S.13-105



Office of Graduate Studies and Postdoctoral Fellows

|           | Maggie Benston Student Services<br>Centre 1100<br>8888 University Drive<br>Burnaby, BC | TEL 778.782<br>FAX 778.782 |             | report-dgs@sfu.ca<br>www.sfu.ca/Dean-<br>GradStudies |
|-----------|--|----------------------------|-------------|--|
| MEMORAND  | Canada V5A 1S6   |                            |             |  |
| ATTENTION | Senate   | DATE                       | 5 June 2013 |  |
| FROM      | Wade Parkhouse, Dean of Graduate Studies   | No.                        | GS2013.19   | Rallour  |
| RE:       | Faculty of Science   |                            |             |  |

#### For information:

Acting under delegated authority at its meeting of 3 June 2013, SGSC approved the following curriculum revisions:

#### Effective Date is Spring 2014

#### **Faculty of Science**

[GS2013.19]

Department of Biological Sciences a)

#### Master of Pest Management Program

- 1. Program Requirements:
- i) Add to requirements; remove from electives: BISC 844-3 Biological Controls
- 2. Electives:
- i) Add to list of courses:

BISC 838-3 Population Dynamics and Demography (as per S.10-93)

- ii) Delete from calendar entry ( as per S.10-93) BISC 817-3 Social Insects **BISC 843-3 Population Processes**
- iii) Delete from calendar entry and course catalogue: BISC 842-3 Insect Development and Reproduction **BISC 851-3 Vertebrate Pests**
- iv) Add language re substitutions
- 3. Thesis Requirements:
- i) Minor course change: Increase units: BISC 849-18 MPM Thesis
- ii) Revise wording re examining committee
- 4. Reinstate course (WD as per S.12-71)
- i) BISC 841-3 Plant Diseases and Plant Biotechnology
- 5. Minor course changes:
- i) Change title and description: BISC 841-3 Plant Diseases and Plant Biotechnology

SIMON FRASER UNIVERSITY ENGAGING THE WORLD

- ii) Change description: BISC 844-3 Biological Controls
- iii) Change of title and description: BISC 852-3 Ecological and Molecular Interactions between Insect Vectors and Parasites

### **Master of Science Program**

- 1. Increase units: BISC 898-18 MSc Thesis
- b) Department of Biomedical Physiology and Kinesiology
  - 1. Cross list and change title: BPK 831-3 Current Topics Thermophysiology with KIN 420-3 Selected Topics in Kinesiology I
- c) **Department of Mathematics** 
  - 1. Remove Pre-requisites, Exclusions and Recommended references from all applicable 700xx level MATH graduate courses: MATH 701-3 Computer Algebra MATH 708-3 Discrete Optimization MATH 709-3 Numerical Linear Algebra and Optimization MATH 716-3 Numerical Analysis II MATH 718-3 Partial Differential Equations MATH 719-3 Linear Analysis MATH 724-3 Applications of Complex Analysis MATH 725-3 Real Analysis MATH 740-3 Galois Theory MATH 741-3 Commutative Algebra and Algebraic Geometry MATH 742-3 Cryptography MATH 743-3 Combinatorial Theory MATH 745-3 Graph Theory MATH 747-3 Coding Theory MATH 748-3 Network Flows MATH 761-3 Continuous Mathematical Models MATH 762-3 Fluid Dynamics
    - MATH 767-3 Dynamical Systems
    - MATH 770-3 Variational Calculus
    - MATH 795-3 Selected Topics in Applied Mathematics
    - MATH 796-3 Selected Topics in Mathematics



### GS2013.19

#### MEMO

Faculty of Science

ATTENTION Senate Committee on Graduate Studies

FROM Peter Ruben, Associate Dean, Faculty of Science

RE Course Change – Biological Sciences

DATE April 24, 2013

TIME 9:03 AM

A number of changes have been made to the MPM graduate program in Department of Biological Sciences. These changes have been approved by the Department and the Faculty Graduate Studies Committee. Please note this includes a reinstatement of BISC841-3. These changes have my approval.

8 4

P. Ruben

### FROM:

The student completes all of

- BISC 601-2 Agriculture, Horticulture and Urban Pest Management
- BISC 602-2 Forest Pest Management
- BISC 844-3 Biological Controls
- BISC 847-3 Pest Management in Practice

and two of

- BISC 816-3 Biology and Management of Forest Insects
- BISC 817-3 Social Insects
- **BISC 838-3 Population Dynamics and Demography**
- BISC 841-3 Plant Diseases and Plant Biotechnology
- BISC 842-3 Insect Development and Reproduction
- BISC 843-3 Population Processes
- BISC 844-3 Biological Controls
- BISC 846-3 Insecticide Chemistry and Toxicology
- BISC 851-3 Vertebrate Pests
- BISC 852-3 Biology of Animal Disease Vectors-Ecological and Molecular Interactions between Insect Vectors and Parasites
- BISC 884-3 Special Topics in Pest Biology and Management

and one additional 800 division elective (three units).

### <u>One of these courses can be substituted by an 800 division elective (three units) OR STAT</u> 650-5 Quantitative Analysis in Resource Management and Field Biology

### **Thesis Requirements**

The program requires a thesis, which is based on original research with relevance to pest management. To do this, the student enrols in

• BISC 849-618 Master of Pest Management Thesis

and continues enrolling in that course until the thesis is finished

The thesis will be defended publicly. The examining committee is comprised of a chair (nonvoting), all members of the student's supervisory committee, <u>and an examiner who is and a</u> member of faculty at the university, or a person otherwise suitably qualified, who is not a member of the student's supervisory committee. The student completes all of

- BISC 601-2 Agriculture, Horticulture and Urban Pest Management
- BISC 602-2 Forest Pest Management
- BISC 844-3 Biological Controls
- BISC 847-3 Pest Management in Practice

and two of

- BISC 816-3 Biology and Management of Forest Insects
- BISC 838-3 Population Dynamics and Demography
- BISC 841-3 Plant Diseases and Plant Biotechnology
- BISC 846-3 Insecticide Chemistry and Toxicology
- BISC 852-3 Ecological and Molecular Interactions between Insect Vectors and Parasites
- BISC 884-3 Special Topics in Pest Biology and Management
- •

One of these courses can be substituted by an 800 division elective (three units) OR STAT 650-5 Quantitative Analysis in Resource Management and Field Biology

### **Thesis Requirements**

The program requires a thesis, which is based on original research with relevance to pest management. To do this, the student enrols in

• BISC 849-18 Master of Pest Management Thesis

and continues enrolling in that course until the thesis is finished

The thesis will be defended publicly. The examining committee is comprised of a chair (nonvoting), all members of the student's supervisory committee, and an examiner who is a member of faculty at the university, or a person otherwise suitably qualified, who is not a member of the student's supervisory committee.

**TO:** 

### SGSC checklist: Course deletion form

Course Number/Credit BISC 842-3

Title (1) LONG title

Molecular Physiology of Insects

(2) SHORT title

 $\Box$  Rationale for the deletion:

Has not been offered in years, we no longer have the expertise to offer this course

### Effective Term and Year

January 2014

### Before submission to SGSC:

L check that this course is not needed for degree completion

L check that this course is not cross-listed with other units.

 $\Box$  If it is:

ensure that all entries are deleted throughout the calendar.

 $\Box$  if this deletion affects the unit's calendar entry (apart from the list of courses), please attach the new calendar language.

### SGSC checklist: Course deletion form

Course Number/Credit BISC 851-3

Title (1) LONG title

Vertebrate Pests

(2) SHORT title

 $\Box$  Rationale for the deletion:

Has not been offered in years, we no longer have the expertise to offer this course

### JEffective Term and Year January 2014

### Before submission to SGSC:

L check that this course is not needed for degree completion

L check that this course is not cross-listed with other units.

 $\Box$  If it is:

 $\Box$  ensure that all entries are deleted throughout the calendar.

 $\Box$  if this deletion affects the unit's calendar entry (apart from the list of courses), please attach the new calendar language.



## Graduate Course Minor Change Form

This form is for an SFU department or program to request a minor change to an existing graduate course. After approval and signature by the faculty graduate studies committee, this form should be forwarded to the Dean of Graduate Studies for approval by the Senate Graduate Studies Committee (SGSC). SGSC will forward the approval to Senate for information.

| DEPARTMENT  |                      |            |  | 1                                      |                            |
|---|----------------------|------------|--|--|----------------------------|
| Department / School / Program   | Contact na           |            |  | Contact email                          |                            |
| Biological Sciences Julian Guttman  |                      |            |  | jguttman@sfu.ca                        |                            |
| Please revise the following elements of<br>Catalogue number I Units The   |                      |            |  |  |                            |
| Please complete only the fields to be   | changed.             |            |  | D COURSE<br>ly the fields to be change | d.                         |
| Program (eg. LBST) Number (eg. 8<br>BISC 849  | 310) Unit<br>6       | ts (eg. 4) | Program (eg. LBST)<br>BISC   | Number (eg. 810)<br><b>849</b>         | Units (eg. 4)<br><b>18</b> |
| Course title (max 80 characters)  |                      |            | Course title (max 80   | characters)                            |                            |
| MPM Thesis  |                      |            | MPM Thesis   |  |                            |
| Short title (appears on transcripts, max  | 25 characters)       |            | Short title (appears o   | on transcripts, max 25 chara           | cters)                     |
| Course description for SFU Calendar   | see attached         | 1          | Course description f   | or SFU Calendar 🛛 see at               | tached                     |
|   |                      |            |  |  |                            |
| Available course components Lecto   | ure 🗆 Semina<br>ne 🗆 | ar         | Available course con   |  | Seminar                    |
| Practicum work done in this class will in<br>vulnerable adults (If the "Yes" box is che<br>instructors will require criminal record | ecked, all stude     |            | Practicum work done in this class will involve children or<br>vulnerable adults (If the "Yes" box is checked, all students and<br>instructors will require criminal record checks) |  |                            |
| Yes No  |                      |            | Yes No   |  |                            |
| Grading basis   | tory / Unsatisfa     | ctory      | Grading basis □Graded □Satisfactory / Unsatisfactory □In Progress / Complete □   |  |                            |
| Prerequisites (if any)  |                      |            | Prerequisites (if any)   |  |                            |
| This is combined with an undergrad cou  | rse. 🗌 Yes           | □ No       | This is combined wit   | h an undergrad course. 🛛               | Yes 🗌 No                   |
| Course number and units:  |                      |            | Course number and  |  | 1                          |
| Additional course requirements for grad   | luate students       |            | Additional course rea  | quirements for graduate stud           | dents                      |
| Faculty graduate studies committee nam  | Ce                   | fal        | laur   | 13 Mar 3<br>Date<br>June 3/13<br>Date  |                            |

RE-INSTATEMENT (5.12-71)



### Graduate Course Minor Change Form

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### DEPARTMENT

| Department / School / Program<br>Biological Sciences                   |       | Contact name<br>Jenny Cory | e e intalet e intalet |             |
|--|-------|----------------------------|-----------------------|-------------|
| Please revise the following elements of the indicated graduate course: |       |                            |                       | ate course: |
| Catalogue number   | Units | 🗹 Title                    | Description           | 🗌 Other:    |

REVISED COURSE

Please complete only the fields to be changed.

### CURRENT COURSE

Faculty graduate studies committee name

Senate graduate studies committee name

rade Parkhouse

Please complete only the fields to be changed.

| Program (eg. LBST)<br>BISC  | Number (eg. 810)<br><b>841</b>  | Units (eg. 4)           |  | Program (eg. LBST)<br>BISC  | Number (eg. 810)<br><b>841</b> | Units (eg. 4) |  |  |
|---|---|-------------------------|--|---|--------------------------------|---------------|--|--|
| Course title (max 80 characters)  |   |                         |  | Course title (max 80 characters)  |                                |               |  |  |
| Plant disease development and control   |   |                         |  | Plant diseases and plant biotechnology  |                                |               |  |  |
| Short title (appears on tr  | anscripts, max 25 charac  | ters)                   |  | Short title (appears on tr  | anscripts, max 25 charac       | ters)         |  |  |
|   | FU Calendar 🛛 see atta  |                         |  | Course description for S  | FU Calendar 🛛 see atta         | ached         |  |  |
| An examination of the major factors that lead to<br>development of soil-associated and foliar plant<br>diseases in cultivated crops, in relation to the<br>nature, underlying principles, application and<br>limitations of various types of control practices. |   |                         |  | An examination of the major factors that lead to<br>development of plant diseases, control<br>practices and the applications of plant<br>biotechnology to disease management. |                                |               |  |  |
| Available course compon   | ients 🛛 Lecture 🖾 Se<br>icum 🗋 Online 🗖   | eminar                  |  | Available course components   |                                |               |  |  |
| vulnerable adults (If the<br>instructors will require c   | this class will involve chil<br>"Yes" box is checked, all s<br>riminal record checks) | dren or<br>students and |  | Practicum work done in this class will involve children or vulnerable adults (If the "Yes" box is checked, all students and instructors will require criminal record checks)  |                                |               |  |  |
| Yes No  |   |                         |  | Yes No  |                                |               |  |  |
| Grading basis Grade   | ed 🔲 Satisfactory / Unsa<br>e 🔲   | atisfactory             |  | Grading basis Graded Satisfactory / Unsatisfactory  |                                |               |  |  |
| Prerequisites (if any)  |   |                         |  | Prerequisites (if any)  |                                |               |  |  |
| This is combined with an  | undergrad course. 🛛 Y   | ′es □No                 |  | This is combined with an  | undergrad course. 🛛 Y          | ′es □No       |  |  |
| Course number and units:  |   |                         |  | Course number and units:  |                                |               |  |  |
| Additional course require   | ments for graduate stude  | ents                    |  | Additional course require   | ments for graduate stude       | ents          |  |  |
| APPROVALS ROBER 12 APTZIL 2013  |   |                         |  |   |                                |               |  |  |

Signature

Signature,

Date 123 3 Sec Date



### **Graduate Course Minor Change Form**

This form is for an SFU department or program to request a minor change to an existing graduate course. After approval and signature by the faculty graduate studies committee, this form should be forwarded to the Dean of Graduate Studies for approval by the Senate Graduate Studies Committee (SGSC). SGSC will forward the approval to Senate for information.

