

OFFICE OF THE ASSOCIATE VICE-PRESIDENT, ACADEMIC

MEMORANDUM	8888 University Drive, Burnaby, BC Canada V5A 1S6	TEL: 778.782.6654 FAX: 778.782.5876	avpacad@sfu.ca www.sfu.ca/vpacademic
MEMONANDOM -			
ATTENTION	Senate	DATE	January 10, 2020
FROM	Wade Parkhouse, Chair	PAGES	1/2
RE:	Senate Committee on Undergraduate Studies Course Changes (SCUS 2	20-01)	Palloure

For information:

Acting under delegated authority at its meeting of January 9, 2020 SCUS approved the following curriculum revisions effective Fall 2020.

a. Faculty of Applied Sciences

1. School of Computing Science

- (i) Prerequisite change for CMPT 371
- (ii) Prerequisite and description change for CMPT 376W

b. Faculty of Arts and Social Sciences

1. Department of Psychology

(i) Prerequisite change for PSYC 425 and 426 adding an amendment to the Criminal Record Check section (Summer 2020)

c. Beedie School of Business

- (i) Equivalent statement change for BUS 200, 201, and 202
- (ii) Description and prerequisite change for BUS 336

d. Faculty of Science

1. Department of Biomedical Physiology and Kinesiology

- (i) Deletion of BPK 324, 417W,
- (ii) Equivalent statement change for BPK 325, 417
- (iii) Title and prerequisite change for BPK 443

2. Department of Chemistry

(i) Prerequisite change for CHEM 364

3. Department of Earth Sciences

- (i) Prerequisite change for EASC 401
- 4. Department of Mathematics

(i) Course number change for MATH 310

(ii) Prerequisite changes for MATH 314, MACM 416, MATH 418 and 462

(iii) Course number, title, description, prerequisite change and equivalency statement for

MATH 461

(iv) Title, description and prerequisite change for MATH 348

5. Department of Molecular Biology and Biochemistry

(i) Prerequisite change for MBB 326

6. Department of Physics

- (i) Prerequisite change for PHYS 211, 255, 384, 385, 395, and 413
- (ii) Prerequisite and equivalency statement changes to 321

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

SCUS 20-01a

CELL	SEU SENATE COMMITTEE ON					COURSE MODIFICATION FORM				
350	UNDERGRA	DUATE STUDIES						Page 1 of 1		
COURSE	SUBJECT	CMPT	NUMBER	371	TITLE	Data Co Networ	mmunicatio king (3)	ons and		
TYPE OF	CHANGES.	Please type 'X' fe	or the appr	opriate revi	sion(s):					
Course number		Units	S		Prere	quisite	\boxtimes			
Title		Desc	ription		-	ivalent tement				

WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using strike through, indicate added or new text using <u>underline</u>. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under <u>Information about</u> specific course components if changing equivalent statement(s).

Prerequisite: CMPT 225, (CMPT 150, ENSC 150 or CMPT 295) and <u>(</u>MATH 151 <u>or</u> MATH 150<u>)</u>. MATH 154 or <u>MATH</u> 157 with a grade of at least B+ may be substituted for MATH 151 (MATH 150).

EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

RATIONALE (must be included)

The reason CMPT 150/CMPT 295 is a prerequisite is a matter of history.

The learning outcomes for CMPT 295 do not match the learning incomes of CMPT 371.

5	SENATE COMMITTEE ON UNDERGRADUATE STUDIES					COURSE MODIFICATION F Page				
	COURSE SUBJ	ECT	СМРТ	NUMBER	376w	TITLE	Technic Dynami	cal Writing a ics (3)	and Group	
т	YPE OF CHAN	I GES. P	lease type	e 'X' for the app	propriate revi	sion(s):				
	Course number			Units		Prere	quisite	\boxtimes		
	Title			Description	\boxtimes	-	ivalent tement			

Covers professional writing in computing science, including format conventions and technical reports. <u>Attention is paid to examines group dynamics</u>, including team leadership, dispute resolution, <u>cognitive bias</u>, professional ethics and collaborative writing. <u>Also covers Research methods are also discussed</u>. The use of LaTeX and various <u>version control tools are emphasized</u>. Prerequisites: <u>CMPT 105W</u> and (CMPT 275 or CMPT 276). Students with credit for CMPT 376 may not take this course for further credit. Writing.

EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

RATIONALE (must be included)

CMPT 105W is added as an additional prerequisite, thereby making the two W Computing courses a consistent full year technical writing module in the department.



FACULTY OF ARTS AND SOCIAL SCIENCES

Office of the Dean

	8888 University Drive, Burnaby, BC Canada V5A 186	TEL 778.782.4416 FAX 778.782.3033	murraye@sfu.ca http://www.sfu.ca/fass.html
MEMORAND	UM		
ATTENTION	Wade Parkhouse, Chair	DATE 2 December 20	019
	Senate Committee on Undergraduate Studies		005
FROM	Catherine Murray, Chair Faculty of Arts and Social Sciences	PAGES 3	CA / larray
	Undergraduate Curriculum Committee		
RE:	Course Changes- Amendment to SCUS	S 19-57-8(i)- PSYC 425 a	and PSYC 426

The Faculty of Arts and Social Sciences approved two new course proposals, PSYC 425 and PSYC 426 at the FASSUCC meeting of Thursday, October 17, 2019. However, the Associate Dean, acting under delegated authority approves the amendment to the Criminal Record Check sections for both courses, changing from "not required" to "required" at the request of the Department of Psychology. Participation will be subject to a criminal record check if the hosts/community partners requires it.

Please place these items on the agenda for the next SCUS meeting.

