must complete
BPK 801 - Seminar on Research in Biomedical Physiology and Kinesiology (3) ~~STAT 890 - Statistics: Selected Topics (4)~~	BPK 801 - Seminar on Research in Biomedical Physiology and Kinesiology (3) **STAT 603 - Quantitative Analysis of Research Studies (5)**
and two additional elective graduate courses selected with input of the supervisory committee	and two additional elective graduate courses selected with input of the supervisory committee
and a thesis proposal	and a thesis proposal
BPK 895 - MSc Proposal (0)	BPK 895 - MSc Proposal (0)

and a thesis BPK 898 - MSc Thesis (18) Elective courses taken outside the Department of Biomedical Physiology and Kinesiology need prior approval of the graduate program chair. [...]	and a thesis BPK 898 - MSc Thesis (18) Elective courses taken outside the Department of Biomedical Physiology and Kinesiology need prior approval of the graduate program chair. **Optional Specialization in Translational and Integrative Neuroscience (TRAIN)** **Application to TRAIN is through the TRAIN steering committee. Students must fulfill all Departmental requirements for the MSc.** **To receive TRAIN specialization, students must complete both NEUR courses with a grade of B+ or higher. These courses would replace graduate elective course requirements for this program.** **Students must complete** **NEUR 800 – Foundations of Cellular and Molecular Neuroscience (3)** **NEUR 801 – Foundations of Systems Neuroscience (3)** **and** **NEUR 802 – Translational and Integrative Neuroscience Workshop (0) at least twice** **For more information on TRAIN, please see Translational and Integrative Neuroscience.** [...]

Calendar Entry Change for BPK PhD

Summary of change: • Replacement of STAT 890 with STAT 603 in program requirements • Addition of optional Specialization in Translational and Integrative Neuroscience Specialization (TRAIN)
Rationale for change: The STAT 603 revisions are in response to Statistics and & Actuarial Science recently approved course changes TRAIN is a new, inter-departmental and inter-faculty Specialization in Translational and Integrative Neuroscience
Effective term and year: Fall 2019
Will this change impact current students? If yes, what is the plan for current students? No

FROM	TO
Transfer from the MSc to the PhD Program [...] In addition to Graduate General Regulations 1.3.4, eligibility and the decision regarding transfer to the PhD in BPK will include the following criteria: strong support letters from the senior supervisor and supervisory committee members; excellent academic performance (e.g. minimum GPA of 3.67); strong background in research design and statistics or modelling as appropriate to the area completion of 3 of the 4 courses required by the MSc program, which must include BPK 801 and ~~STAT 890~~; evidence that the student is capable of completing and disseminating research.	Transfer from the MSc to the PhD Program [...] In addition to Graduate General Regulations 1.3.4, eligibility and the decision regarding transfer to the PhD in BPK will include the following criteria: strong support letters from the senior supervisor and supervisory committee members; excellent academic performance (e.g. minimum GPA of 3.67); strong background in research design and statistics or modelling as appropriate to the area completion of 3 of the 4 courses required by the MSc program, which must include BPK 801 and **STAT 603**; evidence that the student is capable of completing and disseminating research.

Such capability will be judged by research to date, publications, and letters from referees.	Such capability will be judged by research to date, publications, and letters from referees.
[...]	[...]
# Program Requirements	# Program Requirements
This program consists of a comprehensive examination (BPK 896), two seminar presentations (BPK 897), and a thesis (BPK 899). Normally the supervisory committee will prescribe courses necessary to complete the student's academic preparation. However, the supervisory committee may allow the student to proceed without additional course work over and above that for a Master's degree. Students who transfer from the MSc to the PhD program are required to complete the elective course requirements for the MSc. Students ~~who are a direct admit to the PhD program with a Bachelor's~~ must complete BPK 801, ~~STAT 890~~, and two elective graduate courses as specified for the MSc Program. Students admitted with a Master's degree are recommended to complete BPK 801.	This program consists of a comprehensive examination (BPK 896), two seminar presentations (BPK 897), and a thesis (BPK 899). Normally the supervisory committee will prescribe courses necessary to complete the student's academic preparation. However, the supervisory committee may allow the student to proceed without additional course work over and above that for a Master's degree. Students who transfer from the MSc to the PhD program are required to complete the elective course requirements for the MSc. **Students with a bachelor's degree admitted directly to the doctoral program** must complete BPK 801, **STAT 603**, and two elective graduate courses as specified for the MSc Program. Students admitted with a Master's degree are recommended to complete BPK 801.
Study and research is designed to suit the background and research objectives of each student and may differ widely from student to student.	Study and research is designed to suit the background and research objectives of each student and may differ widely from student to student.
Students must complete	Students must complete
a comprehensive exam	a comprehensive exam
BPK 896 - PhD Comprehensive Examination (0)	BPK 896 - PhD Comprehensive Examination (0)
and two seminars	and two seminars
BPK 897 - PhD Seminar (0)	BPK 897 - PhD Seminar (0)