### DEPARTMENT

| Department / School / Program               | Contact name | Contact email |
|---|--------------|---------------|
| Biological Sciences                         | Jenny Cory   | jsc21@sfu.ca  |
| Please revise the following elements of the |              | 1             |

REVISED COURSE

Please complete only the fields to be changed.

Date

Catalogue number 🛛 Units 🗖 Title 🗹 Description 🗔 Other: \_

### CURRENT COURSE

Senate graduate studies committee name

Please complete only the fields to be changed.

| Program (eg. LBST)<br>BISC  | Number (eg. 810)<br><b>844</b>         | Units (eg. 4) |        | Program (eg. LBST)<br>BISC   | Number (eg. 810)<br>844   | Units (eg. 4) |  |  |
|---|--|---------------|--------|--|---------------------------|---------------|--|--|
| Course title (max 80 cha  | racters)                               |               |        | Course title (max 80 cha   | racters]                  |               |  |  |
| Short title (appears on tr  | anscripts, max 25 chara                | cters)        |        | Short title (appears on transcripts, max 25 characters)  |                           |               |  |  |
| Course description for SI   | FU Calendar 🛛 see att                  | ached         |        | Course description for S   | FU Calendar 🗖 see att     | ached         |  |  |
| Principles, theory, and practice of the use of living<br>organisms in the natural regulation and the control of<br>organisms. Emphasis will be on parasitic insects, and<br>include host specificity, genetics, genetic controls,<br>and the evolution of host-parasite associations. |  |               |        | Principles, theory, and practice of the use of<br>living organisms in the natural regulation and<br>the control of organisms.  |                           |               |  |  |
| Available course compon   | ents 🛛 Lecture 🖾 S<br>cum 🗋 Online 🗖 🔄 | eminar        |        | Available course components Lecture Seminar<br>Laboratory Practicum Online   |                           |               |  |  |
| Practicum work done in t<br>vulnerable adults (If the<br>instructors will require c   | 'Yes" box is checked, all              |               |        | Practicum work done in this class will involve children or<br>vulnerable adults (If the "Yes" box is checked, all students and<br>instructors will require criminal record checks) |                           |               |  |  |
| □Yes □No  |  |               |        | □ Yes □ No   |                           |               |  |  |
| Grading basis Grade   | d 🛛 Satisfactory / Uns<br>e 🔲          | satisfactory  |        | Grading basis GGraded Satisfactory / Unsatisfactory  |                           |               |  |  |
| Prerequisites (if any)  |  |               |        | Prerequisites (if any)   |                           |               |  |  |
| This is combined with an  | undergrad course. 🔲                    | Yes 🗖 No      |        | This is combined with an   | undergrad course.         | les □No       |  |  |
| Course number and units   | ::                                     |               |        | Course number and units:   |                           |               |  |  |
| Additional course require   | ments for graduate stud                | ents          |        | Additional course require  | ements for graduate stud  | ents          |  |  |
| Faculty graduate studies c  | OBIN Sign                              |               | J<br>D | 2<br>Da  | 2 April 2013<br>Leme 3/13 |               |  |  |

Signature



# Graduate Course Minor Change Form

This form is for an SFU department or program to request a minor change to an existing graduate course. After approval and signature by the faculty graduate studies committee, this form should be forwarded to the Dean of Graduate Studies for approval by the Senate Graduate Studies Committee (SGSC). SGSC will forward the approval to Senate for information.

### DEPARTMENT

| Department / School / Program               | Contact name | Contact email |
|---|--------------|---------------|
| Biological Sciences                         | Jenny Cory   | jsc21@sfu.ca  |
| Please revise the following elements of the |              |               |

REVISED COURSE

Please complete only the fields to be changed.

🗖 Catalogue number 🛛 Units 🗹 Title 🗹 Description 🖾 Other: \_

### CURRENT COURSE

Please complete only the fields to be changed.

| Program (eg. LBST) Number (eg. 810) Units (eg. 4)<br>BISC 852   | Program (eg. LBST) Number (eg. 810) Units (eg. 4)<br>BISC 852  |  |  |  |  |
|---|--|--|--|--|--|
| Course title (max 80 characters)  | Course title (max 80 characters)   |  |  |  |  |
| Biology of Animal Disease Vectors   | Ecological and Molecular Interactions between Insect Vectors and Parasites   |  |  |  |  |
| Short title (appears on transcripts, max 25 characters)   | Short title (appears on transcripts, max 25 characters)  |  |  |  |  |
| Course description for SFU Calendar 🛛 see attached  | Course description for SFU Calendar 🛛 see attached   |  |  |  |  |
| Physiological, molecular, and behavioural<br>interactions between parasites of human<br>importance and their insect vectors. Emphasis<br>placed on current literature relating to modern<br>approaches in reducing parasite transmission. | Interactions between parasites and their<br>arthropod vectors. Emphasis is placed on<br>recent advances in our understanding of the<br>interactions, including aspects that can be<br>exploited to reduce parasite transmission. |  |  |  |  |
| Available course components 🛛 Lecture 🖾 Seminar   | Available course components 🛛 Lecture 🗖 Seminar  |  |  |  |  |
| Practicum work done in this class will involve children or<br>vulnerable adults (If the "Yes" box is checked, all students and<br>instructors will require criminal record checks)<br>Yes No  | Practicum work done in this class will involve children or vulnerable adults (If the "Yes" box is checked, all students and instructors will require criminal record checks)   |  |  |  |  |
| Grading basis Graded Satisfactory / Unsatisfactory  | Grading basis 🖾 Graded 🔲 Satisfactory / Unsatisfactory   |  |  |  |  |
| Prerequisites (if any)  | Prerequisites (if any)   |  |  |  |  |
| This is combined with an undergrad course. Yes No<br>Course number and units:<br>Additional course requirements for graduate students   | This is combined with an undergrad course. Yes No<br>Course number and units:<br>Additional course requirements for graduate students  |  |  |  |  |
| APPROVALS     Signature       Faculty graduate studies committee name     Signature       Wade factores     Signature   | Date 22APril 2013<br>Date Jane 3/13<br>Date  |  |  |  |  |

Signature



#### MEMO

| ATTENTION Senate Graduate Studies Committee            | TEL T             |
|--|-------------------|
| FROM Peter Ruben, Chair, Faculty of Science Graduate P | Program Committee |
| RE Minor course changes, BISC                          |                   |
| DATE May 14, 2013                                      | TIME 4:16 PM      |

At the urging of DGS, the Department of Biological Sciences has reviewed its unit allocation for the Master and PhD theses courses. The BISC graduate studies committee has agreed to increase the unit allocation for the Masters theses courses to 18 units. Because Masters students in BISC require a minimum of 12 units of course work, this will make the entire degree worth at least 30 units. Following that rationale, the requests attached increase the units for BISC 849 (MPM Thesis) and BISC 898 (MSc Thesis) from 6 to 18 units.

The Faculty of Science Graduate Committee has approved this this request.



### Graduate Course Minor Change Form

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### DEPARTMENT

| Department / School / Program Contact name<br>Biological Sciences Julian Guttman   |  |                    | Contact email<br>jguttman@sfu.ca  |  |   |                     |
|--|--|--------------------|---|--|---|---------------------|
|  | Please revise the following elements of the indicated graduate course: |                    |   |  |   |                     |
| Please complete only to  |  | d.                 |   | Please complete only   | <b>COURSE</b><br>the fields to be changed | 1.                  |
| Program (eg. LBST)<br>BISC   | Number (eg. 810)<br>898  | Units (eg. 4)<br>6 |   | Program (eg. LBST)<br>BISC   | Number (eg. 810)<br>898                   | Units (eg. 4)<br>18 |
| Course title (max 80 cha   | racters)   |                    |   | Course title (max 80 cl  | naracters)                                |                     |
| MSc Thesis   |  |                    |   | MSc Thesis   |   |                     |
| Short title (appears on tr<br>MSc Thesis   | ranscripts, max 25 chara   | cters)             |   | Short title (appears on<br>MSc Thesis  | transcripts, max 25 charad                | cters)              |
| Course description for SFU Calendar 🗖 see attached   |  |                    |   | Course description for   | SFU Calendar 🗖 see att                    | ached               |
| Available course compor  | nents 🗆 Lecture 🗖 S<br>icum 🗖 Online 🗖                                 | Seminar            |   | Available course comp  | onents □Lecture □S<br>cticum □Online □    | eminar              |
| Practicum work done in this class will involve children or vulnerable adults (If the "Yes" box is checked, all students and instructors will require criminal record checks) |  |                    |   | Practicum work done in this class will involve children or vulnerable adults (If the "Yes" box is checked, all students and instructors will require criminal record checks) |   |                     |
| Grading basis Grade  | ed 🔲 Satisfactory / Un   | satisfactory       |   | Grading basis Graded Satisfactory / Unsatisfactory   |   |                     |
| Prerequisites (if any)   |  |                    | Prerequisites (if any)  |  |   |                     |
| This is combined with an undergrad course. Yes No<br>Course number and units:<br>Additional course requirements for graduate students  |  |                    | This is combined with an undergrad course. Yes No<br>Course number and units:<br>Additional course requirements for graduate students |  |   |                     |
|  |  |                    |   |  |   |                     |

Faculty graduate studies committee name <u>Made Parkhouse</u> Senate graduate studies committee name Signa

Signature Signature

227 Date Je Date

### Master of Pest Management Program - Summer - Simon Fraser ... Page 1 of 2

Simon Fraser University

Summer > Biological Sciences > Master of Pest Management Program

#### Master of Pest Management Program

Department of Biological Sciences | Faculty of Science Simon Fraser University Calendar 2013 Summer

#### **Program Requirements**

The research-based master of pest management (MPM) program is distinct from an MSc program because of its strongly applied context and its interaction with practioners and producers.

#### The student completes all of

- BISC 601-2 Agriculture, Horticulture and Urban Pest Management
- BISC 602-2 Forest Pest Management
- BISC 847-3 Pest Management in Practice

and two of

- BISC 816-3 Biology and Management of Forest Insects
- BISC 817-3 Social Insects
- BISC 841-3 Plant Disease Development and Control
- BISC 842-3 Insect Development and Reproduction
- BISC 843-3 Population Processes
- BISC 844-3 Biological Controls
- BISC 846-3 Insecticide Chemistry and Toxicology
- BISC 851-3 Vertebrate Pests
- BISC 852-3 Biology of Animal Disease Vectors
- BISC 884-3 Special Topics in Pest Biology and Management

and one additional 800 division elective (three units).

#### **Thesis Requirements**

The program requires a thesis, which is based on original research with relevance to pest management. To do this, the student enrols in

BISC 849-6 Master of Pest Management Thesis

and continues enrolling in that course until the thesis is finished.

The thesis will be defended publicly. The examining committee is composed of a chair (non-voting), all members of the student's supervisory committee, and a member of faculty at the university, or a person otherwise suitably qualified, who is not a member of the student's supervisory committee.

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 will 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.

8888 University Drive, Burnaby, B.C. Canada V5A 1S6 Terms / Privacy Contact SFU SiteMap Road Conditions O Simon Fraser University

### http://students.sfu.ca/calendar/2013/summer/biological-sciences/... 5/23/2013

### Master of Pest Management Program - Summer - Simon Fraser ... Page 2 of 2

#### Academic Requirements within the Graduate General Regulations

All graduate students must satisfy the academic requirements that are specified in the Graduate General Regulations (residence, course work, academic progress, supervision, research competence requirement, completion time, and degree completion), as well as the specific requirements for the program in which they are enrolled, as shown above.