CM:ws

SCUS 20-01b

vith

COURSE SU	J BJECT PS	YC NUMBER	426	TITLE Field School	Page 1 c
TYPE OF CH	ANGES. Pleas	e type 'X' for the ap	propriate re	evision(s):	
Course number		Units		Prerequisite 🛛	
Title		Description		Equivalent 🛛 Statement	
indicate add allows, drag expand. Plea <u>specific cour</u> Prerequisit from the Fi	ed or new text the endpoint se review the se component e: 30 units, PSV eld School Dire cord Check de	t using <u>underline</u> . If of the text box to ma "Equivalency staten is if changing equiv (C 201, other prerequ ector <u>. Students may b</u>	you need to ake it bigger nents" secti alent staten uisites vary k be required t	anged text using strike th o enter more text than th r, as it will not automatic on under <u>Information ab</u> nent(s). by topic offering, permissi to successfully complete a chool and the community	e box ally pout on
indicate add allows, drag expand. Plea specific cour Prerequisit from the Fi <u>Criminal Re</u>	ed or new text the endpoint se review the se component e: 30 units, PSV eld School Dire cord Check de	using <u>underline</u> . If of the text box to ma "Equivalency staten if changing equiv (C 201, other prerequ ector <u>. Students may b</u>	you need to ake it bigger nents" secti alent staten uisites vary k be required t	e enter more text than th r, as it will not automatic on under <u>Information ab</u> nent(s). by topic offering, permissi to successfully complete a	e box ally pout on
indicate add allows, drag expand. Plea <u>specific cour</u> Prerequisit from the Fi <u>Criminal Re</u> <u>partners in</u>	ed or new text the endpoint se review the se component e: 30 units, PSV eld School Dire cord Check de volved.	using <u>underline</u> . If of the text box to ma "Equivalency staten if changing equiv (C 201, other prerequ ector <u>. Students may b</u>	you need to ake it bigger nents" secti alent staten uisites vary b <u>be required t</u> <u>of the field so</u>	e enter more text than th r, as it will not automatic on under <u>Information ab</u> nent(s). by topic offering, permissi to successfully complete a	e box ally pout on
indicate add allows, drag expand. Plea specific cour Prerequisit from the Fi <u>Criminal Re</u> partners in Fall, Spring, Summer 20	ed or new text the endpoint se review the se component e: 30 units, PSV eld School Dire cord Check de volved.	E using <u>underline</u> . If of the text box to ma "Equivalency staten is if changing equiva (C 201, other prereque ector <u>. Students may be</u> pending on the site of EAR FOR CHANGES rear (please enter in	you need to ake it bigger nents" secti alent staten uisites vary b <u>be required t</u> <u>of the field so</u>	e enter more text than th r, as it will not automatic on under <u>Information ab</u> nent(s). by topic offering, permissi to successfully complete a	e box ally pout on

November 2016

SCUS 20-01c

SFU	SENATE COMMITT UNDERGRADUATE			COURSE MC	DDIFICATION FORM Page 1 of 1
COURSE SI	U BJECT BU	S NUMBER	200	TITLE Business	s Fundamentals
TYPE OF CH	IANGES. Pleas	e type 'X' for the apj	propria	te revision(s):	
Course number		Units		Prerequisite	
Title		Description		Equivalent Statement	\boxtimes

WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using strike through, indicate added or new text using <u>underline</u>. If you need to enter more text than the box allows, drag the endpoint of the text box to make it bigger, as it will not automatically expand. Please review the "Equivalency statements" section under <u>Information about</u> specific course components if changing equivalent statement(s).

Explore the fundamentals of modern business and organizational management. Working with case studies, students will build upon the basics of revenue, profits, contribution and costs, as well as integrate advanced aspects of business models, innovation, competitive advantage, core competence, and strategic analysis. Breadth-Social Sciences. <u>Students with credit for BUS 130 or 201 may not receive</u> <u>further credit for this course.</u>

EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

RATIONALE (must be included)

BUS 200 & BUS 201 are very similar in terms of content (although BUS 201 has additional co-curricular components) and should be considered equivalent. Business students admitted to Beedie in their first year are required to take BUS 201 and BUS 200 is for students outside of the Business Major or in the Business Minor. BUS 130 was an earlier iteration of BUS 201 that is no longer offered.

SFU SENATE COMMITTEE ON UNDERGRADUATE STUDIES				COURSE N	ODIFICATION FORM Page 1 of 1
 COURSE SU	UBJECT	BUS NUMBER	201	TITLE Introd	uction to Business
TYPE OF CH	IANGES.	Please type 'X' for the app	oropriate revi	sion(s):	
Course number		Units		Prerequisite	
Title		Description		Equivalent Statement	
WORDING/	DESCRIP	TION EDITS. Indicate de	leted or chan	ged text using sti	'ike through ,

The management and operation of business, including the principles, concepts, ideas and tools used by managers. Management in the contemporary world of high technology is emphasized, featuring examples and cases involving high-tech firms. In addition, the course exposes students to international and local business issues, and to large companies as well as to smaller, entrepreneurial firms. Prerequisite: This course is only open to approved Business Administration majors admitted to the faculty through the Business Foundation Program - High School Stream. Students with credit for BUS 130 or <u>200</u> 202 or 301 may not receive further credit for this course, nor students with more than 30 units.

EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

RATIONALE (must be included)

BUS 200 & BUS 201 are very similar in terms of content (although BUS 201 has additional co-curricular components) and should be considered equivalent. Business students admitted to Beedie in their first year are required to take BUS 201 and BUS 200 is for students outside of the Business Major or in the Business Minor. BUS 202 has dissimilar content and focuses more on team learning, collaboration, and an experiential product development project, so we are removing that equivalency. BUS 301 was essentially a pilot for BUS 202 and was replaced by BUS 202 in Fall 2014 and was only offered twice (Fall 2013 & Spring 2014) to transfer students.