and a thesis BPK 899 - PhD Thesis (18)	and a thesis BPK 899 - PhD Thesis (18) **Optional Specialization in Translational and Integrative Neuroscience Specialization (TRAIN)** **Application to TRAIN is through the TRAIN steering committee. Students must fulfill all Departmental requirements for the PhD.** **To receive TRAIN specialization, students must complete both NEUR courses with a grade of B+ or higher. These courses would replace graduate elective course requirements for this program.** **Students must complete** **NEUR 800 – Foundations of Cellular and Molecular Neuroscience (3)** **NEUR 801 – Foundations of Systems Neuroscience (3)** **and** **NEUR 802 – Translational and Integrative Neuroscience Workshop (0) four times** **For more information on TRAIN, please see Translational and Integrative Neuroscience.**

Cover memo to SGSC

To: Faculty of Science Graduate Studies Committee
From: Jenny Cory, Graduate Program Chair, Biological Sciences
Re: new TRAIN graduate specialization
Date: February 14th 2019

I am writing to support the proposed new Translational and Integrative Neuroscience (TRAIN) graduate specialization with associated new courses submitted from the Department of Biomedical Physiology and Kinesiology within the Faculty of Science. The specialization has been approved by the graduate program committee and the Department of Biological Sciences. The complete package for the specialization is being submitted through the Faculty of Science Graduate Studies Committee (Michael Silverman, Associate Dean) for approval.

Jenny S. Cory

Jenny S Cory
Graduate Program Chair, Biological Sciences

Calendar Entry Change for BISC MSc

Summary of change: Addition of optional Specialization in Translational and Integrative Neuroscience (TRAIN)
Rationale for change: TRAIN is a new, inter-departmental and inter-faculty Specialization in Translational and Integrative Neuroscience
Effective term and year: Fall 2019
Will this change impact current students? If yes, what is the plan for current students? No

FROM	TO
[...] Program Requirements This program consists of courses and a thesis, based on original research, for a minimum of 30 units. Students must complete 12 units of graduate courses including BISC 800 - Skills for the Successful Scientist (1) and a thesis BISC 898 - MSc Thesis (18) See Graduate General Regulation 1.10 for more information on the examination of the thesis. [...]	[...] Program Requirements This program consists of courses and a thesis, based on original research, for a minimum of 30 units. Students must complete 12 units of graduate courses including BISC 800 - Skills for the Successful Scientist (1) and a thesis BISC 898 - MSc Thesis (18) See Graduate General Regulation 1.10 for more information on the examination of the thesis.

	Optional Specialization in Translational and Integrative Neuroscience (TRAIN) **Application to TRAIN is through the TRAIN steering committee. Students must fulfill all the departmental requirements for the MSc.** **To receive TRAIN specialization, students must complete both NEUR courses with a grade of B+ or higher. These courses would replace graduate elective course requirements for this program.** **Students must complete** **NEUR 800 – Foundations of Cellular and Molecular Neuroscience (3)** **NEUR 801 – Foundations of Systems Neuroscience (3)** **and** **NEUR 802 – Translational and Integrative Neuroscience Workshop (0) at least twice** **For more information on TRAIN, please see Translational and Integrative Neuroscience .** [...]

