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MEMORANDUM

ATTENTION

Senate

DATE

May 4, 2018

FROM

Daniel Leznoff, Chair

PAGES

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Senate Committee on

Undergraduate Studies

RE:

Course Changes (SCUS 18-34)

For information:

Acting under delegated authority at its meeting of May 3, 2018 SCUS approved the following curriculum revisions effective Spring 2019.

#### a. Faculty of Environment (SCUS 18-34a)

#### 1. Department of Geography

- (i) Deletion of GEOG 427
- (ii) Title and description change for GEOG 221 and 241
- (iii) Title, description and prerequisite change for GEOG 261
- (iv) Prerequisite and equivalent statement change for GEOG 321
- (v) Prerequisite change for GEOG 322, 322W, 323, 324, 325 and 327
- (vi) Units and prerequisite change for GEOG 328
- (vii) Prerequisite change for GEOG 362, 362W, 363, 377, 381 and 381W
- (viii) Title, description and prerequisite change for GEOG 382
- (ix) Prerequisite change for GEOG 383
- (x) Title, description and prerequisite change for GEOG 385
- (xi) Prerequisite change for GEOG 386,387 and 389W

# b. Faculty of Science (SCUS 18-34b)

- Department of Biomedical Physiology and Kinesiology
  - (i) Prerequisite change for BPK 326 and equivalency
- 2. Department of Chemistry

- (i) Prerequisite changes for: CHEM 126, 192, 215, 236W, 266, 281, 284, 317, 332, 336, 363, 366W, 367, 371, 372, 380, 381, 391, 419, 432, 439, 442, 444, 449, 450, 452, 455, 459, 460, 462, 469, 481, 482, 483 and 484
- (ii) Prerequisite and equivalent statement changes for CHEM 109, 111, 121, 122, 123, 124, 180, 260, 282, 283, 316, 360, 440, 464 and 465
- (iii) Description and prerequisite changes for CHEM 230 and 286
- (iv) Description, prerequisite and equivalent statement changes for CHEM 110, 120 and 433
- (v) Prerequisite changes for NUSC 342, 346, 444 and 482
- (vi) Units number change for NUSC 346



#### EXISTING COURSE DELETION FORM

1 OF 1 PAGE

COURSE SUBJECT GEOG NUMBER 427 TITLE Selected Topics in the Geography of Tourism
RATIONALE (must be included)
Faculty member who taught this course retired.
EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (enter in textbox)  Spring 2019
PLEASE DO THE FOLLOWING:
<ol> <li>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.</li> <li>Once you have the program impact list, please review how deleting this course affects each program's requirements.</li> <li>If more substantial changes are required to programs as a result of this deletion, please also submit a program modification form.</li> <li>If no further changes other than deletion is required in program requirements, please list those programs in the box below:</li> </ol>
- BA Geography Honours - BA Geography Major

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 our page and click on "deleting a course" and review Step 2. Course Impact Analysis.



COURSE SU	BJECT GEO	OG NUMBER	221	TITLE Economic Geography		
<b>TYPE OF CHANGES.</b> Please type 'X' for the appropriate revision(s):						
Course number		Units		Prerequisite $\square$		
Title	Х	Description	Х	Equivalent   Statement		
WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using strike through, indicate added or new text using underline. 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 Information about specific course components if changing equivalent statement(s).  GEOG 221 - Economic Geography Economic Worlds (3)  The basic concepts of economic geography, involving consideration of the spatial organization and development of economic and resource based systems. The fundamentals of economic geography, the study of the forces that shape the arrangement of economic activity in the real world. Prerequisite: GEOG 100. Breadth-Social Sciences.						
EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox)  Spring 2019  RATIONALE (must be included)  New title and description reflect the course's current approach.						





COURSE SUBJECT GEOG NUMBER 241 TITLE Social Geography						
<b>TYPE OF CHANGES.</b> Please type 'X' for the appropriate revision(s):						
Course						
Title x Description x Equivalent Statement						
<b>WORDING/DESCRIPTION EDITS.</b> 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 specific course components</u> if changing equivalent statement(s).						
GEOG 241 - Social Geography People, Place, Society (3)						
Systematic consideration of the spatial and environmental bases of societies, in historical and cultural perspective. An introduction to key concepts and contexts in contemporary geographical approaches to social practices, meanings, and struggles. Prerequisite: GEOG 100. Breadth-Social Sciences.						
EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox) Spring 2019						
RATIONALE (must be included)						
New title and description reflect the course's current approach.						



COURSE SU	ІВЈЕСТ	GEOG	NUMBER	261	TITLE	Introduct Geograph	tion to Urban ny
<b>TYPE OF CHANGES.</b> Please type 'X' for the appropriate revision(s):							
Course number		Ţ	Jnits		Pre	requisite	Х
Title	X	I	Description	X		quivalent catement	
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 specific course components</u> if changing equivalent statement(s).  GEOG 261 - <u>Introduction to Urban Geography Encountering the City</u> (3)  This course will introduce basic concepts in the study of urban geography by systematically identifying and examining major components of urban structure. <u>An introduction to key concepts and themes in contemporary geographical approaches to cities and urbanization.</u> Prerequisite: GEOG 100 or 102-or 30 units. Breadth-Social Sciences.							
EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox)  Spring 2019							
RATIONALE (must be included)							
10.22			ct the course's d to make the		•	_	2.0~0.00.00.00.00



COURSE S	UBJECT	GEOG NUMBER	321	TITLE Geographies of Global Capitalism
TYPE OF CH	IANGES. P	lease type 'X' for the app	oropria	te revision(s):
Course number		Units		Prerequisite ⊠
Title		Description		Equivalent ⊠ Statement
expand. Pleaspecific cours  GEOG 321  Examines market fur deregulation Prerequisis received controls.	- Geograp the histori action, firm on at vario te: GEOG 2	the "Equivalency statem nents" if changing equiva- hies of Global Capitalism cal development, spatial a structure and operation ous scales from local to g	nents" s alent st (4) l organ n, ecor llobal, f	gger, as it will not automatically section under Information about atement(s).  ization, and social impact of comic policy, and regulation and from a geographical perspective.  In GEOG 100. Students who Capitalism, in Spring 2010, may
	Summer a	D YEAR FOR CHANGES nd year (please enter in		x)



Page 2 of 2

### RATIONALE (must be included)

This change is intended to make the course more accessible to students. Equivalency: it's been 8 years since the STT was offered so it's highly unlikely a student will be looking to take the course for additional credit.



COURSE SU	BJECT GI	EOG NUMBER	322	TITLE World Resources		
TYPE OF CH	ANGES. Plea	se type 'X' for the app	propriate re	vision(s):		
Course number		Units		Prerequisite ⊠		
Title		Description		Equivalent $\square$ Statement		
indicate adde allows, drag t expand. Pleas	ed or new tex the endpoint se review the	t using <u>underline</u> . If y of the text box to ma	you need to lke it bigger, nents" sectio	anged text using strike through, enter more text than the box s, as it will not automatically on under <u>Information about</u> nent(s).	-	
An analysis economic a GEOG 221 <u>A</u>	GEOG 322 - World Resources (4)  An analysis of the use and development of natural resources from a geographic, economic and institutional perspective. Prerequisite: At least 30 units including GEOG 221 At least 45 units, including GEOG 100. Students with credit for GEOG 322W may not take this course for further credit.					
	EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox)					
Spring 2019  RATIONALE (must be included)						
		to make the course n	nore accessi	ible to students.		



COURSE SU	BJECT GI	EOG NUMBER 32	22W TITLE World Resources			
TYPE OF CH	ANGES. Plea	se type 'X' for the appropr	riate revision(s):			
Course number		Units	Prerequisite ⊠			
Title		Description	Equivalent □ Statement			
indicate adde allows, drag t expand. Pleas	ed or new tex the endpoint se review the	ct using <u>underline</u> . If you n of the text box to make it l	d or changed text using strike through, need to enter more text than the box bigger, as it will not automatically s" section under <u>Information about</u> statement(s).			
An analysis economic a GEOG 221 <u>f</u>	GEOG 322W - World Resources (4)  An analysis of the use and development of natural resources from a geographic, economic and institutional perspective. Prerequisite: At least 30 units including GEOG 221 At least 45 units, including GEOG 100. Students with credit for GEOG 322 may not take this course for further credit. Writing.					
Fall, Spring, S	EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox)					
	Spring 2019  PATIONALE (must be included)					
This change is intended to make the course more accessible to students.						



COURSE SUBJECT	GEOG NUMBER	323	TITLE Industrial Location (4)			
TYPE OF CHANGES	. Please type 'X' for the ap	propriate re	vision(s):			
Course $\square$ number	Units		Prerequisite ⊠			
Title $\square$	Description		Equivalent $\square$ Statement			
indicate added or ne allows, drag the end expand. Please revie	WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using strike through, indicate added or new text using underline. 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 Information about specific course components if changing equivalent statement(s).					
GEOG 323 - Industrial Location (4)  An examination of the factors affecting industrial location and the geographic organization of production systems within and among firms from the perspectives of national, regional and urban development. Prerequisite: GEOG 221 At least 45 units, including GEOG 100.						
EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox)						
RATIONALE (must be included)						
	ended to make the course i	more accessi	ble to students.			



COURSE SUBJ	ECT GEOG	NUMBER	324	TITLE Geo	ography of Transpor	tatio
TYPE OF CHAN	GES. Please typ	oe 'X' for the app	oropriate revi	sion(s):		
Course number		Units		Prerequis	site 🗵	
Title		Description		Equivale Stateme		
WORDING/DES indicate added of allows, drag the expand. Please is specific course of	or new text using endpoint of the review the "Equ	ng <u>underline</u> . If <u>y</u> e text box to ma uivalency statem	you need to e ke it bigger, a nents" section	nter more tex as it will not an a under <u>Inforn</u>	utomatically	
GEOG 324 - Ge	ography of Tra	ansportation (4)				
	n systems. Prer	examination of equisite: GEOG				ō
					ш	
EFFECTIVE TER Fall, Spring, Sun Spring 2019			textbox)			
RATIONALE (m	ust he included	n			,	
		ake the course n	nore accessib	le to students	i.	1
la.						





COURSE SUBJEC	T GEOG	NUMBER 3	325 TITLE	Geographies	of Consumption	
TYPE OF CHANGE	S. Please type 'X'	for the approp	oriate revision(s):			
Course number	Unit	ts 🗆	Pren	requisite 🗵		
Title	] Des	cription $\square$	77	uivalent 🗆 atement		
wording/description indicate added or a allows, drag the en expand. Please revenues pecific course con	new text using <u>und</u> adpoint of the text riew the "Equivale	derline. If you box to make i ncy statement	need to enter mo t bigger, as it will s" section under	re text than the not automatica	box lly	
Spaces, places, la cultures, marketi	graphies of Consur andscapes, and sca ing, retail, ideolog O <del>G 221 or 261</del> <u>At</u>	ales of consum y, subjectivity	, objects, technolo	ogy, and tourisn	1.	
	EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox)  Spring 2019					
RATIONALE (must be included)						
	tended to make th	e course more	e accessible to stu	idents.		