	ENATE COMMITTEE O NDERGRADUATE STUI			COURSE MODIFICATION FORM PAGE I OF I		
COURSE SUB	BUS	NUMBER	202		ations for Collaborative Environments	
TYPE OF CHA	NGES. Please ty	pe 'X' for the app	oropriate revi	ision(s):		
Course number		Units		Prerequisite		
Title		Description		Equivalent Statement	\boxtimes	

The demand for innovation in the context of a globalized workforce has raised the importance of developing collaborative skills and managing workplace diversity. Foundations for Collaborative Work Environments expands students' skills in effectively collaborating with others while participating in the Beedie Product Management Experience to achieve team and business objectives. Prerequisite: This course is only open to approved Business Administration majors, joint majors, or second degree students admitted to the faculty through the Business Foundation Program - Transfer Stream. Students with credit for BUS 130 or 201 or 301 may not receive further credit for this course.

EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

RATIONALE (must be included)

BUS 200 & BUS 201 are very similar in terms of content (although BUS 201 has additional co-curricular components) and should be considered equivalent. Business students admitted to Beedie in their first year are required to take BUS 201 and BUS 200 is for students outside of the Business Major or in the Business Minor. BUS 202 has dissimilar content and focuses more on team learning, collaboration, and an experiential product development project, so we are removing that equivalency. BUS 301 was essentially a pilot for BUS 202 and was replaced by BUS 202 in Fall 2014 and was only offered twice (Fall 2013 & Spring 2014) to transfer students. BUS 130 was an earlier iteration of BUS 201 and is no longer offered.

COURSE S	U BJECT BU	JS NUMBER	336-4	TITLE Data and Decisions II
YPE OF CH	IANGES. Plea	se type 'X' for the app	oropriate	revision(s):
Course number		Units		Prerequisite 🖄
Title		Description	\boxtimes	Equivalent 🗆 Statement
ndicate add llows, drag xpand. Plea pecific cour This cours quantitativ Beginning	ed or new tex the endpoint ase review the review the rese componen e is an extens ve models tha with material	t using <u>underline</u> . If of the text box to ma "Equivalency staten <u>ts</u> if changing equiva ion of BUEC <u>BUS</u> 232 t are most directly re on multiple regress	you need lke it bigg nents" sec alent state 2. It develo elevant to ion and fo	ops and applies the business decisions. recasting modeling, the
ndicate add llows, drag xpand. Plea <u>pecific cour</u> This cours quantitativ Beginning course mo introductio	ed or new tex the endpoint ase review the <u>se componen</u> e is an extens ve models tha with material ves on to deci on to optimiza	t using <u>underline</u> . If of the text box to ma "Equivalency staten ts if changing equiva ion of BUEC <u>BUS</u> 232 t are most directly re on multiple regress sion analysis, busine	you need lke it bigg nents" sec alent state . It develo elevant to ion and fo ess simula IATH 150	to enter more text than the box er, as it will not automatically tion under <u>Information about</u> ement(s). ops and applies the business decisions. recasting modeling, the tion, quality control, and an , MATH 151, MATH 154,
ndicate add llows, drag xpand. Plea <u>pecific cour</u> This cours quantitativ Beginning course mo introduction or 157; BU	ed or new tex the endpoint ase review the <u>se componen</u> e is an extens ve models tha with material ves on to deci on to optimiza EC <u>BUS</u> 232 c	t using <u>underline</u> . If of the text box to ma "Equivalency staten <u>ts</u> if changing equiva- ion of BUEC <u>BUS</u> 232 t are most directly re- on multiple regress sion analysis, busine ation. Prerequisite: Mor STAT 270; 45 units	you need ke it bigg nents" sec alent state levant to ion and fo ion and fo ss simula IATH 150 s. Quantita	to enter more text than the box er, as it will not automatically tion under <u>Information about</u> ement(s). ops and applies the business decisions. recasting modeling, the tion, quality control, and an , MATH 151, MATH 154,
ndicate add llows, drag xpand. Plea pecific cours This cours quantitativ Beginning course mo introductio or 157; BU FFECTIVE	ed or new tex the endpoint ase review the se component e is an extens we models tha with material ves on to deci on to optimiza EC <u>BUS</u> 232 of TERM AND Y	t using <u>underline</u> . If of the text box to ma "Equivalency staten ts if changing equiva- ion of BUEC <u>BUS</u> 232 t are most directly re on multiple regress sion analysis, busine ation. Prerequisite: M	you need ke it bigg nents" sec alent state levant state elevant to ion and fo ess simula IATH 150 s. Quantita	to enter more text than the box er, as it will not automatically tion under <u>Information about</u> ement(s). ops and applies the business decisions. recasting modeling, the tion, quality control, and an , MATH 151, MATH 154,
ndicate add llows, drag xpand. Plea pecific cours This cours quantitativ Beginning course mo introductio or 157; BU FFECTIVE	ed or new tex the endpoint ase review the se component e is an extens we models tha with material ves on to deci on to optimiza EC <u>BUS</u> 232 of TERM AND Y	t using <u>underline</u> . If of the text box to ma "Equivalency staten <u>ts</u> if changing equiva- ion of BUEC <u>BUS</u> 232 t are most directly re- on multiple regress sion analysis, busine ation. Prerequisite: M or STAT 270; 45 units	you need ke it bigg nents" sec alent state levant state elevant to ion and fo ess simula IATH 150 s. Quantita	to enter more text than the box er, as it will not automatically tion under <u>Information about</u> ement(s). ops and applies the business decisions. recasting modeling, the tion, quality control, and an , MATH 151, MATH 154,