Calendar Entry Change for BISC PhD

Summary of change: Addition of optional Specialization in Translational and Integrative Neuroscience (TRAIN)
Rationale for change: TRAIN is a new, inter-departmental and inter-faculty Specialization in Translational and Integrative Neuroscience
Effective term and year: Fall 2019
Will this change impact current students? If yes, what is the plan for current students? No

FROM	TO
[...]	[...]
# Program Requirements	# Program Requirements
This program consists of courses and a thesis for a minimum of 12 units. Students may be required to complete additional course work at the discretion of the supervisory committee. Students accepted to the PhD program who have not completed a master's degree, must complete an additional six units of graduate course work.	This program consists of courses and a thesis for a minimum of 12 units. Students may be required to complete additional course work at the discretion of the supervisory committee. Students accepted to the PhD program who have not completed a master's degree, must complete an additional six units of graduate course work.
Students must complete	Students must complete
Six units of graduate courses	Six units of graduate courses
and a candidacy exam	and a candidacy exam
BISC 892 - PhD Graduate Candidacy Exam (0)	BISC 892 - PhD Graduate Candidacy Exam (0)
and a thesis	and a thesis
BISC 899 - PhD Thesis (6)	BISC 899 - PhD Thesis (6)

The thesis is based on original research and is defended publicly. See Graduate General Regulation 1.10 for more information on the examination of the thesis.

~~Oral Candidacy Exam~~

~~The student must pass an oral candidacy exam prior to the end of the fourth program term, or the second term after transfer from the MSc program. The exam concentrates on the student's research area, follows a written PhD research proposal submission, and is graded satisfactory/unsatisfactory. Students with an unacceptable grade must pass a second exam within six months. Students who receive a second unsatisfactory rating will be withdrawn from the program.~~

Program Length

Students are expected to complete the program requirements in less than five years.

Other Information

Supervisory Committee

A senior supervisor is appointed prior to admission. The supervisory committee consists of, at minimum, the senior supervisor and one additional regular biology faculty member. In exceptional cases, a faculty member from another Simon Fraser University department may be substituted for the Department of Biological Sciences faculty member. Additional supervisory committee members from other institutions may be

The thesis is based on original research and is defended publicly. See Graduate General Regulation 1.10 for more information on the examination of the thesis.

Optional Specialization in Translational and Integrative Neuroscience (TRAIN)

Application to TRAIN is through the TRAIN steering committee. Students must fulfill all the departmental requirements for the PhD.

To receive TRAIN specialization, students must complete both NEUR courses with a grade of B+ or higher. These courses would replace graduate elective course requirements for this program.

Students must complete
NEUR 800 – Foundations of Cellular and Molecular Neuroscience (3)
NEUR 801 – Foundations of Systems Neuroscience (3)

and
NEUR 802 – Translational and Integrative Neuroscience Workshop (0) four times

For more information on TRAIN, please see Translational and Integrative Neuroscience.

Program Length

Students are expected to complete the program requirements in less than five years.

appointed upon submission of research credentials and approval by the departmental graduate studies committee.

Annual Progress Report

Students submit a report of their progress every year, and must maintain satisfactory progress toward degree completion to remain in the program. Students receive an annual report form from the graduate secretary every year in the term in which they started, and are expected to complete and return it within six weeks. They will have a committee meeting each year, and a brief summary of this meeting will be included in the report. Also included should be a description of the work/courses completed since the last report (or since starting their program if this is the first time), student progress evaluation forms by each of the supervisory committee members, and a copy of the student's unofficial transcript.

Other Information

Oral Candidacy Exam

The student must pass an oral candidacy exam prior to the end of the fourth program term, or the second term after transfer from the MSc program. The exam concentrates on the student's research area, follows a written PhD research proposal submission, and is graded satisfactory/unsatisfactory. Students with an unacceptable grade must pass a second exam within six months. Students who receive a second unsatisfactory rating will be withdrawn from the program.

Supervisory Committee

A senior supervisor is appointed prior to admission. The supervisory committee consists of, at minimum, the senior supervisor and one additional regular biology faculty member. In exceptional cases, a faculty member from another Simon Fraser University department may be substituted for the Department of Biological Sciences faculty member. Additional supervisory committee members from other institutions may be appointed upon submission of research credentials and approval by the departmental graduate studies committee.

Annual Progress Report

Students submit a report of their progress every year, and must maintain satisfactory progress toward degree completion to remain in the program. Students receive an annual report form from the graduate

	secretary every year in the term in which they started, and are expected to complete and return it within six weeks. They will have a committee meeting each year, and a brief summary of this meeting will be included in the report. Also included should be a description of the work/courses completed since the last report (or since starting their program if this is the first time), student progress evaluation forms by each of the supervisory committee members, and a copy of the student's unofficial transcript. [...]