COURSE SU	BJECT G	EOG NUMBER 3	27 TITLE	Geography of Tourism			
TYPE OF CHANGES. Please type 'X' for the appropriate revision(s):							
Course number		Units	Prerec	quisite 🗵			
Title		Description $\square$		valent $\square$ ement			
indicate adde allows, drag expand. Pleas	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 specific course components</u> if changing equivalent statement(s).						
Factors und	GEOG 327 - Geography of Tourism (4)  Factors underlying the changing geography of tourism. Issues of demand, supply and impact are examined. Prerequisite: GEOG 221 or 241, or permission of the instructor At least 45 units, including GEOG 100.						
Fall, Spring, S	EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox)						
Spring 2019							
This change		cluded) I to make the course more	accessible to stude	ents.			



Page 1 of 1

COURSE SU	J <b>BJECT</b> G	EOG NUMBER	328	TITLE Labour Geographies		
<b>TYPE OF CHANGES.</b> Please type 'X' for the appropriate revision(s):						
Course number		Units		Prerequisite x		
Title		Description		Equivalent $\square$ Statement		
WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using strike through, indicate added or new text using underline. 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 Information about specific course components if changing equivalent statement(s).  GEOG 328 Labour Geographies (3 4)  An examination of contemporary debates in Labour Geography, surveying geographical approaches to work and employment. Lectures will explore the relationships between space, place and labour market change in the context of globalization and uneven development. Prerequisite: At least 60 units, including LBST 101 or GEOG 221. At least 45 units, including GEOG 100 or LBST 101. Students with credit for LBST 328 may not take this course for further credit.						
	Summer an	YEAR FOR CHANGES d year (please enter in				
RATIONAL	E (must be in	ப ncluded)				
RATIONALE (must be included)  Credits: This course is similar in level and approach to other upper-division courses in the Geography undergraduate program, which are all 4 units. This change brings the course in line with those similar upper-division human						

matches a larger set of changes being made to 300 level courses in our program, that are intended to make it more navigable for students.

geography courses. It also matches a change in the cross-listed course, LBST 328,

Prerequisites: This change makes the course more accessible to students and

which is also being changed to 4 credits.



COURSE SUI	ВЈЕСТ	GEOG	NUMBER	362	TITLE	Geography of Urban Built Environments		
	AND SALES OF	The Party of the P						
TYPE OF CHA	NGES. F	lease typ	e 'X' for the app	ropriate revi	sion(s):			
Course number			Units		Prere	equisite 🗵		
Title			Description			ivalent 🗆 tement		
allows, drag the expand. Please specific course GEOG 362 - Current conduction of built environments at least 30 unincluding G	WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using strike through, indicate added or new text using underline. 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 Information about specific course components if changing equivalent statement(s).  GEOG 362 - Geography of Urban Built Environments (4)  Current concepts and approaches in urban geography regarding the development of built environments. Central concerns are the relationships between urbanization and the state, capital, and civil society at various scales. Prerequisite: At least 30 units, including one of GEOG 221, 241, or 261 At least 45 units. including GEOG 100. Students with credit for GEOG 362W may not take this course for further credit.							
	EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox)  Spring 2019							
		included	)					
This change			ke the course m	ore accessib	le to stud	lents.		



COURSE SUBJECT	GEOG NUMBER	362W	TITLE	Geography of Urban Built Environments						
TYPE OF CHANGES.	<b>TYPE OF CHANGES.</b> Please type 'X' for the appropriate revision(s):									
Course $\square$ number	Units		Prere	equisite 🗵						
Title $\square$	Description			ivalent □ tement						
WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using strike through, indicate added or new text using underline. 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 Information about specific course components if changing equivalent statement(s).  GEOG 362W - Geography of Urban Built Environments (4)  Current concepts and approaches in urban geography regarding the development of built environments. Central concerns are the relationships between urbanization and the state, capital, and civil society at various scales. Prerequisite:  At least 30 units, including one of GEOG 221, 241, or 261 At least 45 units, including GEOG 100. Students with credit for GEOG 362 may not take this course for further credit. Writing.										
EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox)  Spring 2019										
RATIONALE (must be	included)									
	ded to make the course m	nore accessib	le to stud	lents.						



COURSE SUBJ	ECT GEOG	NUMBER	363	TITLE Urba	n Planning and Policy		
<b>TYPE OF CHANGES.</b> Please type 'X' for the appropriate revision(s):							
Course number		Units		Prerequisit	te 🗵		
Title		Description		Equivaler Statemer			
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 specific course components</u> if changing equivalent statement(s).							
GEOG 363 - Urban Planning and Policy (4)  An introduction to the major approaches and key ideas of the professions of urban governance; urban planning and urban policy. Through a focus on contemporary theory, process-based understanding, and specific issues and examples, the course examines key trends and interventions and promotes critical reflection on urban development. Prerequisite: 30 units, including one of GEOG 221 or 241 or 261; or enrollment in the Post Baccalaureate Diploma in Sustainable Community Development At least 45 units, including GEOG 100.							
EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox)  Spring 2019  RATIONALE (must be included)							
This change is	intended to m	ake the course n	nore accessil	ole to students.			



COURSE SU	BJECT G	SEOG NUMBEI	R 377	TITLE Environmental History				
TYPE OF CHANGES. Please type 'X' for the appropriate revision(s):								
Course number		Units		Prerequisite 🖂				
Title		Description		Equivalent   Statement				
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 specific course components</u> if changing equivalent statement(s).								
GEOG 377 - Environmental History (4)  Examines the reciprocal influences between humans and nature through time. Topics may include settlement, agriculture, technology, politics, urbanization, science, and conservation. Prerequisite: 45 units with nine of lower division Geography units-At least 45 units, including GEOG 100. Students with credit for HIST 377 may not take this course for further credit.								
EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox)  Spring 2019  RATIONALE (must be included)								
		to make the course	more acce	essible to students.				



COURSE SU	BJECT GEO	NUMBER	381	TITLE Territory, Power, State				
<b>TYPE OF CHANGES.</b> Please type 'X' for the appropriate revision(s):								
Course number		Units		Prerequisite ⊠				
Title		Description		Equivalent   Statement				
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 specific course components</u> if changing equivalent statement(s).								
GEOG 381 - Territory, Power, State (4)  Surveys the manner in which power relations are expressed territorially. Attention given to such topics as state sovereignty, colonialism, rights, and law. Prerequisite: GEOG 241 At least 45 units, including GEOG 100. Students with credit for GEOG 381W may not take this course for further credit.								
Fall, Spring, St	EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox)							
Spring 2019  RATIONALE (must be included)								
This change	is intended to	o make the course mo	ore accessibl	e to students.				





COURSE SUBJECT GEOG NUMBER 381W TITLE Territory, Power, State								
TYPE OF CHANGES. Please type 'X' for the appropriate revision(s):								
Course $\square$ Units $\square$ Prerequisite $\boxtimes$ number								
Title □ Description □ Equivalent □ Statement								
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 specific course components</u> if changing equivalent statement(s).								
GEOG 381W - Territory, Power, State (4)  Surveys the manner in which power relations are expressed territorially. Attention given to such topics as state sovereignty, colonialism, rights, and law. Prerequisite: GEOG 241 At least 45 units, including GEOG 100. Students with credit for GEOG 381 may not take this course for further credit. Writing.								
EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox)  Spring 2019  RATIONALE (must be included)								
This change is intended to make the course more accessible to students.								



COURSE SU	BJECT GEOG	NUMBER	382	TITLE Population Geography					
TYPE OF CH	<b>TYPE OF CHANGES.</b> Please type 'X' for the appropriate revision(s):								
Course number	<u> </u>	Units		Prerequisite ⊠					
Title	$\boxtimes$	Description		Equivalent $\square$ Statement					
indicate add allows, drag expand. Plea	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 specific course components</u> if changing equivalent statement(s).								
GEOG 382 - Population Geography World on the Move (4)  A survey - from geographic perspective - of data, concepts, themes, and debates in the study of population. Particular concern for population numbers, fertility, mortality, and migration over space and time. The world is on the move.  Migrants seeking better opportunities cross paths with refugees fleeing persecution. Some are helped and welcomed, many encounter barriers and threats, while identities, including class, race, gender, sexuality, mediate their prospects. This course's geographic perspective clarifies these complexities by combining conceptual analyses with contemporary cases.  Prerequisite: GEOG 221 or 241 At least 45 units, including GEOG 100.									
EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox)  Spring 2019									
RATIONALE (must be included)									
followed by	y, contemporary	geographers wh	o study pop	ddressed by, and the key approaches oulation and society. The re accessible to students.					



COURSE SUB	вјест С	EOG NUMBER	383	TITLE	Regional Develop Planning (4)	pment and	
<b>TYPE OF CHANGES.</b> Please type 'X' for the appropriate revision(s):							
Course number		Units		Prer	equisite 🛚		
Title		Description		_	uivalent 🗆 atement		
WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using strike through, indicate added or new text using underline. 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 Information about specific course components if changing equivalent statement(s).  GEOG 383 - Regional Development and Planning (4) Theories and concepts of regional development and planning in the advanced capitalist and third worlds; methods of spatial analysis. Prerequisite: GEOG 221 and GEOG 241 At least 45 units, including GEOG 100.							
		YEAR FOR CHANGE: d year (please enter i					
Spring 2019	)						
RATIONALE	(must be i	ncluded)					
This change	is intende	ed to make the course	more acces	ssible to stud	lents.		



COURSE SUBJ	ECT	GEOG	NUMBER	385	TITLE	Agricul Environ	ture and the nment	
TYPE OF CHAN	GES. I	Please typ	pe 'X' for the app	ropriate revi	ision(s):			
Course number			Units		Prere	quisite	x	
Title	Х		Description	х	_	ivalent tement		
WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using strike through, indicate added or new text using underline. 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 Information about specific course components if changing equivalent statement(s).  GEOG 385 - Agriculture and the Environment Food and the City (4)								
An examination of the relationship between agricultural production systems and the biophysical environment, with emphasis on the origins of, and potential solutions to, agri-environmental degradation. An exploration of how food is related to cities, giving particular attention to the culture and politics of food production, distribution, and consumption.  Prerequisite: GEOG 221 At least 45 units, including GEOG 100.								
EFFECTIVE TERM AND YEAR FOR CHANGES								
Fall, Spring, Sum Spring 2019	imer a	ind year	(please enter in	textbox)				
RATIONALE (m	ust be	included	d)					
A reorientation urban focus of			to better reflect	how it is cur	rently ta	ught and	to fit better wi	th the
Prerequisites:	This	change is	intended to ma	ke the course	e more ac	cessible t	o students.	







