S.14-99



Office of Graduate Studies and Postdoctoral Fellows

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No.

report-dgs@sfu.ca www.sfu.ca/Dean-GradStudies

MEMORANDUM

ATTENTION FROM RE:

Senate Wade Parkhouse, Dean of Graduate Studies Faculty of Science

DATE 10 June 2014 GS2014.19

For information:

Acting under delegated authority at its meeting of June 9, 2014, SGSC approved the following curriculum revisions effective Spring 2015:

Faculty of Science

Earth Sciences

- 1. Program requirement changes to Earth Sciences PhD
- 2. Course changes
 - a. Prerequisite: EASC 607
 - b. Description: EASC 604, EASC 617, EASC 620, EASC 624



GS2014.19

MEMO

Faculty of Science

ATTENTION Wade Parkhouse, Dean, Graduate Studies

FROM Peter Ruben, Associate Dean, Faculty of Science

RE Minor course changes – Earth Science

DATE May 13, 2014

TIME 9:59 AM

The graduate program in the Department of Earth Sciences seeks to remove the departmental seminar, EASC 900, as a requirement for their PhD students.

The Department also seeks to make minor course changes, including a change in prerequisite to EASC 607, and changes in the course description for EASC 604, 617, 620, and 624.

The Faculty Graduate Program Committee reviewed and approved the proposed changes. The proposed changes have my approval.

P. Ruben



Department of Earth Sciences

To:	Peter Ruben, Associate Dean / Science
From:	Andrew Calvert Chair, Earth Sciences Graduate Studies Committee
Re:	Graduate program and course changes
Date:	28 th April 2014

I would be grateful if you would consider the following changes to the Earth Sciences Graduate program, which were recently approved by the department.

Removal of first departmental seminar (EASC 900) for PhD students
 The growth in the number of PhD students in our program has resulted in an excessive
 number of graduate student seminars. Students will still be required to present the
 results of their PhD research (EASC 901) to the department. The proposed change in
 wording to be included in the Calendar description of the PhD program is attached.

EASC 900 PhD Seminar - To be deleted

2) Minor Graduate Course Changes
 EASC 604 Deformation Mechanisms and Continental Tectonics – Change to course
 description

 EASC 607 Exploration Seismology – Change to prerequisite

 EASC 617 Quaternary Geology – Change to course description
 EASC 620 Volcanology – Change to course description

 EASC 624 Geology of the Canadian Cordillera – Change to course description

Yours sincerely,

Andy Calmet

Andrew J. Calvert

Proposed Change to EASC PhD Program in Calendar

FROM	ТО
Program Requirements	Program Requirements
Course Work	Course Work
Students complete all of	Students complete all of
EASC 600 - Introduction to Graduate Studies (0) EASC 900 - PhD Research Seminar (1) EASC 901 - PhD Research Seminar (1) EASC 998 - PhD Thesis (6) In addition, those who entered the program with a BSc degree only are required to complete an additional 15 units in graduate courses, whereas for those who entered with a master's degree, an additional six units of graduate courses are required. With the graduate chair's approval, students may substitute related graduate courses from other departments/programs including physical geography, chemistry, physics, biological sciences, and the resource and environmental management. No more than six units from 700 division EASC courses will be permitted. With advance approval, students may complete up to one half of the above course requirements at another university. Additional course work may be	EASC 600 - Introduction to Graduate Studies (0) EASC 901 - PhD Research Seminar (1) EASC 998 - PhD Thesis (6) In addition, those who entered the program with a BSc degree only are required to complete an additional 15 units in graduate courses, whereas for those who entered with a master's degree, an additional six units of graduate courses are required. With the graduate chair's approval, students may substitute related graduate courses from other departments/programs including physical geography, chemistry, physics, biological sciences, and the resource and environmental management. No more than six units from 700 division EASC courses will be permitted. With advance approval, students may complete up to one half of the above course requirements at another university. Additional course work
assigned by the supervisory committee, based on the results of the oral candidacy examination.	may be assigned by the supervisory committee, based on the results of the oral candidacy examination.



Graduate Course Minor Change Form

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DEPARTMENT

Department / School / Program Earth Sciences	Contact name Dan Gibson	Contact email hdgibson@sfu.ca				
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.

REVISED COURSE

Please complete only the fields to be changed.