Return to biological sciences index page.

For calendar technical problems or errors, contact calendar-sfu@sfu.ca | Calendar changes and corrections

Simon Fraser University

Academic Calendar > Biological Sciences > Biological Sciences Master of Science Program

#### **Biological Sciences Master of Science Program**

Department of Biological Sciences | Faculty of Science Simon Fraser University Calendar 2013 Summer

#### **Admission Requirements**

Prior to applying for admission, contact faculty members directly to discuss research interests, programs, and to confirm the availability of a position within their group as well as possible financial support.

In addition to the completed admission form, official copies of all academic transcripts in envelopes sealed and endorsed by the issuing institution is also required. International applicants will provide both the original language transcripts and degree certificates, and certified English translations. Also required is an up-to-date curriculum vitae, and any evidence of research accomplishment (e.g. reprints, manuscripts, thesis abstracts, etc.). Please give careful attention to indicating current research interests on the application. Applicants will request a confidential evaluation and letters of reference from three referees who are familiar and competent to judge your academic potential. The confidential letters of reference and all other supporting documents should be forwarded directly to the Chair of the Departmental Graduate Studies Committee.

New students may begin their programs at the start of any term. Deadlines for receipt of completed applications, with required supporting documents, by the Departmental Graduate Studies Committee are: 1 October (for spring term), 1 February (for summer term) and 1 June (for fall term).

In some circumstances, a student who does not meet the minimum requirements for admission may be admitted as a qualifying student when it is expected that the admission requirements can be met by satisfactorily completing a number of senior undergraduate courses. Successful students may then apply for regular admission to graduate studies in the usual way.

#### **English Language Competence**

English is the language of instruction and communication at the University. Accordingly, an applicant whose primary language is not English must demonstrate command of English sufficient to pursue graduate studies in the chosen field. Please refer to the Graduate General Regulations (1.3.12 English Language Competence) for minimum language requirements and further information:http://students.sfu.ca/calendar/student-info/grad-regulation.html

#### **Program Requirements**

This master of science (MSc) program requires a thesis based on original research.

Applicants will have completed a bachelor's degree at a recognized university with a graduation average of B or better (3.0 cumulative grade point average on all post-secondary course work), have a research supervisor prior to admission, and provide evidence of ability to undertake advanced studies.

Candidates successfully complete a minimum of 12 units of graduate course work and will submit a thesis based on original research.

The thesis will be defended publicly. The examining committee will be composed of a chair (non-voting), all members of the student's supervisory committee, and a Simon Fraser University faculty member, or a person otherwise suitably qualified who is not a member of the student's supervisory committee.

The program is expected to be completed in less than three years.

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.

8888 University Drive, Burnaby, B.C. Canada V5A 1S8 Terms / Privacy Contact SFU SiteMap Road Conditions O Simon Fraser University

### http://students.sfu.ca/calendar/biological-sciences/bisc-MSc.html 5/6/2013

### Biological Sciences Master of Science Program - Academic Cal... Page 2 of 2

**Annual Progress Report** 

Students submit a report of their progress every year, and will maintain satisfactory progress toward degree completion to remain in the program. Students receive an annual report form from the program assistant every year in the term in which they started, and they are expected to complete and return it within six weeks. They must have a committee meeting each year, and a brief summary of this meeting and a table of milestones is included in the report. Also included will be a description of the work completed since the last report (or since starting the 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.

Academic Requirements within the Graduate General Regulations

All graduate students must satisfy the academic requirements that are specified in the Graduate General Regulations (residence, course work, academic progress, supervision, research competence requirement, completion time, and degree completion), as well as the specific requirements for the program in which they are enrolled, as shown above.

Return to biological sciences index page.

\_\_\_\_\_

For calendar technical problems or errors, contact calendar-sfu@sfu.ca | Calendar changes and corrections



#### MEMO

| ATTENTION Senate Graduate Studies Committee         |              |
|---|--------------|
| FROM Peter Ruben, Chair, Faculty of Science Graduat |              |
| RE 37K - MATH                                       |              |
| DATE May 14, 2013                                   | TIME 4:17 PM |

The Faculty of Science Graduate Program Committee has approved the following motions and is recommending them to SGSC:

Biomedical Physiology and Kinesiology Move to cross-list BPK 831-3 with KIN 420-3.

### MATH

Move to delete all references to Pre-requisites, Exclusions and Recommended from MATH 7xx level course descriptions.



### Graduate Course Minor Change Form

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### DEPARTMENT

BPK

F

Senate graduate studies committee name

Department / School / Program Contact name Matt White

Contact email matt@sfu.ca

REVISED COURSE

Please complete only the fields to be changed.

Please revise the following elements of the indicated graduate course: -□ Catalogue number □ Units □ Title □ Description □ Other:

### CURRENT COURSE

Please complete only the fields to be changed.

| Program (eg. LBST)<br><b>BPK</b>   | Number (eg. 810)<br><b>831</b>   | Units (eg. 4)<br>3   | Program (eg. LBST)<br>BPK  | Number (eg. 810)<br><b>831</b>   | Units (eg. 4)<br><b>3</b>  |
|--|--|--|--|--|--|
| Course title (max 80 cha   | racters)   |  | Course title (max 80 o   | characters)  |  |
| Current Topic  | s in Thermoph  | nysiology  | Current Top  | ics in Thermor   | ohysiology   |
| Short title (appears on tr   | ranscripts, max 25 chara   | cters)   | Short title (appears o   | n transcripts, max 25 cha  | iracters)  |
| Provides a detailed under<br>mechanisms underlying te<br>other animals. Thermoreg<br>chronic exposure to hot ar<br>whole body level. The cou | FU Calendar See at<br>standing of physiological<br>emperature regulation in h<br>ulation will be studied dur<br>nd cold environments, froi<br>urse will examine the relati<br>er physiological systems (<br>neural). | and behavioral<br>umans and<br>ing acute and<br>m the cellular to<br>ionship between | Provides a detailed un<br>mechanisms underlyin<br>other animals. Thermo<br>chronic exposure to ho<br>whole body level. The | r SFU Calendar see<br>derstanding of physiologic:<br>g temperature regulation ir<br>regulation will be studied d<br>t and cold environments, fi<br>course will examine the rel<br>other physiological systems<br>lar, neural). | al and behavioral<br>n humans and<br>during acute and<br>rom the cellular to<br>lationship between |
| Available course compor<br>Laboratory DPract   |  | Seminar  | Available course com   |  |  |
| Practicum work done in<br>vulnerable adults (If the<br>instructors will require c<br>□ Yes ☑ No  | this class will involve ch<br>"Yes" box is checked, all<br>riminal record checks)  | ildren or<br>students and  | vulnerable adults (If t  | in this class will involve on this class will involve on the "Yes" box is checked, a re criminal record checks   | all students and   |
| Grading basis  ☑ Grade<br>□ In Progress / Complet  | ed 🔲 Satisfactory / Un<br>e 🔲  | satisfactory   | Grading basis ☑ Gr<br>□ In Progress / Comp   | aded Satisfactory / L  | Insatisfactory   |
| Prerequisites (if any)   |  |  | Prerequisites (if any)<br>For UGs Kin 205,   | Kin 305, Recomme   | ended Kin 407  |
| This is combined with an<br>Course number and unit:<br>Additional course require   |  | Yes 🛛 No<br>dents  | Course number and u<br>Additional course req   | uirements for graduate sl  | tudents  |
| APPROVAL   | 5  |  | Please se  | e attached   | ).   |
| aculty graduate studies of   | r r  | inature C  | louse  | Date Jime 41   | 5  |

# Date

Signature

Date

April 27, 2013

Re: Request for <u>BPKKin</u> 42X to be offered as a cross listed course with <u>BPKKIN</u> 831.

As summarized below, both in text and in the table, the differences between the undergraduate course and the graduate course are:

- undergraduates will have 25% less contact time and 25% less course materials to study than the graduate students
- the midterms and final exam will cover 25% less material for the undergraduate than the graduate students
- the previous bulleted item will be realized by undergraduate students having midterm and final exams that are 25% shorter than those for the graduate students.
- the undergraduates' point-counter point written summaries and oral presentations will be 50% the length of those by the graduate students
- in addition to these differences above, graduate but not undergraduate students will participate in two 3 hour laboratories and will prepare 2 laboratory reports

|                                 | <u>BPK</u> Kin 42X  | UG<br>Evaluation<br>Value<br>(% of final<br>grade) | <u>BPK</u> Kin 831   | Graduate<br>Evaluation<br>Value<br>(% of final<br>grade) |
|---------------------------------|---|--|--|--|
| Hours of<br>lecture &<br>lab/wk | 3 h x 13 lectures =39 h<br><u>0 h laboratory</u><br>Total =39 h       | -  | 4 h x 7 lect. = 28 h<br>3 h x 6 lect. = 18 h<br>3 h x 2 lab. = 6 h<br>Total = 52 h | -  |
| Midterm<br>Exam                 | 75% of the lecture<br>material for graduate<br>students <sup>1</sup>  | 25%  | -  | 5%   |
| Point-<br>Counterpoints         | 2 x 500 word written<br>summaries<br>2 x 10 min oral<br>presentations | 2 x 20%  | 2 x 1000 word<br>written summaries<br>2 x 20 min oral<br>presentations             | 2 x 20%  |
| Laboratory<br>work &<br>reports | None  | -  | 2 x 3 h lab<br>sessions & written<br>laboratory reports                            | 20%  |
| Final Exam                      | 75% of the lecture<br>material for graduate<br>students <sup>1</sup>  | 35%  |  | 35%  |
| Total                           | -   | 100%   |  | 100%   |

<sup>1</sup>This will be realized by 7 of the lectures being 1 h shorter for UG vs. graduate students and the graduate students participating in 2 x 3 h laboratories



### ΜΕΜΟ

DEPARTMENT OF MATHEMATICS

- ATTENTION Peter Ruben, Associate Dean Research and Graduate Studies Faculty of Science
- From: Tom Archibald and Stephen Choi, Graduate Program Co-Chairs Mathematics Department Local 23059 mathgsec@sfu.ca

### RE: Graduate Course Minor Changes

Date: May 2, 2013

The Mathematics Graduate Studies Committee approved the deletion of Pre-requisites, Exclusions and Recommended references from course descriptions for all 7xx level Mathematics Graduate Courses and is forwarding the changes to the SCI Faculty Graduate Studies Committee to approve and recommend to SGSC.

Rationale: Given that MATH graduate students come from all over the globe, applying SFU undergraduate restrictions on course enrolment in 7xx level Mathematics Graduate Courses is unfair to incoming students.

The Graduate Course Minor Change Forms are attached for the following courses: M701

|   | 1 | ~ | • |
|---|---|---|---|
| M | 7 | 0 | 8 |
| M | 7 | 0 | 9 |
| M | 7 | 1 | 6 |
| M | 7 | 1 | 8 |
| M | 7 | 1 | 9 |
| M | 7 | 2 | 4 |
| M | 7 | 2 | 5 |
| M | 7 | 4 | 0 |
| M | 7 | 4 | 1 |
| M | 7 | 4 | 2 |
| M | 7 | 4 | 3 |
| M | 7 | 4 | 5 |
| M | 7 | 4 | 7 |
| M | 7 | 4 | 8 |
| M | 7 | 6 | 1 |
| M | 7 | 6 | 2 |
| Μ | 7 | 6 | 7 |
| M | 7 | 7 | 0 |
| M | 7 | 9 | 5 |
| M | 7 | 9 | 6 |

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Stephen Choi

1



## **Graduate Course Minor Change Form**

This form is for an SFU department or program to request a minor change to an existing graduate course. After approval and signature by the faculty graduate studies committee, this form should be forwarded to the Dean of Graduate Studies for approval by the Senate Graduate Studies Committee (SGSC). SGSC will forward the approval to Senate for information.