SCUS 20-01d

SFU SENATE COMMITTEE ON EXISTING COURSE DELETION FORM UNDERGRADUATE STUDIES I OF 1 PAGE
COURSE SUBJECT BPK NUMBER 324 TITLE Principles of Human Anatomy
RATIONALE (must be included)
The course has never been offered and there is not a plan to offer it in the future.
EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (enter in textbox) Fall 2020
PLEASE DO THE FOLLOWING:
 Attach a program impact list along with your course deletion form. Contact the Senate and Academic Services Office (sfucal@sfu.ca) for a program impact list. Once you have the program impact list, please review how deleting this course affects each program's requirements. If more substantial changes are required to programs as a result of this deletion, please also submit a program modification form. If no further changes other than deletion is required in program requirements, please list those programs in the box below:
 Biomedical Physiology Minor - program modification form submitted along with this motion. BPK 325 course equivalent statement modification submitted along with this motion.
Hi Ryan,
Here's the program impact list for BPK 324:
Biomedical Physiology Minor
Regards,
Annie Young Program Assistant Senate & Academic Services Simon Fraser University 8888 University Drive Burnaby, BC V5A 1S6 778-782-3792
5. Lastly, please conduct a course impact analysis, which reviews the effect of a course number change and/or course deletion on course prerequisites. For instructions on how to do a course impact analysis, please visit <u>our</u> page and click on "deleting a course" and review Step 2. Course Impact Analysis.



SENATE COMMITTEE ON UNDERGRADUATE STUDIES

COURSE SUBJECT	BPK	NUMBER	417W	TITLE	Obesity, Adipocyte Function and Weight Man

RATIONALE (must be included)

The course will not be offered it in the future. BPK will continue to offer BPK 417.

EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (enter in textbox)

Fall 2020

PLEASE DO THE FOLLOWING:

1. Attach a program impact list along with your course deletion form. Contact the Senate and Academic Services Office (sfucal@sfu.ca) for a program impact list.

2. Once you have the program impact list, please review how deleting this course affects each program's requirements.

3. If more substantial changes are required to programs as a result of this deletion, please also submit a program modification form.

4. If no further changes other than deletion is required in program requirements, please list those programs in the box below:

- 1. Kinesiology Major and Honours Program change form submitted along with this motion.
- 2. Biomedical Physiology Major and Honours Program changes passed through SCUS July 4th, 2019.
- 3. Removal of equivalency statement within BPK 417 submitted along with this motion.

Hi Ryan,

Here's the program impact list for BPK 417W:

Biomedical Physiology Major Biomedical Physiology Honours Kinesiology Major Kinesiology Honours

Regards,

5. Lastly, please conduct a course impact analysis, which reviews the effect of a course number change and/or course deletion on course prerequisites. For instructions on how to do a course impact analysis, please visit <u>our</u> page and click on "deleting a course" and review Step 2. Course Impact Analysis.

SFU course si	SENATE COMMITT UNDERGRADUATE JBJECT BPJ	STUDIES	325	COURSE MODIFICATION P TITLE Basic Human Anatom	age 1 o
	IANGES. Pleas	e type 'X' for the app Units	oropriate revi		
Course number		Units		Prerequisite 🛛	
Title		Description		Equivalent 🛛 Statement	
indicate add allows, drag expand. Plea	ed or new text the endpoint o ase review the	using <u>underline</u> . If of the text box to ma	you need to e ake it bigger, a nents" sectior	ged text using strike through, nter more text than the box is it will not automatically under <u>Information about</u> nt(s).	
specific cour					
		r BPK 324 or BPK 3	326 may not	take this course for	

Fall 2020

RATIONALE (must be included)

BPK 324 has never been offered and there is no plan to offer it in the future.

A motion to delete BPK 324 has been put forward.

SFU		MMITTEE ON DUATE STUDIES		COU	RSE MOI	DIFICATION FORM Page 1 of 1
COURSES	SUBJECT	BPK N	UMBER 41	7 TITLE		, Adipocyte Function ight Management
TYPE OF C	HANGES.	Please type 'X' fo	r the appropr	iate revision(s):		
Course number		Units		Prere	equisite	
Title		Descr	iption 🗆		ivalent tement	\boxtimes
indicate ad allows, dra expand. Ple	ded or nev g the endp ease reviev	v text using <u>unde</u> oint of the text b	e <u>rline</u> . If you r ox to make it cy statements	or changed text eed to enter mor bigger, as it will n " section under <u>I</u> statement(s).	e text than not automa	n the box atically
Prerequis credit.	ites: BPK 1	10, 306, 340. Stuc	lents with crea	lit for BPK 417 W	may not re	epeat this course for further
		ND YEAR FOR Cl and year (please		oox)		

RATIONALE (must be included)

BPK 417W is being deleted. BPK 417W has never been scheduled. KIN 417W was scheduled once in Spring 2012.

SFU		MMITTEE ON DUATE STUDIES			COU	RSE MO	DIFICATI	ON FORM Page 1 of 1	
COURSE S	UBJECT	ВРК	NUMBER	443	TITLE	Advanc Prescrij	ed Exercise ption	2	
TYPE OF CH	IANGES.	Please type 'X	' for the app	oropriate revi	ision(s):				
Course number		Un	its		Prere	quisite	\boxtimes		
Title	\boxtimes	De	scription		-	ivalent tement			

Advanced Exercise Programming Prescription

Prerequisite: BPK 304W, 310 and 343 (one of which may be taken as a co-requisite).

EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

RATIONALE (must be included)

Title: The term 'prescription' implies a one-time course of action, whereas the course discusses systematic long-term integrated program development. The term programming is also used within the course description.

Prerequisites: The prerequisites each provide assurance that the student is prepared for parts of the course and that the student is senior enough to benefit from the course. Students taking any one of the courses concurrently will be able to perform well. Adding this flexibility will allow more students to select this course as an option, as any of these third-year courses could be left until late in their program.