COURSE SUI	BJECT G	EOG NUMBER	386	TITLE Health Geography				
<b>TYPE OF CHANGES.</b> Please type 'X' for the appropriate revision(s):								
Course number		Units		Prerequisite ⊠				
Title		Description		Equivalent   Statement				
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 specific course components</u> if changing equivalent statement(s).								
GEOG 386 -	Health Geo	graphy (4)						
A survey of health issues from a geographic perspective, including major spatial influences shaping the health status of populations and health-place relationships. Prerequisite: at least 30 units, including either GEOG 241 or HSCI 130 At least 45 units, including GEOG 100.								
		EAR FOR CHANGES						
Spring 2019		]						
RATIONALE (	must be inc	luded)						
		to make the course i	more acc	essible to students.				



COURSE SU	<b>BJECT</b> GE	OG NUMBER	387	TITLE Geography and Gender			
<b>TYPE OF CHANGES.</b> Please type 'X' for the appropriate revision(s):							
Course number		Units		Prerequisite ⊠			
Title		Description		Equivalent $\square$ Statement			
indicate adde allows, drag t expand. Pleas	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 specific course components</u> if changing equivalent statement(s).						
GEOG 387 - Geography and Gender (4)  Geographical perspectives on gender and sexuality. This course investigates feminist theory in geography and its analysis of home, city, nation, state, global economy, colonialism, and migration. Prerequisite: GEOG 241 At least 45 units, including GEOG 100.							
EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox)  Spring 2019  RATIONALE (must be included)							
This change	is intended t	to make the course m	ore accessi	ble to students.			



COURSE SUBJECT GEOG NUMBER 389W TITLE Nature and Society								
<b>TYPE OF CHANGES.</b> Please type 'X' for the appropriate revision(s):								
Course $\square$ Units $\square$ Prerequisite $\boxtimes$ number								
Title   Description   Equivalent   Statement								
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 specific course components</u> if changing equivalent statement(s).								
Examines the relationship between nature and society, covering the dominant geographical approaches to human-environment interaction, and their social, spatial, and political economic effects. Prerequisite: GEOG 221 or GEOG 241 (Students who received credit for EVSC 200 before 2011 may use it to meet the prerequisite requirement for this course) At least 45 units, including GEOG 100. Writing.								
EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox)  Spring 2019								
RATIONALE (must be included)  This change is intended to make the course more accessible to students.								



Spring 2019

# COURSE MODIFICATION FORM

COURSE SUBJEC	г ВРК	NUMBE	R 326	TITLE Functiona	l Anatomy
TYPE OF CHANGE	<b>S.</b> Please ty	ype 'X' for the a	ppropriate	revision(s):	
Coursenumber		Units		Prerequisite	$\square X$
Title		Description		EquivalentStatement	$\square X$
indicate added or rallows, drag the en expand. Please revispecific course con  Functional Ana Pursues a syste applications. A dissections to pthe human body the major or he Physiology or Neuroscience Meast 60 units. Scourse for furth	atomy BP matic students of the comparation of the c	ing underline. If he text box to muivalency state changing equivalency state fechanging equivalency of or understandination in all laber of BPK 142, 2 Honours stude with credit for I	f you need anake it bigg ments" sectoral water states and leading of the these is required and sectoral and s	changed text using strike to enter more text than the er, as it will not automatition under Information alternation and ement(s).  The emphasis on function ody systems using laborate dimensional organited. Prerequisite: Admir. Neuroscience or Bior. Meuroscience or Bior. at least 60 units. Below BPK 142, 205, PSYC 2007-BPK-325 may not report the emphasis of the emp	nal pratory zation of ssion to nedical navioral 280 and at
<b>EFFECTIVE TERM</b> Fall, Spring, Summe					





#### RATIONALE(must be included)

The department only has the resources to offer this course to the large number of the three BPK Majors. However multiple requests come in for enrolment in this course from our own Minors, students outside of the department and even external to the university. It is seen as a course needed if students want to apply to Physiotherapy programs.

BPK or KIN 324 has never been offered, nor will it be. The KIN designations were deleted from all course listing in a previous motion passed through to Senate.



COURSE SU	IBJECT CI	HEM NUMBER	126	TITLE	General (	Chemistry Laborato
TYPE OF CH	<b>ANGES.</b> Plea	se type 'X' for the ap	propria	te revision(s):		
Course number		Units		Prer	equisite	
Title		Description		•	uivalent atement	
allows, drag texpand. Pleas specific cours  Experiment electrochem	the endpoint se review the se components in chemicanistry and ch	t using <u>underline</u> . If of the text box to mae "Equivalency statents if changing equivalequilibrium, acids a temical kinetics. Presented the company of the	ake it bi nents" s alent st and bas requisit	gger, as it will received a section under Latement(s).	not automa nformation analysis,	about
	ummer and	EAR FOR CHANGES		x)		
RATIONALE	(must be inc	luded)				
		grade requirement i clearer for students.	n the p	erequisite stat	ement is in	itended to





COURSE SU	JBJECT	СНЕМ	NUMBER	192	TITLE		try in Your Home, and Environment		
TYPE OF CH	ANGES.	Please type 'X	Κ' for the ap	propriate	revision(s):				
Course number		Uı	nits		Prere	equisite	$\boxtimes$		
Title		De	escription			ivalent tement			
indicate adde allows, drag expand. Plea	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 specific course components</u> if changing equivalent statement(s).								
on chemica shaping so chemicals t dyes, plasti	al process ciety, exa chat shap cs, pestic dents. Qu	ses with histomining both e our lives. To ides and gremantitative/B	orical, envir the benefic opics may in enhouse gas	onmental al and ha nclude: pe ses. Inten	vill gain a bro and economi rmful aspects erfumes, expl ded for both s equisite: .	c imports of the osives, di	ance in rugs,		
<b>EFFECTIVE</b> 7 Fall, Spring, S						v	,		
Spring 201									
Removing 1			e is no prere	quisite fo	or this course.				





COURSE SU	BJECT	CHEM NUMBER	215		Introduc Chemist	ction to Analytical ry
TYPE OF CH	ANGES. F	Please type 'X' for the app	propriate	revision(s)		
Course number		Units		Prereq	uisite	
Title		Description			alent ment	
indicate adde allows, drag t expand. Pleas specific cours	ed or new the endpo se review se compo	rion EDITS. Indicate de text using <u>underline</u> . If young on the text box to man the "Equivalency statem" if changing equivalency alytical chemistry and the	you need ke it big nents" se nlent stat	to enter more to ger, as it will no ction under Informent(s).	text thar t automa ormation	n the box atically n about
samples. Ti	trimetric	and electrochemical me <u>limum grade of C-</u> . Quant	thods. Pr	erequisite: CHE	EM 122 a	and
		D YEAR FOR CHANGES nd year (please enter in	textbox)			
Spring 2019						
Including th						1-1-
		um grade requirement ir ng clearer for students.	i the pre	requisite staten	nent is ir	ntended to





COURSE SU	IBJECT	СНЕМ	NUMBER	236W	TITLE	Inorgan Laborat	nic Chemistry tory	
түре оғ сн	ANGES. F	Please type 'X'	for the app	ropriate rev	ision(s):			
Course number		Uni	its		Prere	quisite		
Title		Des	scription			ivalent tement		
indicate adde allows, drag expand. Pleas specific cours	WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using strike through, indicate added or new text using underline. 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 Information about specific course components if changing equivalent statement(s).							
An introduction to the synthetic and spectroscopic techniques used in the preparation and characterization of both main group and transition metal compounds. Prerequisite: CHEM 122 and 126 with a minimum grade of C Corequisite: CHEM 230. Students with credit for CHEM 236 may not take this course for further credit. Writing/Quantitative.								
EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox)								
Spring 201		included)						
Including the	ne minim ourse list	um grade req ing clearer for e CHEM 126 w	r students. R	emoving CF	HEM 122 a			





COURSE SU	JBJECT	CHEM NUMBER	266	TITLE Physic I	cal Chemistry Labora
түре оғ сн	ANGES. Ple	ease type 'X' for the app	oropriat	e revision(s):	
Course number		Units		Prerequisite	
Title		Description		Equivalent Statement	
indicate adde allows, drag expand. Pleas specific cours	ed or new to the endpoint se review to se componental principle. Modern e	ON EDITS. Indicate de ext using <u>underline</u> . If ont of the text box to make "Equivalency statements if changing equivalents of experimental phy experiments in atomic at ECHEM 260: Atoms, N	you need like it big nents" se alent sta rsical che and mol	d to enter more text the ger, as it will not auto ection under Informate tement(s).  emistry from the micrecular spectroscopy a	nan the box matically ion about oscopic nd
	Summer an	YEAR FOR CHANGES d year (please enter in		)	
RATIONALE	(must be i	ncluded)			
		n grade requirement in g clearer for students.	n the pre	erequisite statement i	s intended to





COURSE S	UBJECT (	CHEM NUMBER	281	TITLE Organic Chemistry I
TYPE OF CH	<b>IANGES.</b> Ple	ase type 'X' for the app	oropria	te revision(s):
Course number		Units		Prerequisite ⊠
Title		Description		Equivalent  Statement
indicate add allows, drag expand. Plea specific cour	led or new to the endpoir ase review the rse compone	ext using <u>underline</u> . If you to fine the text box to make "Equivalency statements if changing equivalents if changing equivalents."	you nee ke it bi nents" s alent st	
Introducti course inc	on to spectr ludes a labo	oscopy. Kinetics and m	echani requisi	s of simple organic compounds. sms of organic reactions. This te: CHEM 121 <u>with a minimum</u>
	1			
		<b>YEAR FOR CHANGES</b> I year (please enter in	textbox	<b>x</b> )
Spring 201	19			
RATIONALE	E (must be in	cluded)		
		n grade requirement in g clearer for students.	n the pr	erequisite statement is intended to





COURSE SU	JBJECT (	CHEM NUMBER	284	TITLE Organic Chemistry IIb
TYPE OF CH	ANGES. Ple	ase type 'X' for the app	ropriate	revision(s):
Course number		Units		Prerequisite 🖂
Title		Description		Equivalent   Statement
allows, drag expand. Pleas specific cour Intended for Advanced to including r pericyclic r with at leas	the endpoint se review the se componer students treatment of adical reactions and sta C+ grades	at of the text box to make the "Equivalency statements if changing equivalents if changing equivalents if changing to take upper f topics beyond those colons, organometallic red planning multi-step sea minimum grade of C	ce it bigg ents" see lent stat division overed i agents a synthese +, or per	to enter more text than the box ger, as it will not automatically ction under Information about ement(s).  organic chemistry courses. In CHEM 281 and CHEM 282, Ind metal-based catalysis, Is. Prerequisite: CHEM 282 Imission of the Department. Is course for further credit.
	Summer and	YEAR FOR CHANGES I year (please enter in t	extbox)	
RATIONALE	(must be in	اــــا دcluded)		
	ording for c			