### DEPARTMENT

| Department / School / Program Contact name Diane Pogue                                      |  |  |  |  |       | tact email<br>thgsec@sfu.ca             |                    |
|---|--|--|--|--|-------|---|--------------------|
| Please revise the followin<br>Catalogue number  | Please revise the following elements of the indicated graduate   |  |  |  |       | site                                    |                    |
| Please complete only th   |  | d.   |  | Please complete on   |       | <b>OURSE</b><br>ne fields to be changed | 1.                 |
| Program (eg. LBST)<br>MATH  | Number (eg. 810)<br><b>701</b>   | Units (eg. 4)<br>3   |  | Program (eg. LBST)<br>MATH   |       | Number (eg. 810)<br>701                 | Units (eg. 4)<br>3 |
| Course title (max 80 characters)<br>Computer Algebra  |  |  |  | Course title (max 80   | char  | acters)                                 |                    |
| Short title (appears on tr  | anscripts, max 25 charad   | cters)   |  | Short title (appears o   | on tr | anscripts, max 25 charad                | ters)              |
| Course description for SFU Calendar See attached  |  |  |  | Course description fo  | or SI | FU Calendar 🛛 see att                   | ached              |
| Available course compon   |  | eminar   |  | Available course com   |       |   | eminar             |
| Practicum work done in<br>vulnerable adults (If the<br>instructors will require c<br>Yes No | "Yes" box is checked, all  | Service and the service of the servi |  | Practicum work done in this class will involve children or vulnerable adults (If the "Yes" box is checked, all students and instructors will require criminal record checks) |       |   |                    |
| Grading basis Grade   |  | atisfactory  |  | Grading basis Graded Satisfactory / Unsatisfactory   |       |   |                    |
| Prerequisites (if any)<br>Pre-requisite: C  | MPT 307 or M   | ATH 332  |  | Prerequisites (if any)<br>Delete Pre   |       | equisite                                |                    |
| This is combined with an  | undergrad course. 🗹  | Yes 🗖 No   |  | This is combined with  | h an  | undergrad course.                       | Yes 🗖 No           |
| Course number and units   | S:   |  |  | Course number and  | unit  | 5:                                      |                    |
| Additional course require   | ements for graduate stud   | lents  |  | Additional course red  | quire | ements for graduate stud                | ents               |
| eter  | APPROVALS<br>ETAR (UBAW)<br>aculty graduate studies committee name<br>Signature<br>Signature<br>Date<br>Date |  |  |  |       |   |                    |

hade farkhouse Senate graduate studies committee name

| Lei       | 10 |
|-----------|----|
| Signature |    |

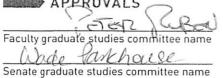
Jie 2/10 Date



### Graduate Course Minor Change Form

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| DEPARTME  | ENT                      |                       |                                  |   |         |  |                    |  |
|---|--------------------------|-----------------------|----------------------------------|---|---------|--|--------------------|--|
| Department / School / Program         Contact name           Mathematics         Diane Pogue      |                          |                       | Contact email<br>mathgsec@sfu.ca |   |         |  |                    |  |
| Please revise the following elements of the indicated graduate of Catalogue number                |                          |                       |                                  | n Pre-requ  | Jis     | ite & Exclu                            | ision              |  |
| CURRENT<br>Please complete only the   |                          | anged.                |                                  | REVISED<br>Please complete on   |         | <b>DURSE</b><br>e fields to be changed | ł.                 |  |
| Program (eg. LBST)<br>MATH  | Number (eg. 810)<br>708  | Units (eg. 4)<br>3    |                                  | Program (eg. LBST)<br>MATH  |         | Number (eg. 810)<br><b>708</b>         | Units (eg. 4)<br>3 |  |
| Course title (max 80 chai   | racters)                 |                       |                                  | Course title (max 80  | chara   | acters)                                |                    |  |
| Discrete O  | ptimizati                | on                    |                                  |   |         |  |                    |  |
| Short title (appears on tr  | anscripts, max 25 c      | haracters)            |                                  | Short title (appears o  | on trai | nscripts, max 25 charac                | ters)              |  |
| Course description for SFU Calendar  see attached   |                          |                       |                                  | Course description fo   | or SFl  | U Calendar 🛛 see atta                  | ached              |  |
| Available course compon   |                          | Seminar               |                                  | Available course components   |         |  |                    |  |
| Practicum work done in t<br>vulnerable adults (If the<br>instructors will require c<br>□ Yes □ No | "Yes" box is checked     | d, all students and   |                                  | Practicum work done in this class will involve children or vulnerable adults (If the "Yes" box is checked, all students and instructors will require criminal record checks) ☐ Yes ☐ No |         |  |                    |  |
| Grading basis Grade   | ed 🔲 Satisfactory<br>e 🔲 | / Unsatisfactory      |                                  | Grading basis Graded Satisfactory / Unsatisfactory  |         |  |                    |  |
| Prerequisites (if any)<br>Pre-requisite: Same as for MA   | TH 408 or equivalent.    | Exclusion: MATH 408-3 |                                  | Prerequisites (if any)<br>Delete Pre  |         | quisite & Exc                          | lusion             |  |
| This is combined with an  | undergrad course.        | 🗹 Yes 🗖 No            | 1                                | This is combined with   | h an u  | Indergrad course.                      | Yes 🗆 No           |  |
| Course number and units   | 5:                       |                       |                                  | Course number and i   | units:  |  |                    |  |
| Additional course requirements for graduate students  |                          |                       |                                  | Additional course requirements for graduate students  |         |  |                    |  |
|   |                          |                       |                                  |   |         |  |                    |  |
| APPPOVAL  | C                        |                       |                                  | -   |         |  |                    |  |



er. Signature

Date Date

Signature



### Graduate Course Minor Change Form

This form is for an SFU department or program to request a minor change to an existing graduate course. After approval and signature by the faculty graduate studies committee, this form should be forwarded to the Dean of Graduate Studies for approval by the Senate Graduate Studies Committee (SGSC). SGSC will forward the approval to Senate for information.

#### DEPARTMENT

| Department / School / Mathematics | Aathematics Contact name Diane Pogue |             |                  | Contact email<br>mathgsec@sfu.ca |         |                    |
|-----------------------------------|--------------------------------------|-------------|------------------|----------------------------------|---------|--------------------|
| Please revise the follow          | ving eleme                           | ents of the | indicated gradua | te course:                       |         |                    |
| 🗖 Catalogue number                | 🛛 Units                              | 🗖 Title     | Description      | 🗹 Other                          | Pre-req | uisite & Exclusion |

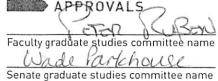
### CURRENT COURSE

Please complete only the fields to be changed.

#### REVISED COURSE

Please complete only the fields to be changed.

| Program (eg. LBST)<br>MATH                                | Number (eg. 810)<br><b>709</b>   | Units (eg. 4)<br>3 |        | Program (eg. LBST)<br>MATH   | Number (eg. 810)<br><b>709</b>        | Units (eg. 4)<br>3 |  |  |  |
|---|--|--------------------|--------|--|---------------------------------------|--------------------|--|--|--|
| Course title (max 80 char                                 | racters)   |                    |        | Course title (max 80 characters)   |                                       |                    |  |  |  |
| Numerical Linear  | Algebra and Op   | timization         | ·      |  |                                       |                    |  |  |  |
| Short title (appears on transcripts, max 25 characters)   |  |                    |        | Short title (appears on tr   | anscripts, max 25 charac              | ters)              |  |  |  |
| Course description for SFU Calendar 🛛 see attached        |  |                    |        | Course description for SFU Calendar  See attached  |                                       |                    |  |  |  |
| Available course compon                                   | ents □Lecture □Se<br>cum □Online □   | eminar             |        | Available course components Lecture Seminar Laboratory Practicum Online  |                                       |                    |  |  |  |
| vulnerable adults (If the '<br>instructors will require c | his class will involve chil<br>'Yes" box is checked, all s<br>riminal record checks) |                    |        | Practicum work done in this class will involve children or<br>vulnerable adults (If the "Yes" box is checked, all students and<br>instructors will require criminal record checks) |                                       |                    |  |  |  |
| Yes No  |  |                    | Yes No |  |                                       |                    |  |  |  |
| Grading basis Grade                                       | ed 🔲 Satisfactory / Unside 🔲   | atisfactory        |        | Grading basis Graded Satisfactory / Unsatisfactory   |                                       |                    |  |  |  |
| Prerequisites (if any)                                    |  |                    |        | Prerequisites (if any)   |                                       |                    |  |  |  |
| Pre-requisite: Same as for MA                             | CM 409 or equivalent. Exclusion  | on: MACM 409-3     |        | Delete Pre-requisite & Exclusion   |                                       |                    |  |  |  |
| This is combined with an                                  | undergrad course. 🗹 Y  | ′es □No            |        | This is combined with an undergrad course. The Yes No  |                                       |                    |  |  |  |
| Course number and units                                   | 5: MACM 409-3  |                    |        | Course number and units:   |                                       |                    |  |  |  |
| Additional course requirements for graduate students      |  |                    |        | Additional course require  | ements for graduate stude             | ents               |  |  |  |
|   |  |                    |        | l  | · · · · · · · · · · · · · · · · · · · |                    |  |  |  |



Signature

3 Date

Signature

Date



### Graduate Course Minor Change Form

This form is for an SFU department or program to request a minor change to an existing graduate course. After approval and signature by the faculty graduate studies committee, this form should be forwarded to the Dean of Graduate Studies for approval by the Senate Graduate Studies Committee (SGSC). SGSC will forward the approval to Senate for information.

| DEPARTME   | ENT   |   |                |                                  |               |                                  |   |
|--|---|---|----------------|----------------------------------|---------------|----------------------------------|---|
| Department / School / Program         Contact name           Mathematics         Diane Pogue |   |   |                |                                  | 1000000000    | tact email<br>thgsec@sfu.ca      | in the second |
| Please revise the followi  | ng elements of the in<br>Units Title [                | dicated graduate co<br>Description      | ourse<br>Other | Pre-requ                         | uis           | ite                              |   |
| CURRENT  |   | nged.                                   |                | Please complete or               |               | DURSE<br>le fields to be changed | ł.  |
| Program (eg. LBST)<br>MATH   | Number (eg. 810)<br><b>716</b>                        | Units (eg. 4)<br>3                      |                | Program (eg. LBST)<br>MATH       |               | Number (eg. 810)<br>716          | Units (eg. 4)<br>3  |
| Course title (max 80 char  |   |   |                | Course title (max 80             | char          | acters)                          |   |
| Numerical  | Analysis  |   |                |                                  |               |                                  |   |
| Short title (appears on tr   | anscripts, max 25 ch                                  | aracters)                               |                | Short title (appears             | on tra        | anscripts, max 25 charac         | cters)  |
| Course description for SI  | FU Calendar 🛛 see                                     | e attached                              |                | Course description f             | for SF        | U Calendar 🛛 see atta            | ached   |
| Available course compon Laboratory Practi Practicum work done in vulnerable adults (If the   | icum 🔲 Online 🛙<br>this class will involve            | children or                             |                |                                  | Praction in t |                                  | ldren or  |
| instructors will require c   | Strends — soldies community are differently and sold. | contraction and examined account of the |                |                                  |               | iminal record checks)            | students and  |
| Grading basis Grade  |   | Unsatisfactory                          |                | Grading basis 🔲 G                |               | d 🔲 Satisfactory / Uns<br>e 🔲    | atisfactory   |
| Prerequisites (if any)<br>Pre-requisite: MATI  | H 310 (or 352) a                                      | nd MACM 316                             |                | Prerequisites (if any Delete Pre |               | equisite                         |   |
| This is combined with an   | undergrad course.                                     | 🗹 Yes 🔲 No                              |                | This is combined wit             | th an         | undergrad course. 🛛              | Yes 🗌 No  |
| Course number and unit   |   |   |                | Course number and                |               |                                  |   |
| Additional course require  | ements for graduate                                   | students                                |                | Additional course re             | quire         | ments for graduate stud          | lents   |
| APPROVAL   | Kuben   | F                                       | 2              | te-                              |               | 2 May 13                         |   |
| aculty graduate studies of   |   | Signature                               | D              | and a                            | Da            | Terre 3/13                       |   |

Wode arkhouse Senate graduate studies committee name

Signature

Se Date



### Graduate Course Minor Change Form

This form is for an SFU department or program to request a minor change to an existing graduate course. After approval and signature by the faculty graduate studies committee, this form should be forwarded to the Dean of Graduate Studies for approval by the Senate Graduate Studies Committee (SGSC). SGSC will forward the approval to Senate for information.