COURSES	SUBJECT CH	EM NUMBER	364	TITLE Quantum Chemistry
YPE OF C	HANGES. Pleas	e type 'X' for the ap	propriate rev	vision(s):
Course number		Units		Prerequisite 🔀
Title		Description		Equivalent 🗆 Statement
Fundame		m mechanics and it		esults and techniques as applied
Fundame to atoms molecule 285, MAT 260 or M	entals of quantu and molecules: s, symmetry of TH 232, and MA ATH 310. Stude	m mechanics and it atomic structure, n atomic and molecul TH 251, all with a n	nolecular bon ar orbitals. F ninimum gra CHEM 464 m	nding, rotations and vibrations of Prerequisite: CHEM 260 or PHYS de of C Recommended: <u>MATH</u> ay not take this course for
Fundame to atoms molecule 285, MAT <u>260 or</u> M further co	entals of quantu and molecules: s, symmetry of TH 232, and MA ATH 310. Stude redit. PHYS 385	m mechanics and it atomic structure, n atomic and molecul TH 251, all with a n ents with credit for (will be accepted in EAR FOR CHANGES	nolecular bor ar orbitals. F ninimum gra CHEM 464 m lieu of CHEM	nding, rotations and vibrations of Prerequisite: CHEM 260 or PHYS de of C Recommended: <u>MATH</u> ay not take this course for
Fundame to atoms molecule 285, MAT <u>260 or</u> M further co	entals of quantu and molecules: s, symmetry of TH 232, and MA ATH 310. Stude redit. PHYS 385 E TERM AND Y g, Summer and y	m mechanics and it atomic structure, n atomic and molecul TH 251, all with a n ents with credit for (will be accepted in	nolecular bor ar orbitals. F ninimum gra CHEM 464 m lieu of CHEM	nding, rotations and vibrations of Prerequisite: CHEM 260 or PHYS de of C Recommended: <u>MATH</u> ay not take this course for

SFU	SENATE COMMIT					Page 1 o
COURSE SU	J BJECT EA	ASC NUMBER	401	TITLE Mineral	l Deposits	
TYPE OF CH	IANGES. Plea	se type 'X' for the ap	propriate revi	sion(s):		
Course number		Units		Prerequisite	\boxtimes	
Title		Description		Equivalent Statement		
allows, drag expand. Plea	the endpoint ise review the	kt using <u>underline</u> . If of the text box to ma e "Equivalency stater <u>ats</u> if changing equiv	ake it bigger, a ments" sectior	as it will not auton 1 under <u>Informatio</u>	natically	
allows, drag expand. Plea <u>specific cour</u> The petrol deposits; t	the endpoint ise review the se componer ogy and gene he occurrenc	of the text box to ma e "Equivalency stater	ake it bigger, a nents" sectior alent stateme ore deposits; c industrial an	as it will not auton n under <u>Informatic</u> nt(s). lescription of class d non-metallic min	natically on about sic ore nerals.	
allows, drag expand. Plea <u>specific cour</u> The petrol deposits; t	the endpoint ise review the se componer ogy and gene he occurrenc	of the text box to ma e "Equivalency stater ats if changing equiv sis of metalliferous of e and exploitation of	ake it bigger, a nents" sectior alent stateme ore deposits; c industrial an	as it will not auton n under <u>Informatic</u> nt(s). lescription of class d non-metallic min	natically on about sic ore nerals.	
allows, drag expand. Plea <u>specific cour</u> The petrol deposits; t Prerequisi	the endpoint se review the se componer ogy and gene he occurrenc te: <u>EASC 201</u> ,	of the text box to ma e "Equivalency stater ats if changing equiv sis of metalliferous of e and exploitation of	ake it bigger, a nents" sectior alent stateme ore deposits; c industrial an nd <u>311</u>. All wi	as it will not auton n under <u>Informatic</u> nt(s). lescription of class d non-metallic min	natically on about sic ore nerals.	



SENATE COMMITTEE ON UNDERGRADUATE STUDIES

COURSE MODIFICATION FORM

RATIONALE (must be included)

Page 2 of 2

- 1. Minor changes to EASC 401 content no longer require EASC 311 as a prerequisite.
- 2. Removal of the EASC 311 prerequisite provides greater access to EASC 401 for Earth Science majors.

	J N D E R G R A	MMITTEE ON DUATE STUDIES MATH	NUMBER	310	COU TITLE	Introdu	DIFICATION FORM Page 1 of 1 ction to Ordinary ntial Equations
TYPE OF CHA	ANGES.	Please type 'X'	for the app	ropriate rev	ision(s):		
Course number	\boxtimes	Un	its		Prere	quisite	
Title		De	scription		-	ivalent tement	

310

260

EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

RATIONALE (must be included)

In the BC transfer guide our 310 gives 2xx credit at every other institution (for example, MATH 215 at UBC and 201 at UVIC). Most every math department in North America offers a first course in this topic in the second year. At SFU, ENSC students are advised to take it in their third semester. Some programmes teach this in first year.

We would like to bring SFU in line with the rest of BC by renumbering MATH 310 as MATH 260 without changing the content.

COURSE SU	JBJECT	MATH NUMBER	314	TITLE Introduction to Fourier Methods Partial DIfferential Equations	and
TYPE OF CH	IANGES. PI	ease type 'X' for the app	oropriate revi	sion(s):	
Course number		Units		Prerequisite 🕅	
Title		Description		Equivalent 🗆 Statement	
expand. Plea specific cour Fourier set	se review se compor	the "Equivalency statem nents if changing equiva	nents" sectior alent stateme e problems. S	eparation of variables for the	
Symbolic a		ical computing, and gra	phics for PDE	s. Prerequisite: <u>MATH 260 or</u>	
Symbolic a	; and one o	ical computing, and gra	phics for PDE		
Symbolic a MATH 310	; and one o	ical computing, and gra	phics for PDE	s. Prerequisite: <u>MATH 260 or</u>	
Symbolic a MATH 310	; and one o	ical computing, and gra	phics for PDE	s. Prerequisite: <u>MATH 260 or</u>	
Symbolic a MATH 310	; and one o	ical computing, and gra	phics for PDE	s. Prerequisite: <u>MATH 260 or</u>	
Symbolic a MATH 310	; and one o	ical computing, and gra	phics for PDE	s. Prerequisite: <u>MATH 260 or</u>	