COURSE ST	JBJECT	CHEM NUMBER	317	TITLE	Analytic Chemist	cal Environmental try
TYPE OF CH	ANGES. I	Please type 'X' for the app	oropriate	revision(s):		
Course number		Units		Prere	equisite	$\boxtimes$
Title		Description			ivalent tement	
indicate add allows, drag expand. Plea specific cour Principles in the dete upon samp	ed or new the endpo se review se compo  and appli rmination ling and s imum gra	TION EDITS. Indicate de text using <u>underline</u> . If you the "Equivalency statem in the "Equivalency statem in the "Equivalency statem" if changing equivalents of the methodolog of substances in air, was sample preparation. Preside of C Corequisite: CH	you need ke it bigg nents" se alent stat gies of an ter, and s	to enter mor ger, as it will r ction under In ement(s). nalytical chen soil, with part CHEM 316 an	nistry emicular em	n the box natically n about  ployed phasis oth
Fall, Spring, Spring 201	Summer a 9	ID YEAR FOR CHANGES and year (please enter in		a.		,
	he minim	um grade requirement in ing clearer for students.				ntended to





COL	JRSE SUBJECT	CHEM NUM	<b>1BER</b> 332	TITLE	The Che Metals	mistry of Tran	sition
TYPE	E OF CHANGES.	Please type 'X' for th	e appropriate	e revision(s):			
Cou nun	rse 🗆 nber	Units		Prere	quisite	$\boxtimes$	
Title	e 🗆	Descripti	ion 🗆		ivalent cement		
indica allow expar speci The the CHI	ate added or new s, drag the endrand. Please review fic course comperson and other transition meta EM 230, 236 W	PTION EDITS. Indicate we text using underline to the text box to the "Equivalency stonents" if changing expension of class, and their physical and 260, all with a miment. Quantitative.	ne. If you need to make it bigg tatements" se quivalent state and or land chemica	to enter more ger, as it will n ction under Interest (s).  rganometallic of properties. Properties.	e text than ot autom formatio  complexe rerequisi	n the box atically n about es of te:	
Fall, S		ND YEAR FOR CHAN and year (please ent					]
	ONALE (must b						7
	ke the course lis	num grade requirem ting clearer for stude					





COURSE SUBJECT	CHEM NUMBER	336	TITLE	Advanc Laborat	ed Inorganic Chemist tory	ry
TYPE OF CHANGES	. Please type 'X' for the app	oropriate revi	ision(s):			
Course $\square$	Units		Prere	quisite		
Title	Description			ivalent tement		
indicate added or ne allows, drag the end expand. Please revie specific course comp  Laboratory experiments involving synthesis	PTION EDITS. Indicate deem text using <u>underline</u> . If y point of the text box to make the "Equivalency statem conents if changing equivalents in co-ordination, or s, characterization and special of C Corequisite: CHaritative.	you need to e ike it bigger, a nents" section alent stateme ganometallic ectroscopy. Pr	nter more is it will no under In nt(s).  and solid rerequisit	e text that ot autom aformation state che	emistry, 236 <u>W</u>	
	AND YEAR FOR CHANGES and year (please enter in		-		,	
RATIONALE (must b	pe included)					
	mum grade requirement in sting clearer for students. I dedundancy.					





COURSE SU	JBJECT	СНЕМ	NUMBER	363	TITLE	Chemical Kinetics and Reaction Dynamics
TYPE OF CH	ANGES.	Please type '	'X' for the app	oropriate rev	vision(s):	
Course number		U	nits		Prere	equisite 🗵
Title		D	escription			ivalent 🗆 tement
indicate adde allows, drag expand. Pleaspecific courses Fundament intermedia radiation co	ed or new the endpo se review se compo tal princi tes, theor	v text using point of the to the "Equiva- onents if cha- ples of chemics of reactions	underline. If yext box to ma alency staten anging equiva- nical kinetics, ion rates, solumental metho	you need to e ke it bigger, nents" sectionalent statements rate laws, m	enter mor as it will r n under <u>Ir</u> ent(s). nechanism s, photoch	
<b>EFFECTIVE</b> 7 Fall, Spring, S				textbox)		
Spring 201	9					
RATIONALE	(must be	included)				
			equirement in for students.	n the prerequ	uisite state	ement is intended to





COURSE SU	BJECT	CHEM NUMBER	366W	TITLE Physi	cal Chemistry Labora
TYPE OF CH	ANGES. F	Please type 'X' for the app	oropriate i	revision(s):	
Course number		Units		Prerequisit	e ⊠
Title		Description		Equivalen Statemen	
indicate adde allows, drag expand. Pleas specific cours Advanced e electrocher	ed or new the endpo se review se compo experiments	rion EDITS. Indicate de text using <u>underline</u> . If yout of the text box to may the "Equivalency statements if changing equivantal methods in thermoded atomic and molecular de of C Corequisite: CH	you need to lke it biggenents" sec- alent state lynamics, structure.	co enter more text ter, as it will not auto tion under <u>Informa</u> ment(s). chemical kinetics, Prerequisite: CHE	han the box omatically tion about
	Summer a	D YEAR FOR CHANGES and year (please enter in			
RATIONALE					
		um grade requirement in ing clearer for students.	n the prer	equisite statement	is intended to





COURSE SUBJECT	CHEM NUMBER	367	TITLE	Advance Laborat	ed Physical Ch ory	iemistry
TYPE OF CHANGES. P	lease type 'X' for the ap	propriate revi	ision(s):			
Course $\square$ number	Units		Prere	quisite		
Title	Description			ivalent cement		
indicate added or new allows, drag the endpo expand. Please review specific course compo	rion EDITS. Indicate de text using <u>underline</u> . If pint of the text box to mathe "Equivalency statements if changing equivantal methods in physical de of C Quantitative.	you need to e ake it bigger, a nents" section alent stateme	enter more as it will n n under <u>In</u> ent(s).	e text tha ot autom formatio	n the box natically on about	
Fall, Spring, Summer a Spring 2019	<b>D YEAR FOR CHANGES</b> nd year (please enter in					
Including the minim make the course listiexists.	included) um grade requirement i ng clearer for students.	n the prerequ Adding the W	isite state as Chem	ement is i 366 (nor	ntended to n-W) no longe	r





COURSE SU	JBJECT	CHEM <b>NUMBER</b>	371	TITLE Chemistry of the Aque Environment	ous
TYPE OF CH	ANGES. Ple	ease type 'X' for the app	propriate	revision(s):	PERSONAL DISTRICT
Course number		Units		Prerequisite 🖂	
Title		Description		Equivalent $\square$ Statement	
indicate add allows, drag expand. Plea specific cour An introdu treatment Chemistry	ed or new to the endpoing se review to se component of the variation of aqueous te: CHEM 28	ext using <u>underline</u> . If yet of the text box to man the "Equivalency statements" if changing equivalencial processes in the bles determining the co	you need the it biggonents" seculent state aqueous ompositioner treatm	environment. Quantitative on of natural systems. nent, and related matters.	
	Summer an	YEAR FOR CHANGES d year (please enter in	textbox)		]
	he minimur		the prer	requisite statement is intended to	





COURSE SUBJ	ECT CHE	M NUMBER	372		istry of the Atmospheric onment
TYPE OF CHAN	I <b>GES.</b> Please	type 'X' for the ap	propriate rev	ision(s):	
Course number		Units		Prerequisit	e 🖂
Title		Description		Equivalen Statemen	
indicate added allows, drag the expand. Please specific course  Quantitative to environment. change. Chem	or new text use endpoint of review the "Ecomponents creatment of Chemistry of the s Current topic	EDITS. Indicate desing underline. If the text box to man Equivalency states if changing equivalencies and physical and physical and physical and the troposphere tratosphere includes. Prerequisite: Contitative.	you need to eake it bigger, anents" sectionalent statemessical processes including air	nter more text to as it will not auton under Information (s).  s in the atmosphypollution and clipletion. Environ	han the box omatically tion about neric mate mental
Fall, Spring, Sur Spring 2019	nmer and yea	AR FOR CHANGES ar (please enter in			:
	minimum gra	ade requirement i arer for students.	n the prerequ	isite statement i	is intended to





COURSE SUBJECT	CHEM NUMBER	380	Metl	mical and Instrume hods of Identification anic Compounds	.,
TYPE OF CHANGES.	Please type 'X' for the app	ropriate revi	sion(s):		
Course $\square$	Units		Prerequisi	te 🗵	
Title $\square$	Description		Equivale Stateme		
indicate added or ne allows, drag the endp expand. Please review	PTION EDITS. Indicate delay text using underline. If yooint of the text box to make the "Equivalency statem" onents if changing equiva	you need to e ke it bigger, a tents" section	nter more text s it will not au under <u>Inform</u>	than the box tomatically	
spectroscopy as ap	infrared, ultraviolet, nucle plied to the identification and <u>CHEM</u> 286, <u>both with</u> <u>Department</u> .	of organic co	mpounds. Prer	equisite:	
	ND YEAR FOR CHANGES and year (please enter in	textbox)			
RATIONALE (must b	e included)				
	num grade requirement in ting clearer for students. A				





COURSE S	UBJECT C	HEM NUMBER	381	TITLE Intermediate Organic Chemistry			
TYPE OF CH	IANGES. Plea	ase type 'X' for the app	propriate	e revision(s):			
Course number		Units		Prerequisite ⊠			
Title		Description		Equivalent   Statement			
WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using strike through, indicate added or new text using underline. 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 Information about specific course components if changing equivalent statement(s).  An intermediate level course in modern organic chemistry, including both theoretical design of synthetic routes and practical training in the laboratory. The central topics to be discussed include methods to form carbon-carbon bonds, use of organometallic reagents, asymmetric synthesis, pericyclic reactions, the use of enzymes in organic synthesis, and the automation of synthetic organic chemistry. Prerequisite: CHEM 380 with a minimum grade of C Quantitative.							
Fall, Spring, Spring 201	Summer and	YEAR FOR CHANGES year (please enter in	textbox)				
Including t	the minimum		n the pre	requisite statement is intended to			





COURSE S	ивјест Сн	EM NUMBER	391	TITLE Industrial Chemistry
TYPE OF CI	<b>HANGES.</b> Pleas	e type 'X' for the ap	propriat	e revision(s):
Course number		Units		Prerequisite ⊠
Title		Description		Equivalent   Statement
indicate add allows, drag expand. Plea	led or new text the endpoint o ase review the	using <u>underline</u> . If of the text box to ma	you need ake it big nents" se	changed text using strike through, d to enter more text than the box ger, as it will not automatically ection under Information about tement(s).
petrochen drive the e products. CHEM 215	nical and miner economy, indus Green approac 5, 230, and 282	trially relevant pol hes to industrial ch	rganic a ymers, a emistry a minimu	nd inorganic chemicals that nd health and hygiene are discussed. Prerequisite: m grade of C-, and CHEM 230
Fall, Spring,	Summer and y	EAR FOR CHANGES ear (please enter in		
Spring 201		. 4 . 45		
	E (must be incl			
				erequisite statement is intended to g up formatting for consistency.