### DEPARTMENT

| Department / School / Program<br>Mathematics  | Contact name<br>Diane Pogue   |                |  |  |                    |  |  |  |
|---|-------------------------------|----------------|--|--|--------------------|--|--|--|
| Please revise the following elements of the i   | ndicated graduate co          | urse:<br>)ther | Pre-requisi  | ite & Recomr   | nended             |  |  |  |
|   |                               |                |  |  |                    |  |  |  |
| Please complete only the fields to be cha   | inged.                        |                | Please complete only                               | <b>COURSE</b><br>the fields to be change   | d.                 |  |  |  |
| Program (eg. LBST)         Number (eg. 810)           MATH         718  | Units (eg. 4)<br>3            |                | Program (eg. LBST)<br>MATH                         | Number (eg. 810)<br><b>718</b>   | Units (eg. 4)<br>3 |  |  |  |
| Course title (max 80 characters)  |                               |                | Course title (max 80 ch                            | aracters)  |                    |  |  |  |
| Partial Differential E  | quations                      |                |  |  |                    |  |  |  |
| Short title (appears on transcripts, max 25 c   | haracters)                    |                | Short title (appears on                            | transcripts, max 25 chara  | cters)             |  |  |  |
| Course description for SFU Calendar 🛛 se  | ee attached                   |                | Course description for                             | SFU Calendar 🛛 see at  | tached             |  |  |  |
| Available course components   | □ Seminar<br>□                |                | Available course compo<br>Laboratory               | onents 🛛 Lecture 🗖 S<br>cticum 🗋 Online 🗖  | Seminar            |  |  |  |
| Practicum work done in this class will involv<br>vulnerable adults (If the "Yes" box is checke<br>instructors will require criminal record checker<br>Yes INo | d, all students and           |                | vulnerable adults (If the                          | n this class will involve ch<br>e "Yes" box is checked, all<br>criminal record checks) |                    |  |  |  |
| Grading basis Graded Satisfactory   | / Unsatisfactory              |                | Grading basis Graded Satisfactory / Unsatisfactory |  |                    |  |  |  |
| Prerequisites (if any)  |                               |                | Prerequisites (if any)                             |  |                    |  |  |  |
| Pre-requisite: MATH 314 (or PHYS 384) or permission of the department. Re   | ecommended: MATH 242 and 320. |                | Delete Pre-re                                      | equisite & Recor   | nmended            |  |  |  |
| This is combined with an undergrad course.  | ☑ Yes □ No                    |                |  | an undergrad course. 🗖   |                    |  |  |  |
| Course number and units: MATH 418-3   |                               |                | Course number and ur                               | nits:  |                    |  |  |  |
| Additional course requirements for graduat  | e students                    |                | Additional course requ                             | irements for graduate stu  | dents              |  |  |  |
| APPROVALS<br>Faculty graduate studies committee name  | Signature                     | Za             | D-   | RMay 3   |                    |  |  |  |
| 10 kido harkhouse   | LUC!                          | ×              |  | Jane 3/13  |                    |  |  |  |

Senate graduate studies committee name

Signature

Date



### Graduate Course Minor Change Form

This form is for an SFU department or program to request a minor change to an existing graduate course. After approval and signature by the faculty graduate studies committee, this form should be forwarded to the Dean of Graduate Studies for approval by the Senate Graduate Studies Committee (SGSC). SGSC will forward the approval to Senate for information.

#### DEPARTMENT

| Department / School / Pr<br>Mathematics  |                                  |                    |     | tact email<br>thgsec@sfu.ca                                  |                |   |                    |  |
|--|----------------------------------|--------------------|-----|--|----------------|---|--------------------|--|
| Please revise the followin<br>Catalogue number   | ourse<br>Other                   | Pre-requi          | sit | e & Recomn   | <u>ne</u> nded |   |                    |  |
| Please complete only the fields to be changed.   |                                  |                    |     | Please complete on   |                | OURSE<br>ne fields to be changed  |                    |  |
| Program (eg. LBST)<br>MATH   |                                  |                    |     |  |                | Number (eg. 810)<br>719   | Units (eg. 4)<br>3 |  |
| Course title (max 80 char<br>Linear Ana  |                                  |                    |     | Course title (max 80   | char           | acters)   |                    |  |
| Short title (appears on tra  | anscripts, max 25 char           | acters)            |     | Short title (appears o                                       | on tra         | anscripts, max 25 charac  | ters)              |  |
| Course description for SFU Calendar See attached   |                                  |                    |     | Course description fo  | or SF          | U Calendar  □ see atta  | iched              |  |
| Available course compon  |                                  | Seminar            |     | Available course components                                  |                |   |                    |  |
| Practicum work done in t<br>vulnerable adults (If the "<br>instructors will require cr<br>Yes No | 'Yes" box is checked, al         | ll students and    |     | vulnerable adults (If  | the "          | his class will involve child<br>Yes" box is checked, all s<br>iminal record checks) |                    |  |
| Grading basis Grade  |                                  | nsatisfactory      |     | Grading basis Graded Satisfactory / Unsatisfactory           |                |   |                    |  |
| Prerequisites (if any)<br>Pre-requisite: MATH 232, 320 or pe                                     | rmission of the instructor. Reco | mmended: MATH 252. |     | Prerequisites (if any)<br>Delete Pre-requisite & Recommended |                |   |                    |  |
| This is combined with an undergrad course. I Yes No Course number and units: <u>MATH 419-3</u>   |                                  |                    |     | This is combined with an undergrad course. Yes No            |                |   |                    |  |
| Additional course requirements for graduate students   |                                  |                    |     | Additional course rec  | quire          | ments for graduate stude  | ents               |  |

| A <          | PRROVAL       | .s             |
|--------------|---------------|----------------|
|              | STED          | VG1Bral)       |
| Faculty grad | uate studies  | committee name |
| like         | le Park       | house          |
| Senate grad  | luate studies | committee name |

AR Signature Signature

Date Date



## Graduate Course Minor Change Form

This form is for an SFU department or program to request a minor change to an existing graduate course. After approval and signature by the faculty graduate studies committee, this form should be forwarded to the Dean of Graduate Studies for approval by the Senate Graduate Studies Committee (SGSC). SGSC will forward the approval to Senate for information.

| DEPARTME  | ENT                                 |              |                                 |                                  |  |        |   |                    |  |
|---|-------------------------------------|--------------|---------------------------------|----------------------------------|--|--------|---|--------------------|--|
| Department / School / Program Contact name Diane Pogue                            |                                     |              |                                 | Contact email<br>mathgsec@sfu.ca |  |        |   |                    |  |
| Please revise the followin<br>Catalogue number                                    | ng elements of the<br>Units I Title | indica<br>De | ed graduate co<br>scription 🔽 ( | urse<br>Othei                    | Pre-requ   | Jis    | site  |                    |  |
| Please complete only the  |                                     | anged        | 5                               |                                  | Please complete or                                 |        | OURSE<br>ne fields to be changed  | l.                 |  |
| Program (eg. LBST)<br>MATH  | Number (eg. 810)<br>724             |              | Units (eg. 4)<br>3              |                                  | Program (eg. LBST)<br>MATH                         |        | Number (eg. 810)<br>724   | Units (eg. 4)<br>3 |  |
| Course title (max 80 chai   | racters)                            |              |                                 |                                  | Course title (max 80                               | char   | acters)   |                    |  |
| Applications  | of Comple                           | ex A         | nalysis                         |                                  |  |        |   |                    |  |
| Short title (appears on tr  | anscripts, max 25 o                 | charac       | ters)                           |                                  | Short title (appears                               | on tr  | anscripts, max 25 charac  | ters)              |  |
| Course description for S  | FU Calendar 🛛 s                     | ee atta      | ched                            |                                  | Course description f                               | for St | FU Calendar 🛛 see atta  | ached              |  |
|   |                                     |              |                                 |                                  |  |        |   |                    |  |
|   |                                     |              |                                 |                                  |  |        |   |                    |  |
|   |                                     |              |                                 |                                  |  |        |   |                    |  |
| Available course compor   |                                     | □Se<br>□     | eminar                          |                                  | Available course con                               |        |   | eminar             |  |
| Practicum work done in<br>vulnerable adults (If the<br>instructors will require c | "Yes" box is checke                 | d, all s     |                                 |                                  | vulnerable adults (If                              | the    | this class will involve chil<br>"Yes" box is checked, all s<br>riminal record checks) |                    |  |
| Yes No  |                                     |              |                                 |                                  | □Yes □No   |        |   |                    |  |
| Grading basis Grade   |                                     | / Uns        | atisfactory                     |                                  | Grading basis Graded Satisfactory / Unsatisfactory |        |   |                    |  |
| Prerequisites (if any)<br>Pre-requisite:  | MATH 322                            | 2            |                                 |                                  | Prerequisites (if any Delete Pre                   |        | equisite  |                    |  |
| This is combined with an  |                                     |              | les 🗌 No                        |                                  | This is combined with                              | th an  | undergrad course.   | Yes 🗌 No           |  |
| Course number and unit  | S:                                  |              |                                 |                                  | Course number and                                  | l unit | S:  |                    |  |
| Additional course require   | ements for graduat                  | e stud       | ents                            |                                  | Additional course re                               | equire | ements for graduate stud  | ents               |  |
|   |                                     |              |                                 |                                  |  |        |   |                    |  |
| APPROVAL  | 5 RiBon                             |              | P                               | Z                                | 8.   |        | 2llar 3   |                    |  |
| Faculty graduate studies  | chouse                              | _ (          | nature                          | $\sum_{i=1}^{n}$                 | lourse   | Da     | Jenne 3/13  |                    |  |
| Senate graduate studies (   | committee name                      | Sig          | ature                           |                                  |  |        |   |                    |  |



### Graduate Course Minor Change Form

This form is for an SFU department or program to request a minor change to an existing graduate course. After approval and signature by the faculty graduate studies committee, this form should be forwarded to the Dean of Graduate Studies for approval by the Senate Graduate Studies Committee (SGSC). SGSC will forward the approval to Senate for information.

#### DEPARTMENT

| Department / School / Program<br>Mathematics                           | Contact name<br>Diane Pogue | Contact email<br>mathgsec@sfu.ca |  |  |
|--|-----------------------------|----------------------------------|--|--|
| Please revise the following elements of the indicated graduate course: |                             |                                  |  |  |
| Catalogue number 🛛 Units 🗖 Title                                       | Description Other: Pre-reo  | uisite                           |  |  |

### CURRENT COURSE

Please complete only the fields to be changed.

### REVISED COURSE

Please complete only the fields to be changed.

| Program (eg. LBST)<br>MATH   | Number (eg. 810)<br>725  | Units (eg. 4)<br>3 | Program (eg. LBST)<br>MATH   | Number (eg. 810)<br>725           | Units (eg. 4)<br>3 |  |
|--|--------------------------|--------------------|--|-----------------------------------|--------------------|--|
| Course title (max 80 characters)   |                          |                    | Course title (max 80 characters)   |                                   |                    |  |
| Real Analy   | /sis                     |                    |  |                                   |                    |  |
| Short title (appears on tr   | anscripts, max 25 chara  | cters)             | Short title (appears on t  | ranscripts, max 25 charad         | :ters)             |  |
| Course description for S   | FU Calendar  □ see att   | ached              | Course description for S   | SFU Calendar 🛛 see att            | ached              |  |
| Available course compon  |                          | ieminar            | Available course compo   |                                   | eminar             |  |
| Practicum work done in this class will involve children or vulnerable adults (If the "Yes" box is checked, all students and instructors will require criminal record checks) |                          |                    | Practicum work done in this class will involve children or<br>vulnerable adults (If the "Yes" box is checked, all students and<br>instructors will require criminal record checks) |                                   |                    |  |
| Yes No   |                          |                    | Yes No   |                                   |                    |  |
| Grading basis Grade  |                          | satisfactory       | Grading basis Grad   | ded 🔲 Satisfactory / Uns<br>ete 🔲 | atisfactory        |  |
| Prerequisites (if any)   |                          |                    | Prerequisites (if any)   |                                   |                    |  |
| Pre-requisite:   | MATH 320                 |                    | Delete Pre-r   | requisite                         |                    |  |
| This is combined with an   | undergrad course. 🛛      | Yes 🗆 No           | This is combined with a  | n undergrad course. 🔲             | Yes 🗌 No           |  |
| Course number and unit   | 5: MATH 419-3            |                    | Course number and units:   |                                   |                    |  |
| Additional course require  | ements for graduate stud | dents              | Additional course requi  | rements for graduate stud         | ents               |  |
| APPROVAL<br>Faculty graduate studies of  | (UPM)                    | Inature            | ade .  | 2Mar 3                            |                    |  |

Ubde Parkhause Senate graduate studies committee name

Signature

June 3/13 Date



### Graduate Course Minor Change Form

This form is for an SFU department or program to request a minor change to an existing graduate course. After approval and signature by the faculty graduate studies committee, this form should be forwarded to the Dean of Graduate Studies for approval by the Senate Graduate Studies Committee (SGSC). SGSC will forward the approval to Senate for information.

#### DEPARTMENT

| Department / School / Program<br>Mathematics  | Contact name<br>Diane Pogue | Contact email<br>mathgsec@sfu.ca |  |  |
|---|-----------------------------|----------------------------------|--|--|
| Please revise the following elements of the indicated graduate course:<br>Catalogue number Units Title Description Other: Pre-requisite |                             |                                  |  |  |
| Catalogue number Units Title  | Description Other: Pre-req  | uisite                           |  |  |

### CURRENT COURSE

Please complete only the fields to be changed.

