S.13-105



Office of Graduate Studies and Postdoctoral Fellows

	Maggie Benston Student Services Centre 1100 8888 University Drive Burnaby, BC	TEL 778.782 FAX 778.782		report-dgs@sfu.ca www.sfu.ca/Dean- 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 Catalogue number I Units The					
Please complete only the fields to be	changed.			D COURSE ly the fields to be change	d.
Program (eg. LBST) Number (eg. 8 BISC 849	310) Unit 6	ts (eg. 4)	Program (eg. LBST) BISC	Number (eg. 810) <b>849</b>	Units (eg. 4) <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 ne 🗆	ar	Available course con		Seminar
Practicum work done in this class will in vulnerable adults (If the "Yes" box is che instructors will require criminal record	ecked, all stude		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	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 Date June 3/13 Date	

RE-INSTATEMENT (5.12-71)



### 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 Biological Sciences		Contact name 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) BISC	Number (eg. 810) <b>841</b>	Units (eg. 4)		Program (eg. LBST) BISC	Number (eg. 810) <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 development of soil-associated and foliar plant diseases in cultivated crops, in relation to the nature, underlying principles, application and limitations of various types of control practices.				An examination of the major factors that lead to development of plant diseases, control practices and the applications of plant biotechnology to disease management.				
Available course compon	ients 🛛 Lecture 🖾 Se icum 🗋 Online 🗖	eminar		Available course components				
vulnerable adults (If the instructors will require c	this class will involve chil "Yes" box is checked, all s riminal record checks)	dren or 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 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) BISC	Number (eg. 810) <b>844</b>	Units (eg. 4)		Program (eg. LBST) BISC	Number (eg. 810) 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 organisms in the natural regulation and the control of organisms. Emphasis will be on parasitic insects, and include host specificity, genetics, genetic controls, and the evolution of host-parasite associations.				Principles, theory, and practice of the use of living organisms in the natural regulation and the control of organisms.				
Available course compon	ents 🛛 Lecture 🖾 S cum 🗋 Online 🗖 🔄	eminar		Available course components Lecture Seminar Laboratory Practicum Online				
Practicum work done in t vulnerable adults (If the instructors will require c	'Yes" box is checked, all			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	d 🛛 Satisfactory / Uns 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 D	2 Da	2 April 2013 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) BISC 852	Program (eg. LBST) Number (eg. 810) Units (eg. 4) 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 interactions between parasites of human importance and their insect vectors. Emphasis placed on current literature relating to modern approaches in reducing parasite transmission.	Interactions between parasites and their arthropod vectors. Emphasis is placed on recent advances in our understanding of the interactions, including aspects that can be 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 vulnerable adults (If the "Yes" box is checked, all students and instructors will require criminal record checks) 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 Course number and units: Additional course requirements for graduate students	This is combined with an undergrad course. Yes No Course number and units: Additional course requirements for graduate students				
APPROVALS     Signature       Faculty graduate studies committee name     Signature       Wade factores     Signature	Date 22APril 2013 Date Jane 3/13 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

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 Biological Sciences Julian Guttman			Contact email jguttman@sfu.ca			
	Please revise the following elements of the indicated graduate course:					
Please complete only to		d.		Please complete only	<b>COURSE</b> the fields to be changed	1.
Program (eg. LBST) BISC	Number (eg. 810) 898	Units (eg. 4) 6		Program (eg. LBST) BISC	Number (eg. 810) 898	Units (eg. 4) 18
Course title (max 80 cha	racters)			Course title (max 80 cl	naracters)	
MSc Thesis				MSc Thesis		
Short title (appears on tr MSc Thesis	ranscripts, max 25 chara	cters)		Short title (appears on 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 icum 🗖 Online 🗖	Seminar		Available course comp	onents □Lecture □S 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 Course number and units: Additional course requirements for graduate students			This is combined with an undergrad course. Yes No Course number and units: 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**

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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.

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### 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.

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### 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.