COURSE SU	IBJECT	СНЕМ	NUMBER	419	TITLE	Special Chemis	Topics in Analytic try	cal
түре оғ сн	ANGES. I	Please type	'X' for the app	propriate rev	ision(s):			
Course number		U	Inits		Prere	quisite		
Title		E	escription			ivalent tement		
indicate adde allows, drag expand. Pleas specific cours	ed or new the endpo se review se compo and appli	y text using oint of the to the "Equivonents if checations of e	S. Indicate de underline. If yext box to ma alency statem anging equivamerging tech minimum gra	you need to e ke it bigger, a nents" section alent stateme niques in ana	nter mor as it will r n under <u>Ir</u> nt(s).	e text tha not autom nformation	n the box natically	
EFFECTIVE	FERM AN	ID YEAR FO	OR CHANGES			,		
Fall, Spring, S	Summer a 9	and year (pl		textbox)				
	ne minim	um grade r	equirement in for students.	n the prerequ	isite state	ement is i	intended to	





COURSE SUBJECT	CHEM NUMBER	432	TITLE Organometallic Chemistry				
TYPE OF CHANGES. I	Please type 'X' for the ap	propria	te revision(s):				
Course $\square$ number	Units		Prerequisite ⊠				
Title	Description		Equivalent   Statement				
WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using strike through, indicate added or new text using underline. 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 Information about specific course components if changing equivalent statement(s).  The organometallic chemistry of the transition elements; the synthesis, characterization and catalytic behavior of organometallic compounds.  Prerequisite: CHEM 332 with a minimum grade of C Quantitative.							
	И						
	ID YEAR FOR CHANGES and year (please enter in		<b>(</b> )				
Spring 2019							
RATIONALE (must be	included)						
	um grade requirement i ing clearer for students.	n the pr	erequisite statement is intended to				





COURSE SUBJECT	CHEM NUMB	ER 439 TI'	TLE Special Topics Chemistry	in Inorganio		
TYPE OF CHANGE	<b>S.</b> Please type 'X' for the a	appropriate revision	u(s):			
Course number	Units		Prerequisite 🗵			
Title $\square$	Description	1 🗆	Equivalent  Statement			
WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using strike through, indicate added or new text using underline. 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 Information about specific course components if changing equivalent statement(s).  An in-depth treatment of a current topic in inorganic chemistry. Contact the department for information regarding the topic to be covered in a given term. Prerequisite: CHEM 332 with a minimum grade of C						
	AND YEAR FOR CHANG er and year (please enter					
RATIONALE (must						
	nimum grade requiremen listing clearer for student		statement is intende	d to		





COURSE SU	JBJECT C	HEM NUMBI	ER 442	TITLE Polymeric Materials Chem	istry				
TYPE OF CH	ANGES. Plea	ase type 'X' for the a	ppropriate	e revision(s):					
Course number		Units		Prerequisite 🖂					
Title		Description	n 🗆	Equivalent $\square$ Statement					
indicate adde allows, drag expand. Pleas specific cours	WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using strike through, indicate added or new text using underline. 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 Information about specific course components if changing equivalent statement(s).  The course covers the detailed chemistry of polymers, including polymer structure,								
studies of p polymers. I discussed.	studies of polymer solutions, molecular weight determination, and the synthesis of polymers. In addition, topics of current interest in polymer science will be discussed. Prerequisite: CHEM 282 or 283, with a minimum grade of C  Quantitative.								
	-		-						
		YEAR FOR CHANGI year (please enter		)					
Spring 201	9	]							
RATIONALE	(must be in	cluded)		а					
Including the make the co	he minimun ourse listing	n grade requirement clearer for student	t in the pre s.	erequisite statement is intended to					





COURSE SU	вјест [	CHEM NUMBER	444	TITLE Organic Materials Chemis				
TYPE OF CHA	NGES. Ple	ease type 'X' for the app	oropriat	e revision(s):				
Course number		Units		Prerequisite ⊠				
Title		Description		Equivalent   Statement				
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 specific course components</u> if changing equivalent statement(s).  Emphasis will be placed on the synthesis and properties of materials that are useful in the design of electrooptical devices, such as light emitting diodes (LEDs) and liquid crystal displays (LCDs). Topics to be discussed will include liquid crystals, conjugated polymers, and the assembly of thin film materials. A case study approach will be employed in order to provide an overview of these areas of research, with examples taken from the primary literature. Prerequisite: CHEM 282 or 283, <u>with a minimum grade of C-</u> . Quantitative.								
EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox)  Spring 2019  RATIONALE (must be included)  Including the minimum grade requirement in the prerequisite statement is intended to make the course listing clearer for students.								





COURSE S	UBJECT	CHEM NUMBER	449	TITLE	Special Chemis	Topics in Mate try	rials	
TYPE OF CH	IANGES. PI	ease type 'X' for the app	propriate	e revision(s):				
Course number		Units		Prere	quisite			
Title		Description			ivalent tement			
specific courses specif	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 specific course components</u> if changing equivalent statement(s).  Selected topics in materials chemistry not regularly covered in chemistry undergraduate course offerings. Topics may vary from year to year and may include (but are not limited to): materials with tunable optoelectronic properties, trace element analysis of materials using non-destructive techniques, materials with applications in producing and utilizing chemical energy. Prerequisite: CHEM 215, 260, 283 (or 284), CHEM 215, CHEM 260, and 12 units of <u>upper division</u> CHEM, all with a minimum grade of C-; 300 level chemistry or permission of the							
	Summer ar 19	D YEAR FOR CHANGES  nd year (please enter in	textbox)				_	
Including t	he minimu	im grade requirement in						





COURSE SUBJEC	СТ СНЕМ	NUMBER	450	FITLE Physica	al Organic Chemistry			
TYPE OF CHANG	<b>ES.</b> Please type 'ኦ	ζ' for the appr	ropriate revisi	on(s):				
Course [number	□ Ur	nits		Prerequisite	$\boxtimes$			
Title	∃ De	escription		Equivalent Statement				
allows, drag the enexpand. Please reversecific course cour	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 specific course components</u> if changing equivalent statement(s).  A study of the structure, stereochemistry and conformation of molecules and their effect on the reactivity of organic molecules. The physical basis of organic chemistry. Prerequisite: CHEM 360 and 380, both with a minimum grade of C  Quantitative.							
EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox) Spring 2019  RATIONALE (must be included)								
Including the mi	nimum grade red e listing clearer fo		the prerequis	ite statement is	intended to			





COURSE S	UBJECT CI	HEM NUMBER	452	TITLE Bio-organic Chemistry				
TYPE OF CI	HANGES. Pleas	se type 'X' for the ap	propria	te revision(s):				
Course number		Units		Prerequisite ⊠				
Title		Description		Equivalent   Statement				
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 Information about specific course components if changing equivalent statement(s).  An advanced treatment of the use of enzymes in organic synthesis, the use of stable and radioisotopes in the study of enzymatic processes and the design of enzyme inhibitors. Prerequisite: CHEM 380 and MBB 222, both with a minimum grade of C-1 or permission of the department Department. Quantitative.								
EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox) Spring 2019  RATIONALE (must be included)								
Including t	the minimum		n the pr	erequisite statement is intended to				





COURSE SU	I <b>BJECT</b> C	HEM NUMBER	455	TITLE Synthetic Organic Chemis			
түре оғ сн	<b>ANGES.</b> Plea	ase type 'X' for the app	propriate	e revision(s):			
Course number		Units		Prerequisite ⊠			
Title		Description		Equivalent   Statement			
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 Information about specific course components if changing equivalent statement(s).  This course teaches the principles involved in the planning and execution of the synthesis of organic molecules. Emphasis is on synthesis of naturally occurring compounds of biological importance. Prerequisite: CHEM 381 with a minimum grade of C-, or permission of the instructor. Quantitative.							
	Summer and	YEAR FOR CHANGES year (please enter in					
RATIONALE	(must be in	cluded)					
Including the make the co	he minimum ourse listing	grade requirement in clearer for students.	n the pre	erequisite statement is intended to			





COURSE SU	IBJECT CH	HEM NUMBER	459		Special Topics in Organic Chemistry				
TYPE OF CH	ANGES. Plea	se type 'X' for the app	oropriate rev	ision(s):					
Course number		Units		Prereg	quisite 🗵				
Title		Description			valent $\square$ ement				
indicate adde allows, drag expand. Pleas specific cours	WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using strike through, indicate added or new text using underline. 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 Information about specific course components if changing equivalent statement(s).  An advanced, in-depth treatment of a specialized area of organic chemistry. Prerequisite: CHEM 380 with a minimum grade of C-, or permission of the instructor.								
	EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox)								
RATIONALE	(must be inc	luded)							
		grade requirement in clearer for students.	n the prerequ	iisite stater	ment is intended to				





COURSE SU	ВЈЕСТ	CHEM NUMBER	460	TITLE Advanced Physical C	Chemist			
TYPE OF CHA	ANGES. Ple	ase type 'X' for the app	propriate	revision(s):				
Course number		Units		Prerequisite ⊠				
Title		Description		Equivalent $\square$ Statement				
indicate adde allows, drag t expand. Pleas specific cours  Statistical the intermolecus solutions, D 260 and 360	WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using strike through, indicate added or new text using underline. 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 Information about specific course components if changing equivalent statement(s).  Statistical thermodynamics, kinetic theory of gases, transport properties, intermolecular forces, electrical properties of molecules, properties of ionic solutions, Debye-Huckel theory, electrochemistry. Prerequisite: MATH 251; CHEM 260 and 360, or PHYS 385-285 and 344, all with a minimum grade of C Quantitative.							
EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox) Spring 2019								
RATIONALE	(must be in	ncluded)						
		n grade requirement ir g clearer for students.	the prei	equisite statement is intended to				





COURSE SU	BJECT	HEM NUMBER	462	TITLE Molecular Spectroscopy					
<b>TYPE OF CHANGES.</b> Please type 'X' for the appropriate revision(s):									
Course number		Units		Prerequisite ⊠					
Title		Description		Equivalent $\square$ Statement					
allows, drag to expand. Please specific course.  Atomic specific polyatomic Symmetry of the specific course.	WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using strike through, indicate added or new text using underline. 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 Information about specific course components if changing equivalent statement(s).  Atomic spectra. Electronic, vibrational and rotational spectra of diatomic and polyatomic molecules. The Raman effect. Nuclear and electron spin resonance. Symmetry classification of molecules and their energy levels. Prerequisite: CHEM 260 or PHYS 385285, with a minimum grade of C Quantitative.								
EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox)  Spring 2019									
RATIONALE	(must be in	cluded)							
Including the minimum grade requirement in the prerequisite statement is intended to make the course listing clearer for students.									





COURSE SUBJECT	СНЕМ	NUMBER	469	TITLE	Special Chemis	Topics in Physical try			
TYPE OF CHANGES	. Please type 'X'	for the appro	priate revis	sion(s):					
Course $\square$ number	Uni	ts 🗆	]	Prere	quisite				
Title	Des	scription [	]		ivalent tement				
<b>WORDING/DESCRIPTION EDITS.</b> 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 specific course components</u> if changing equivalent statement(s).									
Selected topics of physical chemistry not regularly covered in the chemistry undergraduate course offerings. Topics may vary from year to year and may include (but are not limited to): chemical kinetics, electrochemistry, magnetic resonance, polymer chemistry, surface chemistry. Prerequisite: CHEM 260 and 360, both with a minimum grade of C-, or permission of the instructor.									
EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox)  Spring 2019									
RATIONALE (must l	e included)								
Including the minimum grade requirement in the prerequisite statement is intended to make the course listing clearer for students.									