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MEMORANDUM

ATTENTION	Senate Graduate Studies Committee	**DATE**	February 11, 2019
FROM	Michael Silverman, Associate Dean of Research and Graduate Studies	**PAGES**	10
RE:	Minor changes to the calendar entries for the Master of Science and Doctor of Philosophy programs - Mathematics		

With Delegated Authority, I have approved the following graduate program changes in the Faculty of Science. These changes are now being forwarded to the Senate Graduate Studies Committee for approval. These calendar items should be effective for Fall 2019. Please include them on the next SGSC agenda.

Department of Mathematics

- Calendar entry change to standardize language and layout to align with all other graduate calendar entries.

Michael A. Silverman

Michael Silverman, Ph.D.
Faculty Graduate Chair

Enclosure

cc:

SFU

To: Michael Silverman
From: Department of Mathematics
Re: Calendar Changes – Department of Mathematics
Date: January 22, 2019

As per recommendations by the Graduate Curriculum and Policy Coordinator in the Office of Graduate and Postdoctoral Studies, minor changes to the calendar entries for the Master of Science and Doctor of Philosophy programs (Mathematics) have been proposed and approved at the department level.

Aside from the addition of the Accelerated MSc program (see "Note" on page 2 of the Mathematics – Master of Science description), **there is no change to the content of programs.** The changes proposed only standardize language and layout to align with all other graduate calendar entries.

Please review and approve so that these items can be sent to the final SGSC meeting for Fall 2019 calendar changes.

The SGSC material deadline is **February 14, 2019.**

Steve Ruuth - Mathematics Graduate Program Chair

SFU SIMON FRASER UNIVERSITY
ENGAGING THE WORLD

STUDENT SERVICES
Spring Calendar

Please note:

To view the Fall 2018 Academic Calendar go to www.sfu.ca/students/calendar/2018/fall.html

Department of Mathematics
Simon Fraser University Calendar | Spring 2019

Mathematics

MASTER OF SCIENCE

Program Requirements

This program offers two streams: mathematics and operations research. The mathematics stream consists of courses and a thesis, or a project, for a minimum of 30 units. The operations research stream consists of courses and a thesis for a minimum of 30 units.

Mathematics Stream

The Master of Science degree requires a minimum of 30 graduate units consisting of a thesis (12 units) with 18 units of coursework or a project (6 units) with 24 units of coursework. All coursework is subject to supervisory committee and departmental graduate studies committee approval.

THESIS OPTION

Students must complete a minimum of 12 units of coursework from the courses listed in Groups 1-5 below. The coursework must involve at least three different groups.

GROUP 1

MATH 817 - Groups and Rings (4)
MATH 818 - Algebra and Geometry (4)
MATH 819 - Algebra: Selected Topics (4)

GROUP 2

MATH 820 - Graph Theory (4)
MATH 821 - Combinatorics (4)
MATH 827 - Discrete Mathematics: Selected Topics (4)

GROUP 3

MATH 842 - Algebraic Number Theory (4)
MATH 843 - Analytic and Diophantine Number Theory (4)

MATH 845 - Number Theory: Selected Topics (4)
MATH 846 - Cryptography (4)

GROUP 4

MATH 801 - Computer Algebra (4)
MATH 808 - Advanced Linear Programming (4)
APMA 923 - Numerical Methods in Continuous Optimization (4)

GROUP 5

MATH 831 - Real Analysis I (4)
APMA 905 - Applied Functional Analysis (4)
MATH 833 - Analysis: Selected Topics (4)

and

6 units of any graduate course

and a thesis

MATH 898 - MSc Thesis (12)

PROJECT COURSE OPTION

Students must complete a minimum of 12 units of coursework from the courses listed in Groups 1-5 above. The coursework must involve at least three different groups

and

12 units of any graduate course

and a project

MATH 880 - MSc Project (6)

MATH 880 can be attempted at most twice.

Operations Research Stream

The Master of Science degree requires a minimum of 30 graduate units consisting of a thesis (12 units) with 18 units of coursework.