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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) <b>BPK</b>	Number (eg. 810) <b>831</b>	Units (eg. 4) 3	Program (eg. LBST) BPK	Number (eg. 810) <b>831</b>	Units (eg. 4) <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 mechanisms underlying te other animals. Thermoreg chronic exposure to hot ar whole body level. The cou	FU Calendar See at standing of physiological emperature regulation in h ulation will be studied dur nd cold environments, froi urse will examine the relati er physiological systems ( neural).	and behavioral umans and ing acute and m the cellular to ionship between	Provides a detailed un mechanisms underlyin other animals. Thermo chronic exposure to ho whole body level. The	r SFU Calendar see derstanding of physiologic: g temperature regulation ir regulation will be studied d t and cold environments, fi course will examine the rel other physiological systems lar, neural).	al and behavioral n humans and during acute and rom the cellular to lationship between
Available course compor Laboratory DPract		Seminar	Available course com		
Practicum work done in vulnerable adults (If the instructors will require c □ Yes ☑ No	this class will involve ch "Yes" box is checked, all riminal record checks)	ildren or 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 □ In Progress / Complet	ed 🔲 Satisfactory / Un e 🔲	satisfactory	Grading basis ☑ Gr □ In Progress / Comp	aded Satisfactory / L	Insatisfactory
Prerequisites (if any)			Prerequisites (if any) For UGs Kin 205,	Kin 305, Recomme	ended Kin 407
This is combined with an Course number and unit: Additional course require		Yes 🛛 No dents	Course number and u 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 Evaluation Value (% of final grade)	<u>BPK</u> Kin 831	Graduate Evaluation Value (% of final grade)
Hours of lecture & lab/wk	3 h x 13 lectures =39 h <u>0 h laboratory</u> Total =39 h	-	4 h x 7 lect. = 28 h 3 h x 6 lect. = 18 h 3 h x 2 lab. = 6 h Total = 52 h	-
Midterm Exam	75% of the lecture material for graduate students <sup>1</sup>	25%	-	5%
Point- Counterpoints	2 x 500 word written summaries 2 x 10 min oral presentations	2 x 20%	2 x 1000 word written summaries 2 x 20 min oral presentations	2 x 20%
Laboratory work & reports	None	-	2 x 3 h lab sessions & written laboratory reports	20%
Final Exam	75% of the lecture material for graduate 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

phen this

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 thgsec@sfu.ca	
Please revise the followin Catalogue number	Please revise the following elements of the indicated graduate					site	
Please complete only th		d.		Please complete on		<b>OURSE</b> ne fields to be changed	1.
Program (eg. LBST) MATH	Number (eg. 810) <b>701</b>	Units (eg. 4) 3		Program (eg. LBST) MATH		Number (eg. 810) 701	Units (eg. 4) 3
Course title (max 80 characters) 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 vulnerable adults (If the instructors will require c 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) Pre-requisite: C	MPT 307 or M	ATH 332		Prerequisites (if any) 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 ETAR (UBAW) aculty graduate studies committee name Signature Signature Date Date						

hade farkhouse Senate graduate studies committee name

Lei	10
Signature	

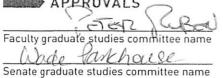
Jie 2/10 Date



### 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			Contact email mathgsec@sfu.ca					
Please revise the following elements of the indicated graduate of Catalogue number				n Pre-requ	Jis	ite & Exclu	ision	
CURRENT Please complete only the		anged.		REVISED Please complete on		<b>DURSE</b> e fields to be changed	ł.	
Program (eg. LBST) MATH	Number (eg. 810) 708	Units (eg. 4) 3		Program (eg. LBST) MATH		Number (eg. 810) <b>708</b>	Units (eg. 4) 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 vulnerable adults (If the instructors will require c □ 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 e 🔲	/ Unsatisfactory		Grading basis Graded Satisfactory / Unsatisfactory				
Prerequisites (if any) Pre-requisite: Same as for MA	TH 408 or equivalent.	Exclusion: MATH 408-3		Prerequisites (if any) 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 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

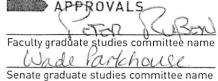
### CURRENT COURSE

Please complete only the fields to be changed.

#### REVISED COURSE

Please complete only the fields to be changed.