				TITLE Undergraduate Research
TYPE OF CH	ANGES. Pl	ease type 'X' for the app	oropriat	e revision(s):
Course number		Units		Prerequisite ⊠
Title		Description		Equivalent   Statement
Experimen presentation supervisor contact the day of class	tal and/or on in resea and subm chemistry tes of the p	theoretical research; p rch seminar format. Ad ission of a research pro advisor to register the previous term. The research to preceding the research to	reparati mission posal. Pr ir intere arch pro erm. Pre	on of a written report and oral requires selection of a faculty cospective students must st in this course before the last posal is due by the end of the erequisite: Permission of the
departmen		ent; knowledge of chem on of <del>300-</del> 300-level cour		an advanced level. Normally rements.
departmen taken after EFFECTIVE	rerm ANI		se requi	rements.
departmen taken after EFFECTIVE 7 Fall, Spring, S	rerm ANI Summer an	on of 300-300-level cour  O YEAR FOR CHANGES  nd year (please enter in	se requi	rements.





COURSE SU	JBJECT	СНЕМ	NUMBER	482		TITLE		d Study in A of Chemistry	
TYPE OF CH	ANGES. P	lease type 'X' f	for the apr	oropriat	e revis	ion(s):			
Course number		Unit					quisite	$\boxtimes$	
Title		Desc	cription				ivalent ement		
indicate adde allows, drag expand. Plea specific cour	ed or new the endpo se review se compo	text using uncoint of the text the "Equivalenments" if change	derline. If y box to ma ncy staten ing equiva	you nee ke it big nents" s alent sta	d to en gger, as ection u atemen	ter more it will n under <u>In</u> t(s).	e text tha ot autom formatio	in the box natically on about	_
Directed reading in a topic chosen in consultation with a supervisor. Admission requires selection of a faculty supervisor and submission of a study topic to the department a least one month prior to the start of the term in which the course will be taken. May repeat for credit. Prerequisite: Permission of the department Department. Normally taken during the fourth year of study.									
		<b>D YEAR FOR (</b> nd year (pleas			:)				
Spring 201	9								
RATIONALE	(must be	included)							
Formatting	for consi	stency.							



COURSE S	UBJECT (	CHEM NUMBER	483	TITLE Undergraduate Research	II					
TYPE OF CH	<b>IANGES.</b> Ple	ase type 'X' for the app	propriate	e revision(s):						
Course number		Units		Prerequisite 🗵						
Title		Description		Equivalent   Statement						
<b>WORDING/DESCRIPTION EDITS.</b> 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 specific course components</u> if changing equivalent statement(s).										
presentati supervisor contact the day of clas the examin permission	Experimental and/or theoretical research; preparation of a written report and oral presentation in research seminar format. Admission requires selection of a faculty supervisor and submission of a research proposal. Prospective students must contact the chemistry advisor to register their interest in this course before the last day of classes of the previous semester. The research proposal is due by the end of the examination period preceding the research term. Prerequisite: CHEM 481 and permission of the department Department. This course cannot be counted towards the 400-level CHEM unit requirement for the Chemistry Majors program.									
		YEAR FOR CHANGES I year (please enter in								
Spring 201	.9									
RATIONALE	(must be in	cluded)								
Formatting	g for consiste	ency.								





COURSE SU	<b>ЈВЈЕСТ</b> С	HEM NUMBE	R 484	TITLE		emester Underg ch in Chemistr	
TYPE OF CH	ANGES. Plea	se type 'X' for the ap	ppropriate	revision(s):			
Course number		Units		Prere	equisite	$\boxtimes$	
Title		Description			iivalent itement		
indicate adde allows, drag expand. Pleas specific cours  Experimen semesters; seminar for submission chemistry a classes of the examination departmen taken after given for Cl	ed or new tend the endpoint se review the secomponer tal and/or the preparation of a research divisor to reperiod preparation period pretable previous to period pretable department completion HEM 481 or FERM AND Summer and	on EDITS. Indicate of the using underline. It is of the text box to me "Equivalency state of the interest of a written report sion requires selection proposal. Prospectively in the proposal of the proposal	f you need hake it biggements" se valent state normally of and oral proposal is term. Premistry at aurse required 484 is com	to enter morger, as it will a ction under Inction under Incement(s).  ver two consulty supervision in the second i	re text than ot autometer autometer and tact the last day and of the rmission of evel. Norre	an the box natically on about  h  of the mally	
RATIONALE	(must be inc	cluded)					
Formatting	for consiste	ncy.					



## COURSE MODIFICATION FORM

COURSE SU	ВЈЕСТ	СНЕМ	NUMBER	109	TITLE		iction to Chemist Careers	ry for	
TYPE OF CH	ANGES. I	Please type 'X	for the app	ropriate revi	ision(s):				
Course number		Un	its		Prere	equisite			
Title		Des	scription			ivalent tement	$\boxtimes$		
indicate adde allows, drag t expand. Pleas specific cours General cor interested i bonding, ga	WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using strike through, indicate added or new text using underline. 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 Information about specific course components if changing equivalent statement(s).  General concepts of chemistry for those with no chemistry background who are interested in pursuing careers in health sciences. Principles of atomic structure, chemical bonding, gases, liquids and solutions, chemical kinetics and equilibrium are covered. The								
surveyed. P 100 (may b pre-health p equivalent)	bonding, gases, liquids and solutions, chemical kinetics and equilibrium are covered. The chemistry of everyday materials, drugs and poisons, and environmental issues are surveyed. Prerequisite: Math 12 or equivalent Pre-Calculus 12 (or equivalent) or MATH 100 (may be taken concurrently). This course is open only to students in the Aboriginal pre-health program. Students with credit for high school chemistry Chemistry 12 (or equivalent), or any university chemistry course may not complete take this course for further credit. Quantitative/Breadth-Science.								
<b>EFFECTIVE T</b> Fall, Spring, S				textbox)					
Spring 2019	)								
RATIONALE	(must be	included)							
Wording ch	anges ar	e intended to	make the co	ourse listing	clearer fo	r studen	ts.		





COURSE SUBJECT	СНІ	EM	NUMBER	111	TITLE	Introductory Che Laboratory	mistry and
TYPE OF CHANGE	<b>S.</b> Please	e type 'X'	for the app	propriate rev	ision(s):		
Course number		Uni	ts		Prere	equisite 🗵	
Title $\square$		Des	cription		7.0	tivalent ⊠ tement	
wording/descriptions indicate added or mallows, drag the enexpand. Please revise specific course com  General fundame calculations; nucl liquids, solids and course includes a mathematics Preconcurrently), or in chemistry is respectively.	ew text dpoint of ew the ' ponents ntal con ear and d solutio laborat Calculus permiss quired f tined, th	using un f the text Equivale if change cepts and atomic s ons; chem ory comp 12 (or e sion of th or this co	derline. If yet box to maency statem ging equivalent connent. Presquivalent), e departments. Gore departments.	you need to e ke it bigger, a nents" section alent stateme ature; stoichic chemical bon cs and chemic erequisite: BC mATH 100 ( entDepartme quisite: if BC be taken as	enter mor as it will r a under II ent(s).  ometry ar ding; pro cal equilil chigh sch may be tr high sch a corequi	e text than the box not automatically information about and chemical perties of gases, prium. This ool aken evious training pool Mathematics site to CHEM	
111. Equivalent C chemistry Chemis university chemis Quantitative/Bre	stry 12 ( stry cou	or equiv	alent), <del>CHE</del>	<del>M 101, or </del> CH	HEM 110,	or any	
<b>EFFECTIVE TERM</b> Fall, Spring, Summe				textbox)			
Spring 2019							
RATIONALE (must			malro tho a	ouves listing	alaaway fa	n strudents Demon	-1 -6
outdated equivale				ourse listing	clearer fo	or students. Remova	10 IE





COURSE SUBJECT	CHEM NUMBER	121	TITLE	General Laborat	l Chemistry and tory I					
TYPE OF CHANGES.	Please type 'X' for the ap	propriate	revision(s):							
Course $\square$	Units		Prere	quisite	$\boxtimes$					
Title $\square$	Description			ivalent cement						
indicate added or net allows, drag the endpend. Please reviews pecific course component of the course component of the course component of the course component of the course cou		you need ake it bigg nents" see alent stat onding; that it in school crade of C	to enter more ger, as it will notion under Inement(s).  dermochemist s course inclusive Chern Students with	e text that ot autom formation formation formation formation for the following states and the following states are states as a second states are states as a second state and the following states are states as a second states are states as a second state and the following states are states as a second state are states as a second states are states as a second state are states are states as a second state are states as a second state are states are stat	ents;					
Fall, Spring, Summer Spring 2019	CHEM 120 or 123 may not count both CHEM 120 and 121 take this course for further credit. Quantitative/Breadth-Science.  EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox)  Spring 2019  RATIONALE (must be included)									
	hemistry I to equivalency			student	is. Added					





TYPE OF CH	ANGES. Plea	ase type 'X' for the app	propriate	e revision(s):				
Course number		Units		Prerequisite ⊠				
Title		Description		Equivalent $\boxtimes$ Statement				
WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using strike through, indicate added or new text using underline. 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 Information about specific course components if changing equivalent statement(s).  Chemical equilibria; electrochemistry; chemical thermodynamics; kinetics. Students who intend to take further laboratory courses in chemistry should take CHEM 122 concurrently with CHEM 126. Prerequisite: CHEM 120 or CHEM 121 or 120 with a minimum grade of C Recommended: MATH 152 (or 155) and PHYS 121 (or 102) as a corequisite. Students with credit for CHEM 124 or CHEM 180 may not take this course for further credit. Quantitative.								
Students w CHEM 122 120 with a 1 121 (or 10	tho intend to concurrentl minimum gr 2) as a corec	o take further laboratory y with CHEM 126. Presade of C Recommend tuisite.Students with c	ory cours requisited: MA' credit for	res in chemistry should take e: <u>CHEM 120 or CHEM</u> 121 <del>or</del> FH 152 (or 155) and PHYS				
Students w CHEM 122 120 with a 121 (or 10 not take th	concurrently concu	o take further laboratory y with CHEM 126. Presade of C Recommend tuisite.Students with c	ory cours requisit ded: MA credit for itative.	res in chemistry should take e: <u>CHEM 120 or CHEM</u> 121 <del>or</del> F <del>H 152 (or 155) and PHYS</del> CHEM 124 or CHEM 180 may				
Students w CHEM 122 120 with a 121 (or 10 not take th	TERM AND	y with CHEM 126. Pre ade of C Recommend juisite.Students with of further credit. Quant	ory cours requisit ded: MA credit for itative.	res in chemistry should take e: <u>CHEM 120 or CHEM</u> 121 <del>or</del> F <del>H 152 (or 155) and PHYS</del> CHEM 124 or CHEM 180 may				





COURSE SU	IBJECT	CHEM NUME	BER 123	TITLE	Enriche Laborat	d Chemistry I and ory			
TYPE OF CH	ANGES.	Please type 'X' for the	appropriate	e revision(s):					
Course number		Units		Prere	quisite				
Title		Descriptio	on 🗆		ivalent tement	$\boxtimes$			
An enriche bonding; the solutions, fibe covered thus a thore includes a least the solutions of the solutions	ed or new the endp se review se compo d chemis nermoche occusing o with mo ough man aborator chool che or CHEM is course	rtion Edits. Indicated text using underline oint of the text box to the "Equivalency statements" if changing equatry course, covering a semistry; elements; per concurrent chemistry are sophistication than stery of high-school carry component. Prerequistry Chemistry 12 (121 may not count may for further credit. Recovery or 101) as a corequisition of the count may not count may n	g. If you need make it big atements" so uivalent stantomic and riodic table; research and in other 1s hemistry will uisite: By plantomic than or commended	d to enter more ger, as it will nection under Ir tement(s).  molecular struct gases, liquids dapplications st year chemistill be assumed. Permission of the of CHEM 12 d: MATH 125 (d. MATH	e text that not autom aformation cture; che, solids, at The topic try course. This couthe Department of the Country course the Department of the Country course the C	n the box natically on about  emical nd ics will es, and erse rtment- for			
	EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox) Spring 2019								
RATIONALE	(must be	included)							
Wording ch	ianges ar	e intended to make th	he course lis	sting clearer fo	r student	cs.			