Students must complete all of

APMA 923 - Numerical Methods in Continuous Optimization (4)
MATH 708 - Discrete Optimization (3)
MATH 808 - Advanced Linear Programming (4)

and

4 units of graduate courses numbered 800 or above

and

3 units of any graduate course.

At least one course must be from an area of mathematics or operations research outside the operations research core courses. All coursework is subject to supervisory committee and departmental graduate studies committee approval.

and a thesis

MATH 898 - MSc Thesis (12)

Program Length

The estimated completion time for a Master of Science in Mathematics is two years.

Academic Requirements within the Graduate General Regulations

All graduate students must satisfy the academic requirements that are specified in the Graduate General Regulations, as well as the specific requirements for the program in which they are enrolled.

Back To Top

REVISED
CALENDAR ENTRY

Mathematics

MASTER OF SCIENCE

Description of Program

The Master of Science (MSc) in Mathematics initiates students to the exciting world of mathematical exploration and research. Students take courses in advanced topics and work with world-class research faculty to create original mathematics. Graduates of the program are qualified for work in industry, academia and government.

Admission Requirements

Applicants must satisfy the University admission requirements as stated in Graduate General Regulations 1.3 in the SFU Calendar.

Program Requirements

This program offers two streams: mathematics and operations research for a minimum of 30 units. All courses are subject to supervisory committee and departmental graduate studies committee approval.

Mathematics Stream

Students must complete

a minimum of 12 units of course work from at least three different groups listed below

and an additional six graduate units of course work

and the requirements from either the thesis or project option

Thesis Option

and a thesis
MATH 898 –MSc Thesis (12)

Project Option

and an additional six graduate units

and a project
MATH 880 – MSc Project (6)

Groups

Group 1
MATH 817 - Groups and Rings (4)
MATH 818 - Algebra and Geometry (4)
MATH 819 - Algebra: Selected Topics (4)

Group 2
MATH 820 - Graph Theory (4)
MATH 821 - Combinatorics (4)
MATH 827 - Discrete Mathematics: Selected Topics (4)

REVISED
CALENDAR ENTRY

Group 3
MATH 842 - Algebraic Number Theory (4)
MATH 843 - Analytic and Diophantine Number Theory (4)
MATH 845 - Number Theory: Selected Topics (4)
MATH 846 - Cryptography (4)

Group 4
MATH 801- Computer Algebra (4)
MATH 808 - Advanced Linear Programming (4)
APMA 923 - Numerical Methods in Continuous Optimization (4)

Group 5
MATH 831 - Real Analysis I (4)
APMA 905 - Applied Functional Analysis (4)
MATH 833 - Analysis: Selected Topics (4)

Operations Research Stream
Students must complete all of
APMA 923 - Numerical Methods in Continuous Optimization (4)
MATH 708 - Discrete Optimization (3)
MATH 808 - Advanced Linear Programming (4)

and four units of graduate courses numbered 800 or above

and an additional three graduate units of course work*

and a thesis
MATH 898 –MSc Thesis (12)

*At least one course must be from an area of mathematics or operations research outside the operations research core courses.

NOTE: SFU students enrolled in the Accelerated master's degree program within the Department of Mathematics may apply a maximum of 10 graduate course units, taken while completing the bachelor's degree, towards the upper division undergraduate electives of the bachelor's program and the requirements of the master's degree. For more information go to: https://www.sfu.ca/deangradstudies/future/academicprograms/AcceleratedMasters.html

Program Length

Students are expected to complete the program requirements in six terms.

Academic Requirements within the Graduate General Regulations

All graduate students must satisfy the academic requirements that are specified in the Graduate General Regulations, as well as the specific requirements for the program in which they are enrolled.

Please note:

To view the Fall 2018 Academic Calendar go to www.sfu.ca/students/calendar/2018/fall.html

Department of Mathematics
Simon Fraser University Calendar | Spring 2019

Mathematics

DOCTOR OF PHILOSOPHY

Admission Requirements

Applicants must satisfy the University admission requirements as stated in the Graduate General Regulations 1.3. Normally, candidates should have a Master of Science (MSc) degree in mathematics or a related discipline to enter the program.