Program (eg. LBST) EASC	Number (eg. 810) 604	Units (eg. 4)	Program (eg. LBST)	Number (eg. 810)	Units (eg. 4)		
Course title (max 80 char	racters)		Course title (max 80 characters)				
Deformation Mechar	nisms and Continent	al Tectonics		1			
Short title (appears on tr	anscripts, max 25 chara	cters)	Short title (appears or	n transcripts, max 25 char	acters)		
Course description for SI This course will focus on incre mechanisms by which rocks d variables (effective pressure, t etc.) on these deformation me applied to ductile deformation, and models of exhumation of r effects such as lithosphere rhe will also be discussed.	asing the level of understand eform and the effect of enviro emperature, strain rate, chen chanisms. Lectures will cover grain-scale to crustal-scale s metamorphic rocks. The link t	ing of the onmental nical environment, r flow concepts strain partitioning, between far-field	his course will focus on inco mechanisms by which rock (effective pressure, temperative these deformation mechanic ductile deformation, grain-so of exhumation of metamorp lithosphere rheology, climal	r SFU Calendar ☐ see a reasing the level of understanding s deform and the effect of enviro ature, strain rate, chemical enviro sms. Lectures will cover flow cor cale to crustal-scale strain partiti- hic rocks. The link between far-fi e and erosion, and orogenic styli e a 2-day field trip associated wi	g of the nmental variables onment, etc.) on iccepts applied to oning, and models eld effects such as a will also be		
Available course compon	ents □Lecture □S cum □Online □_	eminar		Available course components 🛛 Lecture 🖓 Seminar			
Practicum work done in t vulnerable adults (If the instructors will require co Yes \[D] No	'Yes" box is checked, all		vulnerable adults (If th	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		aticfactory		adad 🗖 Satisfaataa. / IIa			
In Progress / Complete			Grading basis Graded Satisfactory / Unsatisfactory				
Prerequisites (if any)			Prerequisites (if any)				
This is combined with an	undergrad course. 🔲	Yes 🗆 No	This is combined with	an undergrad course.	Yes 🗆 No		
Course number and units	i:		Course number and u	Course number and units:			
Additional course require	ments for graduate stud	ients	Additional course requ	Additional course requirements for graduate students			
*							
APBROVALS aculty graduate studies committee name enate graduate studies committee name Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature Signature							



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DEPARTMENT

Department / School / Program	Contact name	Contact email
EASC	A.J.Calvert	acalvert@sfu.ca
Please revise the following elements of Catalogue number Units Ti		equisite

CURRENT COURSE

Please complete only the fields to be changed.

REVISED COURSE

Please complete only the fields to be changed.

Program (eg. LBST) EASC	Number (eg. 810) 607	Units (eg. 4) 3		Program (eg. LBST)	Number (eg. 810)	Units (eg. 4)
Course title (max 80 cha	racters)		1	Course title (max 80 ch	aracters)	
Exploration	seismology					
Short title (appears on tr	anscripts, max 25 chara	cters)		Short title (appears on t	ranscripts, max 25 chara	octers)
Course description for S	FU Calendar □ see att	ached		Course description for S	SFU Calendar □see at	tached
Available course compor		eminar		Available course compo	nents 🗆 Lecture 🗖 S ticum 🔲 Online 🗖	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)				vulnerable adults (If the	this class will involve ch "Yes" box is checked, all criminal record checks)	ildren or students and
Grading basis Grade	ed 🔲 Satisfactory / Uns e 🔲	atisfactory		Grading basis Graded Satisfactory / Unsatisfactory		
Prerequisites (if any) EASC 417 or e	quivalent			Prerequisites (if any) Permission of i	nstructor	
This is combined with an	undergrad course. 🔲	Yes 🗆 No		This is combined with a	n undergrad course. 🛛	Yes 🗌 No
Course number and units				Course number and uni	ts:	
Additional course require	ments for graduate stud	ents		Additional course requir	rements for graduate stud	dents
Faculty graduate studies c	ominittee name Sig	hature 6	2	Dause	13 May 14 ate (1)	4
Schare graduate studies c	Signature and Signature Si	nature		Ui	ate /	



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DEPARTMENT

Department / School / Program Earth Sciences		Contact name Brent Ward		Contact email bcward@sfu.ca			
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)	Number (eg. 810)
EASC	617
Course title (max 80 ch	aracters)

Quaterna

REVISED COURSE

Please complete only the fields to be changed.

Program (eg. LBST) EASC	Number (eg. 810) 617	Units (eg. 4) 3		Program (eg. LBST)	Number (eg. 810)	Units (eg. 4)	
Course title (max 80 char	racters)			Course title (max 80 cha	racters)		
Quaternary	Geology						
Short title (appears on tr	anscripts, max 25 charac	ters)		Short title (appears on tr	anscripts, max 25 charac	ters)	
Course description for SI	FU Calendar 🛛 see atta	ached		Course description for S	FU Calendar 🛛 see atta	ached	
and the second se	acial and proglacia aphy and dating m he Cordillera.	and the second sec		Quaternary stratig	lacial and proglacia raphy and dating m the Cordillera. The day trips and at lea	ethods course	
Available course compon	ents 🛛 Lecture 🗖 Se cum 🗋 Online 🗖	eminar		Available course compor Laboratory Pract	icum 🛛 Online 🗖 Se	eminar	
vulnerable adults (If the ' instructors will require co	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	d 🔲 Satisfactory / Unsa			Yes No			
In Progress / Complete				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.	′es □No	
Course number and units	ö:			Course number and units:			
Additional course require	ments for graduate stude	ents		Additional course requirements for graduate students			
APPROVAL	Ba	R	É		13Mar 14	<u>.</u>	
aculty gradúate studies c	ommittee name Sign		\bigcirc	Da	te Teme 16/14		