Fall 2020



SENATE COMMITTEE ON UNDERGRADUATE STUDIES

Page 2 of 2

RATIONALE (must be included)

MATH 310 is being renumbered as MATH 260 but is unchanged in all other respects.

and the second	SFU		MMITTEE ON DUATE STUDIES		COURSE MODIFICATION FORM Page 1 of 2	
_	COURSE S	UBJECT	MACM	416	TITLE Numerical Analysis II	
	TYPE OF CH	IANGES. I	Please type 'X' for the ap	propriate re	evision(s):	
	Course number		Units		Prerequisite 🗆	
	Title		Description	\boxtimes	Equivalent 🗆 Statement	
	WORDING/	DESCRIP	TION EDITS. Indicate de	eleted or cha	anged text using strike through	

The numerical solution of ordinary differential equations and elliptic, hyperbolic and parabolic partial differential equations will be considered. Prerequisite: (MATH 260 or MATH 310) and MACM 316. Quantitative.

EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020



SENATE COMMITTEE ON UNDERGRADUATE STUDIES

COURSE MODIFICATION FORM

Page 2 of 2

RATIONALE (must be included)

MATH 310 is being renumbered as MATH 260 but is unchanged in all other respects.

		MMITTEE ON DUATE STUDIE	55		COU	RSE MO	DIFICAT	Page 1 of
COURSE S	UBJECT	MATH	NUMBER	418	TITLE	Partial D	Differentia	al Equation
TYPE OF CH	IANGES. F	Please type	e 'X' for the app	propriate revi	ision(s):			
Course number			Units		Prere	equisite		
Title			Description			ivalent tement		
expand. Plea	ase review rse compo	the "Equi nents if cl	text box to ma valency statem hanging equiva	nents" section alent stateme	n under <u>Ir</u> nt(s).	nformation	n about	
functions, and transf equations. 310) and c	the maxin forms. High Burgers' one of MAT te is both	num princ her dimen equation a FH 314, 32 of <u>(</u> MATH	ne method of c iple, Green's fu sional eigenva ind shock wave 0, 322, PHYS 3 <u>252 or</u> 254 <u>)</u> an	lue problems es. Prerequis 884. An alterr	heat equa . An intro ite: <u>(MAT</u> native to t	ation. Dist oduction to <u>`H 260 or</u> the above	ributions o nonlinea MATH	ar
functions, and transf equations. 310] and c prerequisi	the maxin forms. High Burgers' one of MAT te is both	num princ her dimen equation a FH 314, 32 of <u>(</u> MATH	iple, Green's fu sional eigenva nd shock wav 0, 322, PHYS 3	nctions. The lue problems es. Prerequis 884. An alterr	heat equa . An intro ite: <u>(MAT</u> native to t	ation. Dist oduction to <u>`H 260 or</u> the above	ributions o nonlinea MATH	ar

Fall 2020



SENATE COMMITTEE ON UNDERGRADUATE STUDIES

COURSE MODIFICATION FORM

Page 2 of 2

RATIONALE (must be included)

MATH 310 is being renumbered as MATH 260 but is unchanged in all other respects.

COURSE S	UBJECT	MATH NUMBER	462	TITLE	Fluid Dynamics	
TYPE OF CH	IANGES. I	Please type 'X' for the app	propriate revi	ision(s):		
Course number		Units		Prere	quisite 🗌	
Title		Description	\boxtimes		ivalent 🗆 cement	
expand. Plea specific cour Incompres and bound of MATH 3	sse review rse compo ssible fluid lary layer 14, MATH	oint of the text box to may the "Equivalency statem onents if changing equiva d flow phenomena: kinen theory, potential flow, w I 418, PHYS 384. An alter TH 260 or MATH 310], b	nents" section alent stateme natics and equater waves. A rnative to the	n under <u>In</u> nt(s). uations of erodynar above pr	formation about motion, viscous flo nics. Prerequisite: erequisite is both c	one of
	<u>.</u>					

Fall 2020



SENATE COMMITTEE ON UNDERGRADUATE STUDIES

COURSE MODIFICATION FORM

Page 2 of 2

RATIONALE (must be included)

MATH 310 is being renumbered as MATH 260 but is unchanged in all other respects.

SFU	SENATE COMMIT			COU	RSE MO	DIFICATION FO Page 1
COURSE SU	JBJECT	IATH NUMBER	461	TITLE	Continue Models	ous Mathematical
TYPE OF CH	I ANGES. Plea	se type 'X' for the app	oropriate rev	ision(s):		
Course number	\boxtimes	Units		Prere	quisite	\boxtimes
Title	\boxtimes	Description	\boxtimes		ivalent tement	
4 61 <u>360</u>						
4 61 <u>360</u> (3 Formulatic	5) on, analysis a oplications m	cal Models- <u>Modeling</u> nd numerical solution ay be selected from to	a <u>simulation</u> opics in phys	of continu ics, biolog	ous math y, engine	ematical ering and
<u>316, MATH</u> 251 and M	<u>I 418, PHYS 3</u> ATH 310, bot	e: MATH 310 <u>251 and</u> 3 <u>84</u> . An alternative to th with grades of at le not complete this cou	the above pr ast B+. Stude	erequisite ents with e	e is both c credit for	f <u>MATH</u> MATH 361

EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)



Fall 2020

COURSE MODIFICATION FORM

Page 2 of 2

RATIONALE (must be included)

In conjunction with moving MATH 310 to MATH 260 we are modifying one the classes that required 310 required. The removal of additional upper division prerequisites reflects how the class has been recently taught. These changes will make the class more accessible to both major and minor students.