### REVISED COURSE

Please complete only the fields to be changed.

| Program (eg. LBST)<br>MATH   | Number (eg. 810)<br>740        | Units (eg. 4)<br>3 |   | Program (eg. LBST)<br>MATH                  | Number (eg. 810)<br>740   | Units (eg. 4)<br>3 |
|--|--------------------------------|--------------------|---|---|---|--------------------|
| Course title (max 80 characters)   |                                |                    |   | Course title (max 80 cha                    | racters)  |                    |
| Galois The   | eory                           |                    |   |   |   |                    |
| Short title (appears on tr   | anscripts, max 25 charad       | cters)             |   | Short title (appears on tr                  | anscripts, max 25 charac  | ters)              |
| Course description for SFU Calendar  |                                |                    |   | Course description for S                    | FU Calendar □ see atta  | iched              |
| Available course compon  |                                | eminar             |   | Available course compor<br>Laboratory Pract |   | eminar             |
| Practicum work done in this class will involve children or vulnerable adults (If the "Yes" box is checked, all students and instructors will require criminal record checks) |                                |                    |   |   | this class will involve chil<br>"Yes" box is checked, all s<br>riminal record checks) |                    |
| Grading basis Grade  | ed 🔲 Satisfactory / Uns<br>e 🔲 | satisfactory       |   | Grading basis Grad                          | ed 🔲 Satisfactory / Uns<br>te 🔲   | atisfactory        |
| Prerequisites (if any)<br>Pre-requisite:   | MATH 332                       |                    |   | Prerequisites (if any)<br>Delete Pre-r      | equisite  |                    |
| This is combined with an   | undergrad course. 🔽            | Yes 🗖 No           |   | This is combined with ar                    | n undergrad course.   | les □No            |
| Course number and unit   | S:                             |                    |   | Course number and unit                      | S:  |                    |
| Additional course require  | ements for graduate stud       | lents              |   | Additional course requir                    | ements for graduate stud  | ents               |
| APROVAL  | KUBEN                          | inature            | A | Red   | Zuaz 3  |                    |
| Dade Tam<br>Senate graduate studies of   | chouse l                       |                    | Ì | -63-0-05-                                   | June 3/13   |                    |



### Graduate Course Minor Change Form

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| DEPARTME   | INT                            |                    |  |   |  |  |                    |
|--|--------------------------------|--------------------|--|---|--|--|--------------------|
| Department / School / Program Contact name Mathematics Diane Pogue   |                                |                    |  |   | tact email<br>thgsec@sfu.ca  |  |                    |
| Please revise the following elements of the indicated graduate Catalogue number Units Title Description  |                                |                    | ours<br>Othe                                       | Pre-requ  | Jis  | ite                                    |                    |
| Please complete only th  |                                | nged.              |  | REVISEI   |  | <b>DURSE</b><br>e fields to be changed | I.                 |
| Program (eg. LBST)<br>MATH   | Number (eg. 810)<br><b>741</b> | Units (eg. 4)<br>3 |  | Program (eg. LBST)<br>MATH                              |  | Number (eg. 810)<br><b>741</b>         | Units (eg. 4)<br>3 |
| Course title (max 80 char<br>Commutative Alge  |                                | aic Geometry       |  | Course title (max 80                                    | char   | acters)                                |                    |
| Short title (appears on tra  | anscripts, max 25 ch           | aracters)          |  | Short title (appears on transcripts, max 25 characters) |  |  |                    |
| Course description for SFU Calendar  |                                |                    | Course description fo                              | or SF   | U Calendar 🛛 see atta  | ached                                  |                    |
| Available course compon  |                                | Seminar            |  | Available course components                             |  |  |                    |
| Practicum work done in this class will involve children or vulnerable adults (If the "Yes" box is checked, all students and instructors will require criminal record checks) |                                |                    | vulnerable adults (If                              | the "   | his class will involve chil<br>Yes" box is checked, all s<br>iminal record checks) |  |                    |
| Grading basis Graded Satisfactory / Unsatisfactory   |                                |                    | Grading basis Graded Satisfactory / Unsatisfactory |   |  |  |                    |
| Prerequisites (if any)<br>Pre-requisite: Appropria   | te knowledge of alg            | ebraic structures. |  | Prerequisites (if any)<br>Delete Pre                    |  | equisite                               |                    |
| This is combined with an   | undergrad course.              | ☑ Yes □ No         |  | This is combined wit                                    | h an   | undergrad course. 🔲                    | Yes □No            |
| Course number and units  | 5: _MATH 441-3                 |                    |  | Course number and                                       |  |  |                    |
| Additional course require  | ements for graduate            | students           |  | Additional course re-                                   | quire  | ments for graduate stud                | ents               |

Additional course requirements for graduate students

RUD Date Ju Date

Parchouse Senate graduate studies committee name

Faculty graduate studies committee name

RPROVAL

Wade

Signature

Signature



## Graduate Course Minor Change Form

This form is for an SFU department or program to request a minor change to an existing graduate course. After approval and signature by the faculty graduate studies committee, this form should be forwarded to the Dean of Graduate Studies for approval by the Senate Graduate Studies Committee (SGSC). SGSC will forward the approval to Senate for information.

### DEPARTMENT

| Department / School / Program  | Contact name   | Contact email      |
|--|--|--------------------|
| Mathematics  | Diane Pogue  | mathgsec@sfu.ca    |
| Please revise the following elements of the Catalogue number Units Title | indicated graduate course: Pre-req<br>□ Description ② Other: Pre-req | uisite & Exclusion |

### CURRENT COURSE

Please complete only the fields to be changed.

### REVISED COURSE

Please complete only the fields to be changed.

| Program (eg. LBST)<br>MATH   | Number (eg. 810)<br>742          | Units (eg. 4)<br>3 |        | Program (eg. LBST)<br>MATH   | Number (eg. 810)<br><b>742</b> | Units (eg. 4)<br>3 |  |
|--|----------------------------------|--------------------|--------|--|--------------------------------|--------------------|--|
| Course title (max 80 cha   | Course title (max 80 characters) |                    |        | Course title (max 80 characters)   |                                |                    |  |
| Cryptography   |                                  |                    |        |  |                                |                    |  |
| Short title (appears on transcripts, max 25 characters)  |                                  |                    |        | Short title (appears on tr   | anscripts, max 25 charac       | ters)              |  |
| Course description for S   | FU Calendar 🛛 see att            | ached              |        | Course description for S   | FU Calendar 🛛 see atta         | ached              |  |
|  |                                  |                    |        |  |                                |                    |  |
|  |                                  |                    |        |  |                                |                    |  |
|  |                                  |                    |        |  |                                |                    |  |
|  |                                  |                    |        |  |                                |                    |  |
| Available course compor  | Available course components      |                    |        | Available course components        Lecture          Laboratory        Practicum          Online  |                                |                    |  |
| Practicum work done in this class will involve children or vulnerable adults (If the "Yes" box is checked, all students and instructors will require criminal record checks) |                                  |                    |        | Practicum work done in this class will involve children or vulnerable adults (If the "Yes" box is checked, all students and instructors will require criminal record checks) |                                |                    |  |
| □Yes □No   |                                  |                    |        | Yes No   |                                |                    |  |
| Grading basis Grade  | ed 🔲 Satisfactory / Uns<br>ee 🔲  | satisfactory       |        | Grading basis Graded Satisfactory / Unsatisfactory   |                                |                    |  |
| Prerequisites (if any)   |                                  |                    |        | Prerequisites (if any)   |                                |                    |  |
| Prerequisite: Same as for MA   | CM 442 or equivalent. Exclus     | ion: MACM 442-3    |        | Delete Pre-re  | equisite & Exc                 | lusion             |  |
| This is combined with an   | n undergrad course. 🛛            | Yes 🗖 No           |        | This is combined with an undergrad course. 🛛 Yes 🗋 No  |                                |                    |  |
| Course number and unit   | S:                               |                    |        | Course number and units:   |                                |                    |  |
| Additional course requir   | ements for graduate stud         | lents              |        | Additional course requir   | ements for graduate stud       | ents               |  |
|  |                                  |                    |        |  |                                |                    |  |
| APPROVAL   | S                                | R                  | $\geq$ | ١  |                                |                    |  |
| YEAR   | Ku BEN                           | ×19                | I      | 3  | ZMay 13                        |                    |  |
| Faculty graduate studies   | committee name Sig               |                    | Þ      | Da   | Jane 3/13                      |                    |  |

Senate graduate studies committee name

Signature

Date



### Graduate Course Minor Change Form

This form is for an SFU department or program to request a minor change to an existing graduate course. After approval and signature by the faculty graduate studies committee, this form should be forwarded to the Dean of Graduate Studies for approval by the Senate Graduate Studies Committee (SGSC). SGSC will forward the approval to Senate for information.

#### DEPARTMENT

| Department / School / Program  | Contact name                          | Contact email        |
|--|---------------------------------------|----------------------|
| Mathematics  | Diane Pogue                           | mathgsec@sfu.ca      |
| Please revise the following elements of th<br>Catalogue number Units Title | e indicated graduate course: Pre-requ | iisite & Recommended |

#### CURRENT COURSE

Please complete only the fields to be changed.

Parkhouse

Senate graduate studies committee name

ade

#### REVISED COURSE

Please complete only the fields to be changed.

| Program (eg. LBST)<br>MATH   | Number (eg. 810)<br>743                | Units (eg. 4)<br>3 |  | Program (eg. LBST)<br>MATH   | Number (eg. 810)<br><b>743</b> | Units (eg. 4)<br>3 |  |
|--|--|--------------------|--|--|--------------------------------|--------------------|--|
| Course title (max 80 cha   | Course title (max 80 characters)       |                    |  | Course title (max 80 characters)   |                                |                    |  |
| Combinato  | orial Theory                           | /                  |  |  |                                |                    |  |
| Short title (appears on tr   | anscripts, max 25 charac               | ters)              |  | Short title (appears on tr   | anscripts, max 25 charac       | ters)              |  |
| Course description for SFU Calendar  see attached  |  |                    |  | Course description for SFU Calendar See attached   |                                |                    |  |
| Available course compor  | nents 🛛 Lecture 🔲 S<br>icum 🗋 Online 🗋 |                    |  | Available course compon  |                                | eminar             |  |
| Practicum work done in this class will involve children or vulnerable adults (If the "Yes" box is checked, all students and instructors will require criminal record checks) |  |                    |  | Practicum work done in this class will involve children or<br>vulnerable adults (If the "Yes" box is checked, all students and<br>instructors will require criminal record checks) |                                |                    |  |
| Yes No   |  |                    |  | Yes No   |                                |                    |  |
| Grading basis Grade  | ed Satisfactory / Uns                  | atisfactory        |  | Grading basis Graded Satisfactory / Unsatisfactory   |                                |                    |  |
| Prerequisites (if any)   |  |                    |  | Prerequisites (if any)   |                                |                    |  |
| Pre-requisite: MATH 343 and M  | ATH 340 or 332. Recommended            | : MATH 345 & 440   |  | Delete Pre-rec   | uisite & Recom                 | mended             |  |
| This is combined with an   | undergrad course. 🗹                    | Yes 🗆 No           |  | This is combined with an   | undergrad course.              | íes □No            |  |
| Course number and unit   | S: MATH 443-3                          |                    |  | Course number and units  | 5:                             |                    |  |
| Additional course require  | ements for graduate stud               | ents               |  | Additional course requirements for graduate students   |                                |                    |  |
|  |  |                    |  |  | -                              |                    |  |
| APPROVALS<br>ETER RUBEN<br>Faculty graduate studies committee name<br>Signature<br>Signature<br>Date<br>Date   |  |                    |  |  |                                |                    |  |

Signature

June 3/13 Date



### Graduate Course Minor Change Form

This form is for an SFU department or program to request a minor change to an existing graduate course. After approval and signature by the faculty graduate studies committee, this form should be forwarded to the Dean of Graduate Studies for approval by the Senate Graduate Studies Committee (SGSC). SGSC will forward the approval to Senate for information.

#### DEPARTMENT

| Department / School / Program<br>Mathematics                             | Contact name<br>Diane Pogue         | Contact email<br>mathgsec@sfu.ca |
|--|-------------------------------------|----------------------------------|
| Please revise the following elements of the Catalogue number Units Title | indicated graduate course: Pre-requ | isite & Recommended              |
|  |                                     |                                  |

### CURRENT COURSE

Please complete only the fields to be changed.