Program (eg. LBST) MATH	Number (eg. 810) <b>709</b>	Units (eg. 4) 3		Program (eg. LBST) MATH	Number (eg. 810) <b>709</b>	Units (eg. 4) 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 cum □Online □	eminar		Available course components Lecture Seminar Laboratory Practicum Online					
vulnerable adults (If the ' instructors will require c	his class will involve chil 'Yes" box is checked, all s 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)					
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 thgsec@sfu.ca	in the second
Please revise the followi	ng elements of the in Units Title [	dicated graduate co Description	ourse Other	Pre-requ	uis	ite	
CURRENT		nged.		Please complete or		DURSE le fields to be changed	ł.
Program (eg. LBST) MATH	Number (eg. 810) <b>716</b>	Units (eg. 4) 3		Program (eg. LBST) MATH		Number (eg. 810) 716	Units (eg. 4) 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 🛙 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 e 🔲	atisfactory
Prerequisites (if any) 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 Mathematics	Contact name Diane Pogue							
Please revise the following elements of the i	ndicated graduate co	urse: )ther	Pre-requisi	ite & Recomr	nended			
Please complete only the fields to be cha	inged.		Please complete only	<b>COURSE</b> the fields to be change	d.			
Program (eg. LBST)         Number (eg. 810)           MATH         718	Units (eg. 4) 3		Program (eg. LBST) MATH	Number (eg. 810) <b>718</b>	Units (eg. 4) 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 □		Available course compo Laboratory	onents 🛛 Lecture 🗖 S cticum 🗋 Online 🗖	Seminar			
Practicum work done in this class will involv vulnerable adults (If the "Yes" box is checke instructors will require criminal record checker Yes INo	d, all students and		vulnerable adults (If the	n this class will involve ch e "Yes" box is checked, all 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 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 Mathematics				tact email thgsec@sfu.ca				
Please revise the followin Catalogue number	ourse Other	Pre-requi	sit	e & Recomn	<u>ne</u> nded			
Please complete only the fields to be changed.				Please complete on		OURSE ne fields to be changed		
Program (eg. LBST) MATH						Number (eg. 810) 719	Units (eg. 4) 3	
Course title (max 80 char 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 vulnerable adults (If the " instructors will require cr Yes No	'Yes" box is checked, al	ll students and		vulnerable adults (If	the "	his class will involve child Yes" box is checked, all s iminal record checks)		
Grading basis Grade		nsatisfactory		Grading basis Graded Satisfactory / Unsatisfactory				
Prerequisites (if any) Pre-requisite: MATH 232, 320 or pe	rmission of the instructor. Reco	mmended: MATH 252.		Prerequisites (if any) 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 mathgsec@sfu.ca					
Please revise the followin Catalogue number	ng elements of the Units I Title	indica De	ed graduate co scription 🔽 (	urse Othei	Pre-requ	Jis	site		
Please complete only the		anged	5		Please complete or		OURSE ne fields to be changed	l.	
Program (eg. LBST) MATH	Number (eg. 810) 724		Units (eg. 4) 3		Program (eg. LBST) MATH		Number (eg. 810) 724	Units (eg. 4) 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 □	eminar		Available course con			eminar	
Practicum work done in vulnerable adults (If the instructors will require c	"Yes" box is checke	d, all s			vulnerable adults (If	the	this class will involve chil "Yes" box is checked, all s riminal record checks)		
Yes No					□Yes □No				
Grading basis Grade		/ Uns	atisfactory		Grading basis Graded Satisfactory / Unsatisfactory				
Prerequisites (if any) 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 Mathematics	Contact name Diane Pogue	Contact email 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) MATH	Number (eg. 810) 725	Units (eg. 4) 3	Program (eg. LBST) MATH	Number (eg. 810) 725	Units (eg. 4) 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 vulnerable adults (If the "Yes" box is checked, all students and instructors will require criminal record checks)			
Yes No			Yes No			
Grading basis Grade		satisfactory	Grading basis Grad	ded 🔲 Satisfactory / Uns 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 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 Mathematics	Contact name Diane Pogue	Contact email mathgsec@sfu.ca		
Please revise the following elements of the indicated graduate course: 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) MATH	Number (eg. 810) 740	Units (eg. 4) 3		Program (eg. LBST) MATH	Number (eg. 810) 740	Units (eg. 4) 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 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 "Yes" box is checked, all s riminal record checks)	
Grading basis Grade	ed 🔲 Satisfactory / Uns e 🔲	satisfactory		Grading basis Grad	ed 🔲 Satisfactory / Uns te 🔲	atisfactory
Prerequisites (if any) Pre-requisite:	MATH 332			Prerequisites (if any) 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 Senate graduate studies of	chouse l		Ì	-63-0-05-	June 3/13	



### 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	INT						
Department / School / Program Contact name Mathematics Diane Pogue					tact email thgsec@sfu.ca		
Please revise the following elements of the indicated graduate Catalogue number Units Title Description			ours Othe	Pre-requ	Jis	ite	
Please complete only th		nged.		REVISEI		<b>DURSE</b> e fields to be changed	I.
Program (eg. LBST) MATH	Number (eg. 810) <b>741</b>	Units (eg. 4) 3		Program (eg. LBST) MATH		Number (eg. 810) <b>741</b>	Units (eg. 4) 3
Course title (max 80 char 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 Yes" box is checked, all s iminal record checks)		
Grading basis Graded Satisfactory / Unsatisfactory			Grading basis Graded Satisfactory / Unsatisfactory				
Prerequisites (if any) Pre-requisite: Appropria	te knowledge of alg	ebraic structures.		Prerequisites (if any) 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 □ 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) MATH	Number (eg. 810) 742	Units (eg. 4) 3		Program (eg. LBST) MATH	Number (eg. 810) <b>742</b>	Units (eg. 4) 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 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 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

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#### REVISED COURSE

Please complete only the fields to be changed.