Course number Title		se type 'X' for the app Units Description		Prerequisite 🖂					
number Title				Prerequisite 🖂					
		Description							
WORDING/DE				Equivalent ⊠ Statement					
An enriched of chemical their current chem sophistication mastery of himinimum grade Department. Than one of C Students who CHEM 124 co	chemistry of modynamic istry resea in than in ot ode of C-; or Students when the modern to the contract of the	ics; kinetics, energy a rch and applications ther 1st year chemist themistry will be ass CHEM 120 or CHEM ith credit for CHEM r 124 take this cours take further laborate	mical equand nucle The top try cours umed. Pr 121 (or 122 or Cl or furt ory cours	callibria; electrochemistry; ear science, focusing on ics will be covered with more es, and thus a thorough rerequisite: CHEM 123 with a 120 and permission of the HEM 180 may not count more her credit. Corequisite: es in chemistry should take ded: MATH 126 (or 152 or					
EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox)  Spring 2019									
RATIONALE (n	RATIONALE (must be included)  Wording changes are intended to make the course listing clearer for students.								





COURSE SU	ВЈЕСТ	СНЕМ	NUMBER	180	TIT	The Che	emistry of Life		
TYPE OF CHA	<b>ANGES.</b> P	lease type 'X	or the ap	propriat	e revision	(s):			
Course number		Un	its		P	rerequisite			
Title		De	scription			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 specific course components</u> if changing equivalent statement(s).									
<b>EFFECTIVE T</b> Fall, Spring, S					)				
Spring 2019	)								
RATIONALE	(must be	included)							
make the co	urse listi	ng clearer fo	r students.	Added e	quivalenc	statement is y statement fo Enriched Gen	or courses with		





COURSE SU	<b>ЈВЈЕСТ</b>	CHEM <b>NUMBER</b>	260	TITLE	Atoms, Spectro	Molecules, scopy		
TYPE OF CH	ANGES. Pl	ease type 'X' for the ap	propria	te revision(s):				
Course number		Units		Prere	equisite			
Title		Description		•	ivalent tement	⊠		
WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using strike through, indicate added or new text using underline. 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 Information about specific course components if changing equivalent statement(s).								
Elements of physical chemistry from the molecular point of view. Introduction to quantum chemistry, atomic and molecular structure, and spectroscopy.  Prerequisite: CHEM 122, MATH 152, and PHYS 102 (with at least a B grade) or PHYS 121, or PHYS-126 or PHYS-141 (or PHYS 102 with a minimum grade of B), all with a minimum grade of C Recommended: MATH 232. Students with credit for PHYS 285 may not take this course for further credit. Quantitative.								
EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox)  Spring 2019								
RATIONALE	(must be i	ncluded)						
course listin	ng clearer i able prere	inclusion of minimum for students. Added eq quisite substitute for f	uivalend	y statement fo	r PHYS 2	85 as this course		





COURSE SU	J <b>BJECT</b> CH	HEM NUMBER	282	TITLE Organic Chemistry II				
TYPE OF CH	ANGES. Pleas	se type 'X' for the ap	propriate	revision(s):				
Course number		Units		Prerequisite 🖂				
Title		Description		Equivalent 🖂 Statement				
indicate addeallows, drage expand. Pleaspecific courself polyfunction natural prowith credit	WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using strike through, indicate added or new text using underline. 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 Information about specific course components if changing equivalent statement(s).  Polyfunctional organic compounds and complex organic reactions. Introduction to natural products. Prerequisite: CHEM 281 with a minimum grade of C Students with credit for CHEM 283 may not complete take this course for further credit.  Prerequisite: CHEM 281. Quantitative.							
EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox)  Spring 2019  RATIONALE (must be included)								
Including to	he minimum ourse listing o	grade requirement i	Moved th	requisite statement is intended to e prerequisite statement before for consistency.				





COURSE SU	ВЈЕСТ	СНЕМ	NUMBER	283	TITLE 0	rganic	Chemistry IIb
TYPE OF CH	ANGES.	Please typ	pe 'X' for the ap	propriat	e revision(s):		
Course number			Units		Prerequ	isite	$\boxtimes$
Title			Description		Equiva Staten		$\boxtimes$
allows, drag expand. Please specific course An advance reactivity, cacids and the reactions, casynthesis. Finot receive	WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using strike through, indicate added or new text using underline. 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 Information about specific course components if changing equivalent statement(s).  An advanced treatment of Organic Chemistry II. Topics include dienes and their reactivity, conjugation and aromaticity, aromatic substitution reactions, carboxylic acids and their derivatives, ketones and aldehydes, biological molecules, radical reactions, organometallic reagents, pericyclic reactions and planning multi-step synthesis. Prerequisite: CHEM 281 with a minimum grade of C Students should not receive with credit for both-CHEM 282 and 283 may not take this course for further credit. Quantitative.						
EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox)  Spring 2019							
RATIONALE						000	at the
Including the make the co	ourse list	num grade ing cleare	e requirement i er for students.	n the pro Changed	erequisite stateme l wording of equiv	ent is i valenc	ntended to y statement for





COURSE SUB	BJECT	СНЕМ	NUMBER	316	TITLE	Introdu Analysi	ctory Instru s	ımenta
TYPE OF CHA	NGES. I	Please type '	X' for the app	propriate	revision(s):			
Course number		U	nits		Prere	quisite		
Title		D	escription			ivalent tement		
wording/de indicate added allows, drag th expand. Please specific course	or new e endpo review	text using your text using you the feature to the text of the text of the feature the feature to the feature the f	underline. If y ext box to ma alency staten	you need ike it bigg nents" se	to enter mor ger, as it will n ction under <u>Ir</u>	e text tha ot autom	n the box natically	
spectroscopy CHEM-260, b	oth wit oth wit Oepartm	natography <u>h a minimu</u> nent. Studen	and electroch m grade of C- ets with credi	nemistry. , or perm	nentation baso Prerequisite: nission of the M 416 may n	CHEM 2		
EFFECTIVE TE Fall, Spring, Sur Spring 2019	mmer a	nd year (ple						
Including the make the coustatement.	minim	um grade re	equirement in or students.	n the pre Removin	requisite state g an outdated	ement is i course e	ntended to quivalency	





COURSE S	SUBJECT	CHEM NUMBER	360	TITLE		odynamics and al Kinetics
TYPE OF C	HANGES. F	Please type 'X' for the app	propriat	e revision(s):		
Course number		Units		Prere	equisite	
Title		Description			ivalent tement	$\boxtimes$
WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using strike through, indicate added or new text using underline. 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 Information about specific course components if changing equivalent statement(s).  Elements of physical chemistry from the macroscopic point of view. Thermodynamics, and its applications to chemical equilibrium. Chemical kinetics and reaction rate theories. Prerequisite: CHEM 260 with a minimum grade of C						
	nts with cr	TH 251. <del>Credit will not be</del> edit for MBB 323 may no				
		<b>D YEAR FOR CHANGES</b> nd year (please enter in	textbox	)		9.1
Spring 2019						
RATIONAL	E (must be	included)				
Including make the consistence	course listi	um grade requirement ir ng clearer for students. (	the pre Changin	erequisite state g equivalency	ement is i statemen	intended to at wording for





COURSE SU	ВЈЕСТ [	CHEM NUMBER	440	TITLE Solid State Materials Chemistry				
TYPE OF CHANGES. Please type 'X' for the appropriate revision(s):								
Course number		Units		Prerequisite ⊠				
Title		Description		Equivalent ⊠ Statement				
indicate adde allows, drag t expand. Pleas	WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using strike through, indicate added or new text using underline. 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 Information about specific course components if changing equivalent statement(s).							
crystal stru techniques, molecular n properties, 340 with a	ctures, bo mixed va nechanisr and mate <u>minimum</u>	onding, preparative metl lence states, solid soluti ns of the optical, electro rials applications in adv	nods, and ons, defe nic, ionicanced te	rganic materials in terms of alytical and characterization fects and non-stoichiometry, ic, magnetic and dielectric echnology. Prerequisite: CHEM it for CHEM 438 may not take				
		D YEAR FOR CHANGES nd year (please enter in	textbox)	)				
Spring 2019								
RATIONALE Including the make the co	e minimu	ım grade requirement ir	i the pre Removin	erequisite statement is intended to ng outdated equivalency statement.				





COURSE SU	J <b>BJECT</b> CH	IEM NUMBER	464	TITLE Quantum Chemistry			
TYPE OF CH	ANGES. Pleas	se type 'X' for the ap	propriate	revision(s):			
Course number		Units		Prerequisite ⊠			
Title		Description		Equivalent ⊠ Statement			
indicate adde allows, drag expand. Plea specific cour  Fundamen applied to and vibrati Prerequisit with a min	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 specific course components</u> if changing equivalent statement(s).  Fundamentals of quantum mechanics and its principal results and techniques as applied to atoms and molecules: atomic structure, molecular bonding, rotations and vibrations of molecules, symmetry of atomic and molecular orbitals.  Prerequisite: CHEM 260 or PHYS 285, MATH 232, and MATH 251; or PHYS 385, all with a minimum grade of C Recommended: MATH 310. Students with credit for CHEM 469 may not take this course for further credit. Quantitative.						
EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox)							
Spring 201	9 (must be inc	luded)					
Including to	he minimum ourse listing o	grade requirement i	Removin	requisite statement is intended to g outdated equivalency statement istry).			