### REVISED COURSE

Please complete only the fields to be changed.

| Program (eg. LBST)<br>MATH  | Number (eg. 810)<br>745        | Units (eg. 4)<br>3 |  | Program (eg. LBST)<br>MATH   | Number (eg. 810)<br>745   | Units (eg. 4)<br>3 |
|---|--------------------------------|--------------------|--|--|---------------------------|--------------------|
| Course title (max 80 characters)  |                                |                    |  | Course title (max 80 cha   | racters)                  | 1                  |
| Graph The   | ory                            | 5                  |  |  |                           |                    |
| Short title (appears on transcripts, max 25 characters)   |                                |                    |  | Short title (appears on tr   | ranscripts, max 25 charac | ters)              |
| Course description for SFU Calendar   |                                |                    |  | Course description for S   | FU Calendar □ see atta    | ached              |
| Available course compon   | icum 🛛 Online 🗆 🖂              | eminar             |  | Available course components          □ Lecture           □ Laboratory         □ Practicum           □ Online   |                           |                    |
| Practicum work done in this class will involve children or vulnerable adults (If the "Yes" box is checked, all students and instructors will require criminal record checks) I Yes No |                                |                    |  | Practicum work done in this class will involve children or vulnerable adults (If the "Yes" box is checked, all students and instructors will require criminal record checks) |                           |                    |
| Grading basis Grade   | ed 🔲 Satisfactory / Uns<br>e 🔲 | atisfactory        |  | Grading basis Graded Satisfactory / Unsatisfactory   |                           |                    |
| Prerequisites (if any)<br>Pre-requisite: MATH   | 345. Recommended:              | MATH 343           |  | Prerequisites (if any)<br>Delete Pre-rec   | quisite & Recom           | mended             |
| This is combined with an  | undergrad course.              | Yes 🗖 No           |  | This is combined with ar   | undergrad course.         | res 🗖 No           |
| Course number and units   | S:                             |                    |  | Course number and units:   |                           |                    |
| Additional course requirements for graduate students Additional course requirements for graduate students   |                                |                    |  |  |                           |                    |
| Faculty graduate studies committee name Signature Date June 3/13  |                                |                    |  |  |                           |                    |

Coas

I hade Parkhouse Senate graduate studies committee name

2 Signature

3/13 Jane Date



### Graduate Course Minor Change Form

This form is for an SFU department or program to request a minor change to an existing graduate course. After approval and signature by the faculty graduate studies committee, this form should be forwarded to the Dean of Graduate Studies for approval by the Senate Graduate Studies Committee (SGSC). SGSC will forward the approval to Senate for information.

### DEPARTMENT

| Department / School / Program<br>Mathematics | Contact name<br>Diane Pogue          | Contact email mathgsec@sfu.ca |
|--|--------------------------------------|-------------------------------|
| Please revise the following elements of th   | e indicated graduate course: Pre-req | uisite & Recommended          |

### CURRENT COURSE

Please complete only the fields to be changed.

### REVISED COURSE

Please complete only the fields to be changed.

| Program (eg. LBST)<br>MATH                           | Number (eg. 810)<br>747   | Units (eg. 4)<br>3 |   | Program (eg. LBST)<br>MATH   | Number (eg. 810)<br><b>747</b> | Units (eg. 4)<br>3 |  |
|--|---|--------------------|---|--|--------------------------------|--------------------|--|
| Course title (max 80 chai                            | racters)  |                    |   | Course title (max 80 cha   | racters)                       |                    |  |
| Coding Theory  |   |                    |   |  |                                |                    |  |
| Short title (appears on tr                           | anscripts, max 25 charac  | ters)              |   | Short title (appears on tr   | anscripts, max 25 charac       | ters)              |  |
| Course description for SFU Calendar 🛛 see attached   |   |                    |   | Course description for S   | FU Calendar 🛛 see atta         | ached              |  |
| Available course components                          |   |                    |   | Available course compor  |                                | eminar             |  |
|  | this class will involve chil<br>"Yes" box is checked, all s<br>riminal record checks) |                    |   | Practicum work done in this class will involve children or vulnerable adults (If the "Yes" box is checked, all students and instructors will require criminal record checks) |                                |                    |  |
| Grading basis Grade                                  | ed 🔲 Satisfactory / Uns<br>e 🔲  | atisfactory        |   | Grading basis Graded Satisfactory / Unsatisfactory   |                                |                    |  |
| Prerequisites (if any)<br>Pre-requisite: MATH        | 232 Becommended:  | MATH 332           |   | Prerequisites (if any)<br>Delete Pre-requisite & Recommended   |                                |                    |  |
|  | undergrad course.   |                    |   |  | undergrad course.              |                    |  |
| Course number and units                              |   |                    |   |  | s:                             | 2000               |  |
| Additional course requirements for graduate students |   |                    |   |  | ements for graduate stude      |                    |  |
| Faculty graduate studies of                          | Signature Sign  | nature             | Z | Da<br>Da   | 2 May 3<br>te                  |                    |  |

6300

Senate graduate studies committee name

Signature

3/13 Date



### Graduate Course Minor Change Form

This form is for an SFU department or program to request a minor change to an existing graduate course. After approval and signature by the faculty graduate studies committee, this form should be forwarded to the Dean of Graduate Studies for approval by the Senate Graduate Studies Committee (SGSC). SGSC will forward the approval to Senate for information.

#### DEPARTMENT

| Department / School / Program Contact name Diane Poque   |                                       | Contact name<br>Diane Pogue |  | - R45.0   | ntact email<br>athgsec@sfu.ca |                    |  |
|--|---------------------------------------|-----------------------------|--|---|-------------------------------|--------------------|--|
| inauternatics  |                                       | Diane i ogue                |  | 1110  | angsec@siu.ca                 |                    |  |
| Please revise the followi  | ng elements of the i<br>Units I Title | ndicated graduate co        | ours<br>Othe   | Pre-requis  | site & Exclu                  | sion               |  |
|  |                                       |                             |  |   |                               |                    |  |
| CURRENT COURSE REVISED COURSE  |                                       |                             |  |   |                               |                    |  |
| Please complete only t   | he fields to be cha                   | inged.                      |  | Please complete only t                                  | he fields to be changed       | Ι.                 |  |
| Program (eg. LBST)<br>MATH   | Number (eg. 810)<br>748               | Units (eg. 4)<br>3          |  | Program (eg. LBST)<br>MATH                              | Number (eg. 810)<br>748       | Units (eg. 4)<br>3 |  |
| Course title (max 80 cha   | racters)                              |                             | 1  | Course title (max 80 cha                                | racters)                      |                    |  |
| Network F  | lows                                  |                             |  |   |                               |                    |  |
| Short title (appears on tr   | anscripts, max 25 c                   | haracters)                  |  | Short title (appears on transcripts, max 25 characters) |                               |                    |  |
| Course description for SFU Calendar See attached   |                                       |                             |  | Course description for S                                | FU Calendar 🛛 see atta        | ached              |  |
| Available course components 🛛 Lecture 🖾 Seminar  |                                       |                             | Available course components  |   |                               |                    |  |
| Practicum work done in this class will involve children or vulnerable adults (If the "Yes" box is checked, all students and instructors will require criminal record checks) |                                       |                             | Practicum work done in this class will involve children or vulnerable adults (If the "Yes" box is checked, all students and instructors will require criminal record checks) |   |                               |                    |  |
| Yes No   |                                       |                             |  | Yes No  |                               |                    |  |

APPROVALS Faculty graduate studies committee name Nade larkhouse

Graded

This is combined with an undergrad course.

Additional course requirements for graduate students

Course number and units: MATH 448-3

 $\Box_{-}$ 

Pre-requisite: Same as for MATH 448 or equivalent. Exclusion: MATH 448-3

Grading basis

In Progress / Complete

Prerequisites (if any)

Signature th

\_3/1 Date Ja

□ Satisfactory / Unsatisfactory

**Delete Pre-requisite & Exclusion** 

This is combined with an undergrad course. Yes No

Additional course requirements for graduate students

Senate graduate studies committee name Signature

□ Satisfactory / Unsatisfactory

☑ Yes □ No

Date

Grading basis Graded

Course number and units: \_\_\_\_\_

Prerequisites (if any)

In Progress / Complete



SIMON FRASER UNIVERSITY

DEAN OF GRADUATE STUDIES

### Graduate Course Minor Change Form

This form is for an SFU department or program to request a minor change to an existing graduate course. After approval and signature by the faculty graduate studies committee, this form should be forwarded to the Dean of Graduate Studies for approval by the Senate Graduate Studies Committee (SGSC). SGSC will forward the approval to Senate for information.

#### DEPARTMENT

| Department / School / Program  | Contact name | Contact email   |  |  |  |
|--|--------------|-----------------|--|--|--|
| Mathematics  | Diane Pogue  | mathgsec@sfu.ca |  |  |  |
| Please revise the following elements of the indicated graduate course: |              |                 |  |  |  |

### CURRENT COURSE

Please complete only the fields to be changed.

#### REVISED COURSE

Please complete only the fields to be changed.

| Program (eg. LBST)<br>MATH                       | Number (eg. 810)<br><b>761</b> | Units (eg. 4)<br>3 |        | Program (eg. LBST)<br>MATH   | Number (eg. 810)<br><b>761</b> | Units (eg. 4)<br>3 |  |
|--|--------------------------------|--------------------|--------|--|--------------------------------|--------------------|--|
| Course title (max 80 cha                         | racters)                       |                    |        | Course title (max 80 cha   | aracters)                      |                    |  |
| Continuous N                                     | <b>Nathematica</b>             | al Models          |        |  |                                |                    |  |
| Short title (appears on tr                       | anscripts, max 25 char         | racters)           |        | Short title (appears on t  | ranscripts, max 25 charac      | ters)              |  |
| Course description for S                         | FU Calendar 🛛 see a            | attached           |        | Course description for S   | FU Calendar 🛛 see atta         | ached              |  |
|  |                                |                    |        |  |                                |                    |  |
|  |                                |                    |        |  |                                |                    |  |
|  |                                |                    |        |  |                                |                    |  |
| Available course compon                          |                                | Seminar            |        | Available course components  |                                |                    |  |
| Practicum work done in vulnerable adults (If the | "Yes" box is checked, a        | ll students and    |        | Practicum work done in this class will involve children or<br>vulnerable adults (If the "Yes" box is checked, all students and |                                |                    |  |
| instructors will require c<br>□Yes □No           | riminal record checks)         |                    |        | instructors will require criminal record checks)<br>□Yes □No   |                                |                    |  |
| Grading basis Grade                              | d D Satisfactory / 11          | neaticfactory      |        | Grading basis Graded Satisfactory / Unsatisfactory   |                                |                    |  |
| In Progress / Complete                           |                                |                    |        | In Progress / Complete   |                                |                    |  |
| Prerequisites (if any)                           |                                |                    |        | Prerequisites (if any)   |                                |                    |  |
| Pre-requisite: M                                 | ATH 314 and I                  | MACM 316           |        | Delete Pre-requisite   |                                |                    |  |
| This is combined with an                         | undergrad course. [            | ☑Yes □No           |        | This is combined with an undergrad course. 🛛 Yes 🖾 No  |                                |                    |  |
| Course number and units                          | 5: MATH 461-3                  |                    |        | Course number and units:   |                                |                    |  |
| Additional course require                        | ements for graduate st         | udents             |        | Additional course requirements for graduate students   |                                |                    |  |
|  |                                |                    |        |  |                                |                    |  |
|  |                                |                    |        |  |                                |                    |  |
| APPROVAL   | S S                            | (I                 | $\sum$ | $\gamma$   | 0                              |                    |  |
| YEER   | KUBEN                          | A                  | -0     | The  | 2May 3                         |                    |  |
| Faculty graduate studies of                      | committee name S               | ignature           |        | b Di   | ate 7/13                       |                    |  |
| Senate graduate studies c                        | ommittee name S                | lignature          |        | - <u>cases</u>   | ate                            |                    |  |



### Graduate Course Minor Change Form

This form is for an SFU department or program to request a minor change to an existing graduate course. After approval and signature by the faculty graduate studies committee, this form should be forwarded to the Dean of Graduate Studies for approval by the Senate Graduate Studies Committee (SGSC). SGSC will forward the approval to Senate for information.

### DEPARTMENT

| Department / School / Program<br>Mathematics  | Contact name<br>Diane Pogue | Contact email<br>mathgsec@sfu.ca |  |  |  |  |  |
|---|-----------------------------|----------------------------------|--|--|--|--|--|
| Please revise the following elements of the indicated graduate course:<br>Catalogue number Units Title Description Other: Pre-requisite |                             |                                  |  |  |  |  |  |
| Catalogue number Units Titl   | e □Description ☑Other: Pre- | requisite                        |  |  |  |  |  |

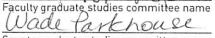
### CURRENT COURSE

Please complete only the fields to be changed.