	SENATE COMMIT UNDERGRADUATI			COURSE MODIFICATION FOR Page 1 c
COURSE S	UBJECT M.	ATH NUMBER	348	TITLE Probabilistic Models in Operations Research
TYPE OF CH	IANGES. Pleas	se type 'X' for the ap	propriate rev	ision(s):
Course number		Units		Prerequisite 🖂
Title	\boxtimes	Description	\boxtimes	Equivalent 🗆 Statement
		Operations Research	1	
MATH 348 Inventory forecasting simulation Review of expectatio distribution include inv	theory, Marka g models, deci modeling, pr the basics of p n and condition and the Poi ventory theor	listic Models by decision process a sion Analysis and ga oject planning using probability, includin poning. Applications o sson process from so y, queuing, forecasti	and applicati t mes, probab ; PERT/CPM, g sample spa of Markov ch cience and in ng, schedulin	ons, queuing theory, ilistic dynamic programming, sequencing and scheduling. ce, random variables, ains, the exponential dustry. Applications may g and simulation. Prerequisite: site: <u>MATH 308</u> . Quantitative.

EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)



COURSE MODIFICATION FORM

Page 2 of 2

Fall 2020

RATIONALE (must be included)

In conjunction with moving MATH 310 to MATH 260 we are modifying one the classes that required 310 required. The removal of additional upper division prerequisites reflects how the class has been recently taught. These changes will make the class more accessible to both major and minor students.

COURSE SU	BJECT	MBB	NUMBER	326	TITLE	Introduct system	tion to the imn	nune
TYPE OF CH	IANGES.	. Please type '	X' for the ap	propriate re	evision(s):			
Course number		U	nits		Prer	equisite	Х	
Title		D	escription			uivalent		
ndicate add Illows, drag expand. Plea specific cour	led or ne the end ase revie rse comp	PTION EDITS w text using point of the te w the "Equiva- conents if char e structure an	underline. If ext box to ma alency stater anging equiv	you need to ake it bigge nents" secti alent stater	anged text o enter mor r, as it will ion under <u>l</u> nent(s).	re text tha not autom nformatic	n the box natically on about	7
ndicate add illows, drag expand. Plea pecific cour Introducti system pr the functio responses function o	led or ne the end ase revie rse comp on to the otects ag on of inn , includin f T and E	w text using point of the term point of the term w the "Equiva- conents if char e structure and gainst microb ate immune of ng the organic 3 cells, and an	underline. If ext box to ma alency stater anging equiv d function o ial infections cells, recepto zation of lym tibodies. Stu	you need to ake it bigger nents" secti alent stater f the immun s. Innate imm rs and com aphoid orga udents with	anged text o enter mon r, as it will ion under <u>I</u> nent(s). ne system a mune respo plement. A ns, develop credit for I	using stri re text tha not autom <u>nformatic</u> and how th onses, incl daptive in oment and ISCI 426,	n the box natically on about his luding nmune l MBB	
ndicate add illows, drag expand. Plea pecific cour Introducti system pr the functio responses function o	led or ne the end ase revie rse comp on to the otects ag on of inn , includi f T and F CI 326 m	w text using point of the text point of the text text the "Equiva- conents if char e structure and gainst microb ate immune of ate immune of ag the organis 3 cells, and an hay not take t	underline. If ext box to ma alency stater anging equiv d function o ial infections cells, recepto zation of lym tibodies. Stu	you need to ake it bigger nents" secti alent stater f the immun s. Innate imm rs and com aphoid orga udents with	anged text o enter mon r, as it will ion under <u>I</u> nent(s). ne system a mune respo plement. A ns, develop credit for I	using stri re text tha not autom <u>nformatic</u> and how th onses, incl daptive in oment and ISCI 426,	n the box natically on about his luding nmune l MBB	

Fall 2020

RATIONALE (must be included)

A minimum grade for the MBB 231 prerequisite has been added consistent with other MBB UD course prerequisites.

SFU SENATE COMMITTEE ON UNDERGRADUATE STUDIES				COURSE MOI	COURSE MODIFICATION FORM Page 1 of 1		
COURSE S	UBJECT	PHYS NUMBER	211	TITLE Intermo	ediate Mechanics		
TYPE OF CH	HANGES.	Please type 'X' for the ap	propria	te revision(s):			
Course number		Units		Prerequisite			
Title		Description		Equivalent Statement			

An intermediate mechanics course covering kinematics, dynamics, calculus of variations and Lagrange's equations, non-inertial reference frames, central forces and orbits, and rigid body motion. Prerequisite: PHYS 126 or 121 or 141, with a minimum grade of C-, (or PHYS 102, with a minimum grade of B); MATH 251; MATH 232 or MATH 240; PHYS 255 or ENSC 380. All prerequisite courses require a minimum grade of C-. Corequisite: MATH 251; MATH 232 or 240. Recommended corequisite: MATH 260 or MATH 310 and PHYS 255. Quantitative.

EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

RATIONALE (must be included)

Rationale: Switching to spring to ease student workload allows changes to prereqs to better prepare students for this challenging course.

SFU		MMITTEE ON DUATE STUDIES	COURSE MODIFICATION FOR Page 1 o			
COURSE S	UBJECT	PHYS NUMBER	R 255	TITLE Vibratic	ons and Waves	
TYPE OF CH	IANGES.	Please type 'X' for the ap	propriate rev	vision(s):		
Course number		Units		Prerequisite		
Title		Description		Equivalent Statement		

The physics of vibrations and waves. Topics include periodic motion, including free and forced oscillations, coupled oscillators, normal modes, and waves in one and higher dimensions. Prerequisite: PHYS 126 or 121 or 141, with a minimum **grade of** C-, grade; or PHYS-101 and 102, with a **minimum** grade of B or better. Corequisite: MATH 251; MATH 232 or 240. Recommended **corequisite**concurrent: PHYS-211 and MATH 310260 or MATH 310. Quantitative.

EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

RATIONALE (must be included)

Changed from Recommended concurrent to Recommended Corequisite to be consistent with other entries. PHYS 211 is no longer taught the same semester, so it is not useful to recommend it as a corequisite. PHYS 101 is a required prerequisite for PHYS 102 so it is not necessary to require it here. Change of number of MATH 310 -> MATH 260.