Program (eg. LBST) MATH	Number (eg. 810) 743	Units (eg. 4) 3		Program (eg. LBST) MATH	Number (eg. 810) <b>743</b>	Units (eg. 4) 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 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 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	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 ETER RUBEN Faculty graduate studies committee name Signature Signature Date 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 Mathematics	Contact name Diane Pogue	Contact email 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) MATH	Number (eg. 810) 745	Units (eg. 4) 3		Program (eg. LBST) MATH	Number (eg. 810) 745	Units (eg. 4) 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 e 🔲	atisfactory		Grading basis Graded Satisfactory / Unsatisfactory		
Prerequisites (if any) Pre-requisite: MATH	345. Recommended:	MATH 343		Prerequisites (if any) 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

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### DEPARTMENT

Department / School / Program Mathematics	Contact name 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) MATH	Number (eg. 810) 747	Units (eg. 4) 3		Program (eg. LBST) MATH	Number (eg. 810) <b>747</b>	Units (eg. 4) 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 "Yes" box is checked, all s 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 e 🔲	atisfactory		Grading basis Graded Satisfactory / Unsatisfactory			
Prerequisites (if any) Pre-requisite: MATH	232 Becommended:	MATH 332		Prerequisites (if any) 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 Da	2 May 3 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 Diane Pogue		- R45.0	ntact email athgsec@sfu.ca		
inauternatics		Diane i ogue		1110	angsec@siu.ca		
Please revise the followi	ng elements of the i Units I Title	ndicated graduate co	ours 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) MATH	Number (eg. 810) 748	Units (eg. 4) 3		Program (eg. LBST) MATH	Number (eg. 810) 748	Units (eg. 4) 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

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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:					

### CURRENT COURSE

Please complete only the fields to be changed.

#### REVISED COURSE

Please complete only the fields to be changed.

Program (eg. LBST) MATH	Number (eg. 810) <b>761</b>	Units (eg. 4) 3		Program (eg. LBST) MATH	Number (eg. 810) <b>761</b>	Units (eg. 4) 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 vulnerable adults (If the "Yes" box is checked, all students and			
instructors will require c □Yes □No	riminal record checks)			instructors will require criminal record checks) □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

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### DEPARTMENT

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

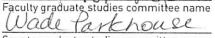
### CURRENT COURSE

Please complete only the fields to be changed.

### REVISED COURSE

Please complete only the fields to be changed.

Program (eg. LBST) MATH	Number (eg. 810) <b>762</b>	Units (eg. 4) 3		Program (eg. LBST) MATH	Number (eg. 810) 762	Units (eg. 4) 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) ☐ Yes ☐ No			
Grading basis Grade		atisfactory		Grading basis Graded Satisfactory / Unsatisfactory			
Prerequisites (if any) Pre-requisite: MATH 314 or PHYS 384, MATH 322				Prerequisites (if any) Delete Pre-re	equisite		
This is combined with an undergrad course.  Yes No Course number and units: MACM 462-3 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 Mathematics	Contact name Diane Pogue	Contact email mathgsec@sfu.ca
Please revise the following elements of 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) MATH	Number (eg. 810) 767	Units (eg. 4) 3		Program (eg. LBST) MATH	Number (eg. 810) <b>767</b>	Units (eg. 4) 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 "Yes" box is checked, all :riminal record checks)				this class will involve chil "Yes" box is checked, all s riminal record checks)		
Grading basis Grade	ed 🔲 Satisfactory / Uns 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

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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: 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) MATH	Number (eg. 810) 770	Units (eg. 4) 3	Program (eg. LBST) MATH	Number (eg. 810) <b>770</b>	Units (eg. 4) 3	
Course title (max 80 cha 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 "Yes" box is checked, all s 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 e 🔲	atisfactory	Grading basis Graded Satisfactory / Unsatisfactory			
Prerequisites (if any) Prerequisite: Same as for MA	TH 470 or equivalent. Exclusio	on: MATH 470-3.	Prerequisites (if any) Delete Pre-requisite & Exclusion			
This is combined with an undergrad course. I Yes INO Course number and units: MATH 470-3 Additional course requirements for graduate students			This is combined with an undergrad course. Yes No Course number and units: Additional course requirements for graduate students			

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

Signature

Date Tu

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: 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) MATH	Number (eg. 810) <b>795</b>	Units (eg. 4) 3		Program (eg. LBST) MATH	Number (eg. 810) <b>795</b>	Units (eg. 4) 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 icum 🗋 Online 🗖	eminar		Available course components Lecture Seminar 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				
Grading basis Grade	ed 🔲 Satisfactory / Unsi e 🔲	atisfactory		Grading basis Graded Satisfactory / Unsatisfactory				
Prerequisites (if any) Prerequisite: Same as for MATH 495 or equivalent. Exclusion: MATH 495-3.				Prerequisites (if any) 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 Mathematics	Contact name Diane Pogue		Contact email mathgsec@sfu.ca	
Please revise the following elements of the indicated graduate course: 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) MATH 796	Units (eg. 4) <b>3</b>	Program (eg. LBST) MATH	Number (eg. 810) <b>796</b>	Units (eg. 4) 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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00

113 Icane Date