Mathematics Stream

Program Requirements

This program consists of required and elective courses (12 units), and a thesis (12 units) for a minimum of 24 units. Students who did not complete a MSc degree may be asked to complete additional course work. The graduate course work, across degrees, should demonstrate a breadth of mathematical knowledge. This can be achieved by completing coursework in three of the five groups of courses listed in the Mathematics MSc program; similar breadth from coursework in other major areas of mathematics can satisfy this requirement. All course work is subject to supervisory committee and departmental graduate studies committee approval.

Students must complete a minimum of 24 units, including all of

MATH 875 - PhD Preliminary Examination (0)
MATH 876 - PhD Comprehensive Examination (0)
MATH 879 - PhD Thesis Proposal (0)

and

8 units of course work from courses numbered 800 or above

and

4 units of any graduate course

and a thesis

MATH 899 - PhD Thesis (12)

Examinations

A student cannot attempt to complete MATH 875, MATH 876 or MATH 879 more than twice. Normally, these examinations must be completed within six terms of initial enrollment in the program.

The program requires the submission and successful examination of a thesis. The thesis embodies a significant contribution to mathematical knowledge. The completed thesis is assessed by the student's examining committee at an oral examination.

Operations Research Stream

Program Requirements

This program consists of required and elective courses (12 units), and a thesis (12 units) for a minimum of 24 units. Students who did not complete a MSc degree may be asked to complete additional course work. All course work is subject to supervisory committee and departmental graduate studies committee approval.

Students must complete a minimum of 24 units, including all of

MATH 888 - Ph.D. Comprehensive Exam: Operations Research (0)
MATH 879 - PhD Thesis Proposal (0)

and

8 units of course work from courses numbered 800 or above

and

4 units of any graduate course

and a thesis

MATH 899 - PhD Thesis (12)

Examinations

A student cannot attempt to complete MATH 888 or MATH 879 more than twice. Normally, these examinations must be completed within six terms of initial enrollment in the program.

The program requires the submission and successful examination of a thesis. The thesis embodies a significant contribution to mathematical knowledge. The completed thesis is assessed by the student's examining committee at an oral examination.

Academic Requirements within the Graduate General Regulations

All graduate students must satisfy the academic requirements that are specified in the Graduate General Regulations, as well as the specific requirements for the program in which they are enrolled.

Back To Top

Mathematics

Doctor of Philosophy

Description of Program

The Doctor of Philosophy (PhD) in Mathematics is a program intended for those who wish to develop advanced independent research skills and hone their ability to explore mathematical questions. Candidates pursue a research-intensive program supported by world-class research faculty leading to a substantial contribution to mathematical knowledge. Students are trained in scientific communication skills and are qualified to work in industry, academia and government.

Admission Requirements

Applicants must satisfy the University admission requirements as stated in Graduate General Regulations 1.3 in the SFU Calendar. Normally, candidates should have a Master of Science (MSc) degree in mathematics or a related discipline to enter the program.

Program Requirements

This program offers two streams: mathematics and operations research. Both streams consist of courses and a thesis for a minimum of 24 units. Students who did not complete an MSc degree may be asked to complete additional course work. All courses are subject to supervisory committee and departmental graduate studies committee approval.

Mathematics Stream

Students must complete all of
MATH 875 - PhD Preliminary Examination (0)
MATH 876 - PhD Comprehensive Examination (0)
MATH 879 - PhD Thesis Proposal (0)

and eight units of graduate courses numbered 800 or above

and an additional four graduate units

and a thesis
MATH 899 - PhD Thesis (12)

Operations Research Stream

Students must complete all of
MATH 888 - PhD Comprehensive Examination: Operations Research (0)
MATH 879 - PhD Thesis Proposal (0)

and eight units of graduate courses numbered 800 or above

and an additional four graduate units

and a thesis
MATH 899 - PhD Thesis (12)

Program Length

Students are expected to complete the program requirements in four years. Students are expected to complete their comprehensive examination and thesis proposal within their first six terms.

Other Information

Course Work

The graduate course work, across degrees, should demonstrate a breadth of mathematical knowledge. This can be achieved by completing coursework in three of the five groups of courses listed in the mathematics MSc program; similar breadth from course work in other major areas of mathematics can satisfy this requirement.

Thesis

The program requires the submission and successful examination of a thesis. The thesis embodies a significant contribution to mathematical knowledge. The completed thesis is assessed by the student's examining committee at an oral examination.