Senate graduate studies committee name

Faculty graduate studi

Signature

Date



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DEPARTMI	ENT						
Department / School / Program Contact name Earth Sciences Glyn Williams-		Jone	es	1.000	tact email nwj@sfu.ca		
Please revise the following Catalogue number							
Please complete only t		nged.		Please complete or		DURSE e fields to be changed	
Program (eg. LBST) EASC	Number (eg. 810) 620	Units (eg. 4) 3		Program (eg. LBST)		Number (eg. 810)	Units (eg. 4)
Course title (max 80 cha	racters]			Course title (max 80) chara	acters)	
Volcanolog	y						
Short title (appears on tr	anscripts, max 25 c	haracters)		Short title (appears	on tra	inscripts, max 25 charac	ters)
Course description for S	FU Calendar 🛛 se	e attached		Course description f	for SF	U Calendar 🛛 see atta	ched
Physical, chemical and tectonic aspects of volcanology examined with emphasis on processes of magma generation and evolution, styles of eruption, environments of deposition, and interpretation of volcanic facies.			5	Physical, chemical and tectonic aspects of volcanology examined with emphasis on processes of magma generation and evolution, styles of eruption, environments of deposition, and interpretation of volcanic facies.			
1				Includes two to thre	e wee	ekend field trips.	
Available course compor	ients 🛛 Lecture icum 🗋 Online [Seminar		Available course con	npone Practic	ents 🗆 Lecture 🗆 Se cum 🗖 Online 🗖	minar
Practicum work done in vulnerable adults (If the instructors will require c	"Yes" box is checked	i, 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				Yes No			
Grading basis Grade		Unsatisfactory		Grading basis Graded Satisfactory / Unsatisfactory			
Prerequisites (if any)				Prerequisites (if any)]		
This is combined with an	undergrad course.	Yes No	1	This is combined wit	th an u	undergrad course. 🔲 Y	es 🗖 No
Course number and units	EASC 421			Course number and units:			
Additional course require	ments for graduate	students		Additional course rea	quirer	ments for graduate stude	ints
APPROVAL	CoBord	P	Zue	A-		13 Mary (4	-
Faculty graduate studies c		Signature		Lacese	Date	Sume 16/14	
Senate graduate studies co	ommittee name	Signature			Date	e	

Senate graduate studies committee name



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 Earth Sciences		Contact name Dan Gibson	Contact email hdgibson@sfu.ca				
Please revise the following elements of the indicated graduate course:							
Catalogue number	🛛 Units	🗆 Title	Description	🗆 Other:			

REVISED COURSE

Please complete only the fields to be changed.

CURRENT COURSE

Please complete only the fields to be changed.

Program (eg. LBST) EASC	Number (eg. 810) 624	Units (eg. 4) 3	Program (eg. LBST)	Number (eg. 810)	Units (eg. 4)
Course title (max 80 cha	aracters)		Course title (max 80 ch	aracters)	
Geology of th	ne Canadian (Cordillera			
Short title (appears on t	ranscripts, max 25 chara	acters)	Short title (appears on	transcripts, max 25 char	racters)
Course description for S	SFU Calendar 🛛 see at	ttached	Course description for	SFU Calendar 🗖 see a	attached
Canadian Cordillera, perspective. Models of terranes and related	Icture and historical go examined from a plate of development of the entities, and their ama dillera, will be examine	e tectonic various algamation to	Canadian Cordillera, perspective. Models of and related entities, a present Cordillera, wi	cture and historical geo examined from a plate of development of the v nd their amalgamation Il be examined in detail rip associated with this	tectonic arious terranes to form the . There will
	nents 🛛 Lecture 🗖 ticum 🖾 Online 🗖 _		Available course compo Laboratory Prac	onents 🛛 Lecture 🗖 cticum 🗖 Online 🗖 -	
vulnerable adults (If the	this class will involve ch "Yes" box is checked, al criminal record checks]	ildren or l students and	vulnerable adults (If th	n this class will involve c e "Yes" box is checked, a criminal record checks)	ll students and
□Yes □No			🗆 Yes 🖾 No		
Grading basis □Grad □In Progress / Comple	ed Satisfactory/Un te	satisfactory	Grading basis Gra Grading basis / Grad	ded 🔲 Satisfactory / U ete 🔲	nsatisfactory
Prerequisites (if any)			Prerequisites (if any)	,	
This is combined with an	n undergrad course. 🗖	Yes No	This is combined with a	in undergrad course.	Yes No
Course number and unit	S:		Course number and un	its:	
Additional course requir	ements for graduate stu	dents	Additional course requi	rements for graduate stu	udents
Faculty graduate studies			ed	13 Mcc ((

Date Sc

Senate graduate studies committee name

Signature