SF	U SENATE CC UNDERGRA	MMITTEE ON DUATE STUDIES		COURSE MOI	DIFICATION FORM Page 1 of 1
COL	IRSE SUBJECT	PHYS NUMBER	R 384	TITLE Method	ls of Theoretical Physics
ТҮРЕ	E OF CHANGES.	Please type 'X' for the ap	opropriate rev	vision(s):	
Cou nun	rse 🗆 nber	Units		Prerequisite	\boxtimes
Title	e 🗆	Description		Equivalent Statement	
		3			

Applications of mathematical methods in physics, differential equations of physics, eigenvalue problems, solutions to wave equations. Prerequisite: MATH 252 or 254; **MATH 260 or** MATH 310; **PHYS 211**; PHYS 255 or ENSC 320, All prerequisite courses require with a minimum grade of C-. Corequisite: PHYS 211. Quantitative.

EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

RATIONALE (must be included)

Change of number of MATH 310 -> MATH 260. Changes to the schedule allow us to make PHYS 211 a required prerequisite, which will better prepare students for this course.

SFU	SENATE CON UNDERGRAD	IMITTEE ON UATE STUDIES		COURSE MODIFICATION FORM Page 1 of			
COURSE S	UBJECT	PHYS NUMBER	R 385	TITLE Quantu	m Mechanics		
TYPE OF CH	HANGES. P	lease type 'X' for the ap	propria	te revision(s):			
Course number		Units		Prerequisite			
Title		Description		Equivalent Statement			

Wave mechanics and the Schroedinger equation, the harmonic oscillator, introduction to Dirac notation, angular momentum and spin, the hydrogen atom, atomic structure, timeindependent perturbation theory, atomic spectra, and applications. Prerequisite: MATH 252 or 254; PHYS 285 or ENSC 380 or CHEM 260. All prerequisite courses require with a minimum grade of C-. Recommended prerequisitesCo-requisite: MATH 260 or MATH 310; PHYS 211.; MATH 310. Quantitative.

EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

RATIONALE (must be included)

Change of number of MATH 310 -> MATH 260. PHYS 211 is not a required prerequisite, but will help prepare students for this course.

SFU	SENATE COM UNDERGRAD	MITTEE ON UATE STUDIES		COURSE MODIFICATION FORM Page 1 of 1			
COURSE SU	IBJECT	PHYS NUMBER	395	TITLE Comput	ational Physics		
TYPE OF CH	ANGES. P	lease type 'X' for the app	propriate rev	rision(s):			
Course number		Units		Prerequisite	\boxtimes		
Title		Description		Equivalent Statement			

Computer-based approaches to solving complex physical problems. Includes topics such as Monte-Carlo and molecular dynamics techniques applied to thermal properties of materials; dynamical behavior of systems, including chaotic motion; methods for ground state determination and optimization, including Newton-Raphson, simulated annealing, neural nets, and genetic algorithms: symplectic methods; and analysis of numerical data. Prerequisite: **MATH 260 or** MATH 310;; PHYS 255;; CMPT 102, 120; or equivalent;. **All prerequisite courses require** with a minimum grade of C-. Recommended: PHYS 344 or equivalent. Quantitative.

EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

RATIONALE (must be included)

Change of number of MATH 310 -> MATH 260. We are changing our computing requirement to CMPT 120 only. PHYS 344 is no longer recommended.

SFU	SENATE COM UNDERGRAD	IMITTEE ON UATE STUDIES	COURSE MODIFICATION FORM Page 1 of 1			
COURSE SI	UBJECT	PHYS NUMBER	4 13	TITLE Advanc	ed Mechanics	
TYPE OF CH	I ANGES. P	lease type 'X' for the ap	propriate	e revision(s):		
Course number		Units		Prerequisite	\boxtimes	
Title		Description		Equivalent Statement		

Central forces, rigid body motion, small oscillations. Lagrangian and Hamiltonian formulations of mechanics. Prerequisite: PHYS 384, with a minimum grade of C- or permission of the department. Non-physics majors may enter with MATH 252; MATH 260 or MATH 310-and; PHYS 211;. All prerequisite courses require with a minimum grade of C-. Quantitative.

EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

RATIONALE (must be included)

Change of number of MATH 310 -> MATH 260.

SFU		MMITTEE ON DUATE STUDIES		COURSE MODIFICATION				
COURSE SU	JBJECT	PHYS	NUMBER	321	TITLE	Interme Magnet	ediate Electricity and ism	
TYPE OF CH	ANGES. F	lease type 'X' f	for the app	ropriate revi	sion(s):			
Course number		Unit	S		Prere	quisite	\boxtimes	
Title		Desc	cription		-	ivalent tement		

Development and application of Maxwell's equations in vector differential form. Notation and theorems of vector calculus; electric charge, fields, potentials, capacitance and field energy; conductors; methods for solving electrostatic problems; electric fields in matter; electrical current and the magnetic field; Ampere's law and the vector potential; magnetic fields in matter; electromotive force, electrical resistance, Faraday's law and inductance; Maxwell's correction to Ampere's law and electromagnetic waves. Prerequisite: PHYS 121 or 126 or 141 (or PHYS 102, with a minimum grade of B); **MATH** 252 or 254; **MATH 260 or** MATH 310, with_ **All prerequisite courses require a** minimum grade of C-, **unless specified**. Students with credit for PHYS 221 may not take this course for further credit. Quantitative.

EFFECTIVE TERM AND YEAR FOR CHANGES

Fall, Spring, Summer and year (please enter in textbox)

Fall 2020

RATIONALE (must be included)

Change of number of MATH 310 -> MATH 260. PHYS 221 is no longer offered. Grade requirement added explicitly to be consistent with other courses.