### REVISED COURSE

Please complete only the fields to be changed.

| Program (eg. LBST)<br>MATH   | Number (eg. 810)<br><b>762</b> | Units (eg. 4)<br>3 |  | Program (eg. LBST)<br>MATH   | Number (eg. 810)<br>762  | Units (eg. 4)<br>3 |  |
|--|--------------------------------|--------------------|--|--|--------------------------|--------------------|--|
| Course title (max 80 char  | acters)                        |                    |  | Course title (max 80 cha   | racters)                 |                    |  |
| Fluid Dynamics   |                                |                    |  |  |                          |                    |  |
| Short title (appears on tra  | anscripts, max 25 charac       | ters)              |  | Short title (appears on tr   | anscripts, max 25 charac | ters)              |  |
| Course description for SFU Calendar 🛛 see attached   |                                |                    |  | Course description for S   | FU Calendar □ see atta   | ached              |  |
| Available course compon  |                                | eminar             |  | Available course components  |                          |                    |  |
| Practicum work done in this class will involve children or vulnerable adults (If the "Yes" box is checked, all students and instructors will require criminal record checks) |                                |                    |  | Practicum work done in this class will involve children or vulnerable adults (If the "Yes" box is checked, all students and instructors will require criminal record checks)<br>☐ Yes ☐ No |                          |                    |  |
| Grading basis Grade  |                                | atisfactory        |  | Grading basis Graded Satisfactory / Unsatisfactory   |                          |                    |  |
| Prerequisites (if any)<br>Pre-requisite: MATH 314 or PHYS 384, MATH 322  |                                |                    |  | Prerequisites (if any)<br>Delete Pre-re  | equisite                 |                    |  |
| This is combined with an undergrad course.  Yes No<br>Course number and units: MACM 462-3<br>Additional course requirements for graduate students                            |                                |                    |  | Course number and units  | undergrad course.        |                    |  |
| APPROVAL   | s_                             | 07                 |  |  |                          |                    |  |



Signature

Date 5 Date

Senate graduate studies committee name

Signature



### Graduate Course Minor Change Form

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#### DEPARTMENT

| Department / School / Program<br>Mathematics                         | Contact name<br>Diane Pogue           | Contact email mathgsec@sfu.ca |
|--|---------------------------------------|-------------------------------|
| Please revise the following elements of<br>Catalogue number Units Ti | the indicated graduate course: Pre-re | equisite & Recommended        |

### CURRENT COURSE

Please complete only the fields to be changed.

### REVISED COURSE

Please complete only the fields to be changed.

| Program (eg. LBST)<br>MATH                           | Number (eg. 810)<br>767   | Units (eg. 4)<br>3 |   | Program (eg. LBST)<br>MATH  | Number (eg. 810)<br><b>767</b>  | Units (eg. 4)<br>3 |  |
|--|---|--------------------|---|---|---|--------------------|--|
| Course title (max 80 cha                             | racters)  |                    |   | Course title (max 80 cha  | racters)  |                    |  |
| Dynamical  | Dynamical Systems   |                    |   |   |   |                    |  |
| Short title (appears on tr                           | anscripts, max 25 charad  | cters)             |   | Short title (appears on tr  | ranscripts, max 25 charac   | ters)              |  |
| Course description for SFU Calendar 🛛 see attached   |   |                    |   | Course description for S  | FU Calendar 🛛 see atta  | ached              |  |
| Available course compor                              |   | eminar             |   | Available course components          □ Lecture          □ Seminar         □ Laboratory             □ Laboratory          □ Practicum          □ Online          □ |   |                    |  |
|  | this class will involve chi<br>"Yes" box is checked, all<br>:riminal record checks) |                    |   |   | this class will involve chil<br>"Yes" box is checked, all s<br>riminal record checks) |                    |  |
| Grading basis Grade                                  | ed 🔲 Satisfactory / Uns<br>e 🔲  | atisfactory        |   | Grading basis Graded Satisfactory / Unsatisfactory  |   |                    |  |
| Prerequisites (if any)                               |   |                    |   | Prerequisites (if any)  |   |                    |  |
| Pre-requisite: MATH                                  | 310. Recommended  | : MATH 320         |   | Delete Pre-ree  | quisite & Recom   | nmended            |  |
| This is combined with an                             | undergrad course. 🗹   | Yes 🗖 No           |   | This is combined with an  | undergrad course.   | res 🗖 No           |  |
| Course number and unit                               | S:  | ······             |   | Course number and units:  |   |                    |  |
| Additional course requirements for graduate students |   |                    |   | Additional course requir  | ements for graduate stud  | ents               |  |
| Faculty graduate studies of                          | (CBEN)  | nature             | Z | Rufer Da  | 2Mazis  | 2                  |  |

Ubde takhouse Senate graduate studies committee name

Signature

113 Date



### Graduate Course Minor Change Form

This form is for an SFU department or program to request a minor change to an existing graduate course. After approval and signature by the faculty graduate studies committee, this form should be forwarded to the Dean of Graduate Studies for approval by the Senate Graduate Studies Committee (SGSC). SGSC will forward the approval to Senate for information.

### DEPARTMENT

| Department / School / Program   | Contact name | Contact email   |  |  |  |  |  |
|---|--------------|-----------------|--|--|--|--|--|
| Mathematics   | Diane Pogue  | mathgsec@sfu.ca |  |  |  |  |  |
| Please revise the following elements of the indicated graduate course:<br>Catalogue number Units Title Description Other: Pre-requisite & Exclusion |              |                 |  |  |  |  |  |

### CURRENT COURSE

Please complete only the fields to be changed.

### REVISED COURSE

Please complete only the fields to be changed.

| Program (eg. LBST)<br>MATH  | Number (eg. 810)<br>770   | Units (eg. 4)<br>3 | Program (eg. LBST)<br>MATH   | Number (eg. 810)<br><b>770</b> | Units (eg. 4)<br>3 |  |
|---|---|--------------------|--|--------------------------------|--------------------|--|
| Course title (max 80 cha<br>Variational   |   |                    | Course title (max 80 cha   | racters)                       |                    |  |
| Short title (appears on tr  | anscripts, max 25 charac  | ters)              | Short title (appears on tr   | anscripts, max 25 charac       | ters)              |  |
| Course description for SFU Calendar 🛛 see attached  |   |                    | Course description for SFU Calendar 🔲 see attached   |                                |                    |  |
| Available course compor   | icum 🛛 Online 🗖 Se  | eminar             | Available course components  |                                |                    |  |
|   | this class will involve chil<br>"Yes" box is checked, all s<br>riminal record checks) |                    | Practicum work done in this class will involve children or vulnerable adults (If the "Yes" box is checked, all students and instructors will require criminal record checks) |                                |                    |  |
| Grading basis Grade   | ed 🔲 Satisfactory / Uns<br>e 🔲  | atisfactory        | Grading basis Graded Satisfactory / Unsatisfactory   |                                |                    |  |
| Prerequisites (if any)<br>Prerequisite: Same as for MA  | TH 470 or equivalent. Exclusio  | on: MATH 470-3.    | Prerequisites (if any)<br>Delete Pre-requisite & Exclusion   |                                |                    |  |
| This is combined with an undergrad course. I Yes INO<br>Course number and units: MATH 470-3<br>Additional course requirements for graduate students |   |                    | This is combined with an undergrad course. Yes No<br>Course number and units:<br>Additional course requirements for graduate students  |                                |                    |  |

APPROVALS Faculty graduate studies committee name Vade Partchous Senate graduate studies committee name

Signature

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Signature

Date



### Graduate Course Minor Change Form

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#### DEPARTMENT

| Department / School / Program   | Contact name | Contact email   |  |  |  |  |
|---|--------------|-----------------|--|--|--|--|
| Mathematics   | Diane Pogue  | mathgsec@sfu.ca |  |  |  |  |
| Please revise the following elements of the indicated graduate course:<br>Catalogue number Units Title Description Other: Pre-requisite & Exclusion |              |                 |  |  |  |  |

### CURRENT COURSE

Please complete only the fields to be changed.

### REVISED COURSE

Please complete only the fields to be changed.

| Program (eg. LBST)<br>MATH   | Number (eg. 810)<br><b>795</b>          | Units (eg. 4)<br>3 |  | Program (eg. LBST)<br>MATH   | Number (eg. 810)<br><b>795</b> | Units (eg. 4)<br>3 |  |  |
|--|---|--------------------|--|--|--------------------------------|--------------------|--|--|
| Course title (max 80 char  | racters)                                |                    |  | Course title (max 80 chai  | racters)                       |                    |  |  |
| Selected Topics  | s in Applied Mat                        | hematics           |  |  |                                |                    |  |  |
| Short title (appears on tr   | anscripts, max 25 charac                | ters)              |  | Short title (appears on tr   | anscripts, max 25 charac       | ters)              |  |  |
| Course description for SFU Calendar 🛛 see attached   |   |                    |  | Course description for SFU Calendar  see attached  |                                |                    |  |  |
| Available course compon  | ients 🛛 Lecture 🗖 Se<br>icum 🗋 Online 🗖 | eminar             |  | Available course components Lecture Seminar<br>Laboratory Practicum Online   |                                |                    |  |  |
| Practicum work done in this class will involve children or vulnerable adults (If the "Yes" box is checked, all students and instructors will require criminal record checks) |   |                    |  | Practicum work done in this class will involve children or vulnerable adults (If the "Yes" box is checked, all students and instructors will require criminal record checks)<br>☐ Yes ☐ No |                                |                    |  |  |
| Grading basis Grade  | ed 🔲 Satisfactory / Unsi<br>e 🔲         | atisfactory        |  | Grading basis Graded Satisfactory / Unsatisfactory   |                                |                    |  |  |
| Prerequisites (if any)<br>Prerequisite: Same as for MATH 495 or equivalent. Exclusion: MATH 495-3.   |   |                    |  | Prerequisites (if any)<br>Delete Pre-re  | equisite & Exc                 | lusion             |  |  |
| This is combined with an   | undergrad course. 🗹 Y                   | ′es □No            |  | This is combined with an undergrad course. $\Box$ Yes $\Box$ No  |                                |                    |  |  |
| Course number and units  | 5:                                      |                    |  | Course number and units:   |                                |                    |  |  |
| Additional course requirements for graduate students   |   |                    |  | Additional course requirements for graduate students   |                                |                    |  |  |
|  |   |                    |  |  |                                |                    |  |  |
| APPROVALS  |   |                    |  |  |                                |                    |  |  |

ade Tarkhouse Senate graduate studies committee name

TR Faculty graduate studies committee name

Ĉ Signature

Signature

Date Date



# Graduate Course Minor Change Form

This form is for an SFU department or program to request a minor change to an existing graduate course. After approval and signature by the faculty graduate studies committee, this form should be forwarded to the Dean of Graduate Studies for approval by the Senate Graduate Studies Committee (SGSC). SGSC will forward the approval to Senate for information.

| DEPARTMENT   |                                  |  |                                  |                    |
|--|----------------------------------|--|----------------------------------|--------------------|
| Department / School / Program<br>Mathematics   | Contact name<br>Diane Pogue      |  | Contact email<br>mathgsec@sfu.ca |                    |
| Please revise the following elements of the indicated graduate course:<br>Catalogue number Units Title Description Other: Pre-requisite & Exclusion                          |                                  |  |                                  |                    |
| Please complete only the fields to be changed.   |                                  | Please complete only the fields to be changed.   |                                  |                    |
| Program (eg. LBST) Number (eg. 810)<br>MATH 796  | Units (eg. 4)<br><b>3</b>        | Program (eg. LBST)<br>MATH   | Number (eg. 810)<br><b>796</b>   | Units (eg. 4)<br>3 |
| Course title (max 80 characters)   | Course title (max 80 characters) |  |                                  |                    |
| Selected Topics in Mathematics Short title (appears on transcripts, max 25 characters)   |                                  | Short title (appears on transcripts, max 25 characters)  |                                  |                    |
| Course description for SFU Calendar See attached   |                                  | Course description for SFU Calendar See attached   |                                  |                    |
|  |                                  |  |                                  |                    |
| Available course components 🛛 Lecture 🖾 Seminar  |                                  | Available course components  |                                  |                    |
| Practicum work done in this class will involve children or vulnerable adults [If the "Yes" box is checked, all students and instructors will require criminal record checks] |                                  | Practicum work done in this class will involve children or vulnerable adults (If the "Yes" box is checked, all students and instructors will require criminal record checks) |                                  |                    |
| Yes No   |                                  | Yes No   |                                  |                    |
| Grading basis Graded Satisfactory / Unsatisfactory   |                                  | Grading basis Graded Satisfactory / Unsatisfactory   |                                  |                    |
| Prerequisites (if any)   |                                  | Prerequisites (if any)   |                                  |                    |
| Prerequisite: Same as for MATH 496 or equivalent. Exclusion: Math 496.   |                                  | Delete Pre-requisite & Exclusion   |                                  |                    |
| This is combined with an undergrad course. Ves No  |                                  | This is combined with an undergrad course. Yes No  |                                  |                    |
| Course number and units: MATH 496-3  |                                  | Course number and units:   |                                  |                    |
| Additional course requirements for graduate students   |                                  | Additional course requirements for graduate students   |                                  |                    |
|  |                                  |  |                                  |                    |
| Faculty graduate studies committee name Signature Date Date  |                                  |  |                                  |                    |

Lade tarkhouse Senate graduate studies committee name

-l Signature

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113 Icane Date