Academic Requirements within the Graduate General Regulations

All graduate students must satisfy the academic requirements that are specified in the Graduate General Regulations, as well as the specific requirements for the program in which they are enrolled.

Please note:

To view the Fall 2018 Academic Calendar go to www.sfu.ca/students/calendar/2018/fall.html

Department of Mathematics
Simon Fraser University Calendar | Spring 2019

Applied and Computational Mathematics

MASTER OF SCIENCE

Admission Requirements

Applicants normally submit scores in the aptitude section and an appropriate advanced section of the Educational Testing Service's graduate record examinations. Applicants with backgrounds in areas other than mathematics (for example, a bachelor's degree or its equivalent in engineering or physics) may be considered suitably prepared for these programs.

Core Course Requirements

Normally courses that are cross-listed as undergraduate courses cannot be used to satisfy graduate course requirements.

Beyond all the courses the student completed for the bachelor's degree, the candidate will complete 24 units that consist of one of

APMA 900 - Asymptotic Analysis of Differential Equations (4)
APMA 901 - Partial Differential Equations (4)

and one of

APMA 920 - Numerical Linear Algebra (4)
APMA 922 - Numerical Solution of Partial Differential Equations (4)

and one of

APMA 930 - Computational Fluid Dynamics (4)
APMA 935 - Analysis and Computation of Models (4)

and at least one other course from the above course lists that has not already been completed

and an additional eight graduate units.

Thesis Option

In addition to the core course requirements, the student should complete a satisfactory thesis normally involving a significant computational component, which is submitted and defended at an oral examination.

Project Option

In addition to the core course requirements, the student completes a further 4 units of graduate coursework. The student should also complete a project that normally involves a significant computational component, and requires a project report and a final presentation. The project component should normally be completed within one term, during which the student should register in MATH 880-6.

Academic Requirements within the Graduate General Regulations

All graduate students must satisfy the academic requirements that are specified in the Graduate General Regulations, as well as the specific requirements for the program in which they are enrolled.

Back To Top

Applied and Computational Mathematics

Master of Science

Description of Program

The Master of Science (MSc) in Applied and Computational Mathematics offers advanced education and research training in applied analysis, computation and mathematical modelling. Students admitted to the program will complete one of two program options.

Admission Requirements

Applicants must satisfy the University admission requirements as stated in Graduate General Regulations 1.3 in the SFU Calendar. Applicants normally submit scores in the aptitude section and the appropriate advanced section of the Educational Testing Service's graduate record examinations (GRE). Applicants with backgrounds in areas other than mathematics (e.g. a bachelor's degree, or its equivalent, in engineering or physics) may be considered suitably prepared for these programs.

Program Requirements

This program consists of required courses, elective courses, and a thesis for a minimum of 36 units.

Students must complete one of
APMA 900 - Asymptotic Analysis of Differential Equations (4)
APMA 901 - Partial Differential Equations (4)

and one of
APMA 920 - Numerical Linear Algebra (4)
APMA 922 - Numerical Solution of Partial Differential Equations (4)

and one of
APMA 930 - Computational Fluid Dynamics (4)
APMA 935 - Analysis and Computation of Models (4)

and at least one other course from the courses listed above that has not already been completed

and an additional eight graduate units

and either the thesis or project option

Thesis Option
and a thesis
MATH 898 –MSc Thesis (12)

Project Option
and an additional 4 graduate units

and a project
MATH 880 – MSc Project (6)

NOTE: SFU students enrolled in the Accelerated master's degree program within the Department of Mathematics may apply a maximum of 10 graduate course units, taken while completing the bachelor's degree, towards the upper division undergraduate electives of the bachelor's program and the requirements of the master's degree. For more information go to: https://www.sfu.ca/deangradstudies/future/academicprograms/AcceleratedMasters.html

Program Length

Students are expected to complete the program requirements in six terms.

Other Information

Cross-listed courses
Normally courses that are cross-listed as undergraduate courses cannot be used to satisfy the graduate course requirements.

Thesis
The thesis normally involves a significant computational component which is submitted and defended at an oral examination.

Project
The project normally involves a significant computational component and requires a project report and a final presentation. The project component is normally completed within one term.

Academic Requirements within the Graduate General Regulations

All graduate students must satisfy the academic requirements that are specified in the Graduate General Regulations, as well as the specific requirements for the program in which they are enrolled.

Please note:

To view the Fall 2018 Academic Calendar go to www.sfu.ca/students/calendar/2018/fall.html

Department of Mathematics
Simon Fraser University Calendar | Spring 2019

Applied and Computational Mathematics

DOCTOR OF PHILOSOPHY

Admission Requirements

Applicants normally submit scores in the aptitude section and an appropriate advanced section of the Educational Testing Service's graduate record examinations. Applicants with backgrounds in areas other than mathematics (for example, a bachelor's degree or its equivalent in engineering or physics) may be considered suitably prepared for these programs.

Program Requirements

PhD candidates must complete a further eight graduate units beyond the MSc core course requirements shown below.

Candidates who are admitted to the PhD program without an MSc are required to obtain credit or transfer credit for an amount of course work equivalent to that obtained by students with an MSc.

Core Course Requirements

Normally courses that are cross-listed as undergraduate courses cannot be used to satisfy graduate course requirements.

Beyond all the courses the student completed for the bachelor's degree, the candidate will complete 24 units that consist of one of

APMA 900 - Asymptotic Analysis of Differential Equations (4)
APMA 901 - Partial Differential Equations (4)

and one of

APMA 920 - Numerical Linear Algebra (4)
APMA 922 - Numerical Solution of Partial Differential Equations (4)

and one of

APMA 930 - Computational Fluid Dynamics (4)
APMA 935 - Analysis and Computation of Models (4)

and at least one other course from the above course lists that has not already been completed

and an additional eight graduate units.

Candidacy Examination

Students pass an oral candidacy exam given by the supervisory committee before the end of the fourth full time term. The exam consists of a proposed thesis topic defence and supervisory committee questions about related proposed research topics. The exam follows submission of a written PhD research proposal and is graded pass/fail. Those with a fail will complete a second exam within six months. A student failing twice will normally withdraw.

Thesis

A PhD candidate must submit and defend a thesis based on his/her original work that embodies a significant contribution to mathematical knowledge.

Academic Requirements within the Graduate General Regulations

All graduate students must satisfy the academic requirements that are specified in the Graduate General Regulations, as well as the specific requirements for the program in which they are enrolled.

Back To Top

Applied and Computational Mathematics

Doctor of Philosophy

Description of Program

The Doctor of Philosophy (PhD) in Applied and Computational Mathematics is a program intended for those who wish to develop advanced independent research skills. Candidates pursue a research-intensive program leading to a substantial contribution to knowledge in a particular area of applied and computational mathematics.

Admission Requirements

Applicants must satisfy the University admission requirements as stated in Graduate General Regulations 1.3 in the SFU Calendar. Applicants normally submit scores in the aptitude section and the appropriate advanced section of the Educational Testing Service's graduate record examinations (GRE). Applicants with backgrounds in areas other than mathematics (e.g. a bachelor's degree, or its equivalent, in engineering or physics) may be considered suitably prepared for these programs.

Program Requirements

This program consists of courses, a candidacy examination, and a thesis for a minimum of 20 units.

Students must complete

a minimum of eight graduate units in Mathematics

and a candidacy exam
APMA 995 – Oral Candidacy Exam (0)

and a thesis
MATH 899 - PhD Thesis (12)

Students who are admitted to the PhD program without an MSc are also required to take a minimum of additional 24 units which is equivalent to that obtained by students with an MSc.

Program Length

Students are expected to complete the program requirements in four years.

Other Information

Candidacy Examination

Students pass an oral candidacy exam given by the supervisory committee before the end of the fourth full-time term. The exam consists of a proposed thesis topic defence and supervisory committee questions about related proposed research topics. The oral exam follows submission of a written PhD research proposal and is graded 'Satisfactory' or 'Unsatisfactory'. Those who are graded 'Unsatisfactory' will complete a second exam within six months. A student who cannot obtain 'Satisfactory' after two attempts will normally be withdrawn from the program.

Thesis
A PhD candidate must submit and defend a thesis based on their original work that embodies a significant contribution to mathematical knowledge.

Academic Requirements within the Graduate General Regulations

All graduate students must satisfy the academic requirements that are specified in the Graduate General Regulations, as well as the specific requirements for the program in which they are enrolled.