COURSE SUI	вјест 📗	CHEM NUMBER	465	TITLE Electrochemistry			
TYPE OF CHA	NGES. Ple	ease type 'X' for the ap	propriat	e revision(s):			
Course number		Units		Prerequisite ⊠			
Title		Description		Equivalent 🖂 Statement			
Modern tech and dynamic systems of in cells and sol CHEM 360 w	e compone iniques and c electrock increasing ar energy with a mini	ents if changing equival ad concepts in electroc nemistry, ion transport importance including conversion application	hemistry t and vol chemical ns will al	tement(s).  Topics include equilibrium tammetry. Electrochemical ly modified electrodes, fuel so be discussed. Prerequisite: h credit for CHEM 469 may			
EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox) Spring 2019  RATIONALE (must be included)							
Including the minimum grade requirement in the prerequisite statement is intended to make the course listing clearer for students. Removing outdated equivalency statement (Chem 469 ST has not been offered as electrochemistry).							





COURSE S	UBJECT	СНЕМ	NUMBER	230	TITLE Inorganic Chemistry	
TVDE OF CL	IANCES D	loaco tur	no 'V' for the an	nronriat	ra varigion (a).	
TIPEOFCE	IANGES. P	iease ty	pe 'X' for the ap	propriat	e revision(s):	
Course number			Units		Prerequisite ⊠	
Title			Description		Equivalent $\square$ Statement	
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fundamen electron at and stereo Prerequisi Students v	tal concept ffinity, elect chemistry te: CHEM 1 who expect concurrer	tronega co-ordi Co-ordi to take to take	iodicity of prop tivity, stability of ination complex a minimum grafurther courses	erties, voluments, vol	ompounds in terms of alence, ionization potential, tion states, bonding, structure organometallic chemistry.	
			FOR CHANGES		······································	
Spring 2019						
RATIONALE (must be included)						
Including the minimum grade requirement in the prerequisite statement is intended to make the course listing clearer for students. Fixing minor spelling error in "periodicity". Following a standard format for concurrent lecture/lab course statements throughout all chemistry course descriptions. Adding the W as Chem 236 (non-W) no longer exists.						





COURSE S	UBJECT	СНЕМ	NUMBER	286	TITLE	Organio II	Chemistry Laborat	
TYPE OF CI	IANGES. I	Please type 'X'	' for the app	oropriate r	evision(s):			
Course number		Un	its		Prere	quisite		
Title		Des	scription			ivalent tement		
indicate add allows, drag expand. Plea specific cour	WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using strike through, indicate added or new text using underline. 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 Information about specific course components if changing equivalent statement(s).  Laboratory work chosen to complement CHEM 282the lecture course.							
Prerequisi 283. Quan		281 <u>with a m</u>	<u>inimum gra</u>	ade of C Co	orequisite: (	CHEM 28	2 or	
	Summer a	ID YEAR FOR and year (plea						
RATIONALE	E (must be	included)						
Wording c statement	hange and are intend	l inclusion of led to make tl	the minimu he course li	m grade re sting cleare	equirement er for stude	in the pre	erequisite	





COURSE SU	J <b>BJECT</b> C	HEM NUMBER	110	TITLE Introductory Chemistry			
TYPE OF CH	ANGES. Plea	ase type 'X' for the app	propriat	e revision(s):			
Course number		Units		Prerequisite 🖂			
Title		Description	$\boxtimes$	Equivalent ⊠ Statement			
WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using strike through, indicate added or new text using underline. 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 Information about specific course components if changing equivalent statement(s).  General fundamental concepts and nomenclature; stoichiometry and chemical calculations; nuclear and atomic structures, chemical bonding; properties of gases, liquids, solids and solutions; chemical kinetics and chemical equilibrium. This course has the same lecture component as CHEM 111 but no laboratory work. Students who intend to take further laboratory courses in chemistry must should take CHEM 111 instead. Prerequisite: BC high school mathematicsPre-Calculus 12 (or equivalent). MATH 100 (may be taken concurrently), or permission of the departmentDepartment. No previous training in chemistry is required for this course. Corequisite: If BC high school mathematics 12 credit not obtained, then MATH 100 must be taken as a corequisite to CHEM 110. Students with credit for high school chemistry Chemistry 12 (or equivalent), CHEM 111, or any university chemistry course may not take CHEM 110 or 111this course for further credit. Students may not count both CHEM 110 and 111 for credit. Quantitative/Breadth-Science.							
EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox)  Spring 2019							
RATIONALE	RATIONALE (must be included)						
Wording changes are intended to make the course listing clearer for students.							



COURSE SU	вјест [	CHEM NUMBER	120	TITLE General Chemistry	y I		
TYPE OF CH	ANGES. Pl	ease type 'X' for the app	propriat	te revision(s):			
Course number		Units		Prerequisite 🖂			
Title		Description	$\boxtimes$	Equivalent ⊠ Statement			
WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using strike through, indicate added or new text using underline. 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 Information about specific course components if changing equivalent statement(s).  Atomic and molecular structure; chemical bonding; thermochemistry; elements; periodic table; gases, liquids, solids, and solutions. This course has the same lecture component as CHEM 121 but no laboratory work. Students who intend to take further laboratory courses in chemistry must should take CHEM 121 instead.  Prerequisite: BC high school chemistry Chemistry 12, or CHEM 110 or CHEM 111 or CHEM 110 with a minimum grade of C Recommended: MATH 151 (or 154) and PHYS 120 (or 101) as a corequisite. Students with credit for CHEM 102, CHEM 104,							
Or CHEM 12 Quantitativ		M 123 may not take this	s course	e for further credit.			
		YEAR FOR CHANGES nd year (please enter in		<b>x</b> )			
Spring 2019							
RATIONALE	(must be i	ncluded)					
	emistry I a	dded to equivalency sta		sting clearer for students. Enriched t and outdated courses (CHEM 102			





COURSE S	UBJECT (	CHEM NUMBER	433	TITLE Bioinorganic Chemistry			
TYPE OF CH	IANGES. Ple	ase type 'X' for the ap	propriat	e revision(s):			
Course number		Units		Prerequisite ⊠			
Title		Description	$\boxtimes$	Equivalent ⊠ Statement			
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to enzyme CHEM 332 least 6 uni	s, to medicin with a mini ts of upper-c	al inorganic chemistr mum grade of C-: The livision MBB- <del>courses</del> ;	y. <del>Repea</del> Chemist or perm	ystems, from trace elements, to the Credit. Prerequisite: try of Transition Metals; or at hission of the Department. trourse for further credit.			
EFFECTIVE TERM AND YEAR FOR CHANGES Fall, Spring, Summer and year (please enter in textbox)  Spring 2019							
make the c	he minimun ourse listing	n grade requirement in g clearer for students.	Removii	erequisite statement is intended to ng outdated equivalency statement and when this course was created).			





COURSE SU	JBJECT	NUSC NUMBER	342	TITLE	Introdu Science	ction to Nuclear
TYPE OF CH	ANGES. I	Please type 'X' for the app	oropriat	e revision(s):		
Course number		Units		Prere	quisite	$\boxtimes$
Title		Description			ivalent tement	
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model and spontaneo nucleus an	structure us fission d heavy io iission of	e of complex nuclei, nucle ; experimental description on reactions. Prerequisit the department Departm	ear deca on of nu e: NUSC	y via particle e clear reactions 341 <u>, with a m</u>	mission a ; nucleon inimum g	and rade of
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Spring 201						
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COURSE SUI	BJECT NU	SC NUMBER	<b>3</b> 46	TITLE R	adiochemistry Laborator	ry			
<b>TYPE OF CHANGES.</b> Please type 'X' for the appropriate revision(s):									
Course number		Units		Prerequi	isite 🗵				
Title		Description		Equiva Staten					
indicate adde allows, drag tl expand. Pleas	WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using strike through, indicate added or new text using underline. 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 Information about specific course components if changing equivalent statement(s).								
Introduction to the techniques of radiochemistry; proportional and Geiger counters; sample preparations and half-life measurement; synthesis and separation of labelled compounds; beta and gamma-ray spectroscopy. Prerequisite: NUSC 341 with a minimum grade of C Quantitative.									
		EAR FOR CHANGES ear (please enter in							
Spring 2019  RATIONALE (		ıded)							
Including the	e minimum g	rade requirement i learer for students.		quisite stateme	ent is intended to				





COURSE SU	ВЈЕСТ	NUSC	NUMBER	444	TITLE	Special Topics in Nuclear Science		
TYPE OF CHANGES. Please type 'X' for the appropriate revision(s):								
Course number		Un	its		Prere	quisite 🗵		
Title		De	scription			ivalent 🗌 tement		
WORDING/DESCRIPTION EDITS. Indicate deleted or changed text using strike through, indicate added or new text using underline. 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 Information about specific course components if changing equivalent statement(s).  Advanced topics in nuclear science. Prerequisite: NUSC 342 or 442, with a minimum grade of C-, or permission of the department Department.								
			,					
EFFECTIVE T Fall, Spring, S Spring 2019	ummer a	ind year (plea		extbox)				
Including th	e minim					ement is intended to ency.		





COURSE SUBJECT	NUSC NUMBER	482	TITLE Directed Study in A	Advance
TVPF OF CHANGES	Please type 'X' for the ap	nronriato roy	rician(a).	
		propriate rev	ision(s):	
Course number	Units		Prerequisite 🛚	
Title	Description		Equivalent $\square$ Statement	
ndicate added or ne allows, drag the end expand. Please revie	w text using <u>underline</u> . If point of the text box to ma	you need to eake it bigger, a nents" section	nged text using strike through enter more text than the box as it will not automatically n under <u>Information about</u> ent(s).	t,
requires selection department at leas will be taken. Norn	n a topic chosen in consult of a faculty supervisor and t one month prior to the s nally taken during the fou department Department.	d submission start of the te	of a study topic to the rm in which the course	
	ND YEAR FOR CHANGES and year (please enter in			
RATIONALE (must b	e included)			
Formatting for con				

## COURSE MODIFICATION FORM



100	COURSE SUE	BJECT NUSC	NUMBER	346-3	TITLE Radiochemistry Labor	at			
	TYPE OF CHANGES. Please type 'X' for the appropriate revision(s):								
	Course number		Units	X	Prerequisite				
	Title		Description		Equivalent □ Statement				
	indicate adde allows, drag t expand. Pleas	ed or new text u the endpoint of se review the "E	sing <u>underline</u> . If the text box to m	you need to ake it bigge ments" sect	nanged text using strike through, o enter more text than the box er, as it will not automatically ion under Information about ment(s).				
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	Spring 2018	3							
	RATIONALE	(must be includ	ed)						
	10 4-h nucle Due to the l and sufficie procedures hour/week from 2 to 3) behind each	ear science expeack of a lecture of a lecture of a lecture of a lecture, and how to applecture component, the students we experiment, b)	eriments, each accomponent, the state the theory behind proach some of the theory to the theory behind the theory behind the the theory behind the theory that they are that they	companied students do nd the expensive ne extensive e (and there ce to a) bet v have the e	s a 2-credit course and involves up to by corresponding written reports. not have the opportunity to discuss riments, the experimental e data analysis. By adding a one-eby increasing the credit assignment ter master the theoretical concepts xperimental procedure ready for the cel sheets in advance of the				
	This added credit hour of lecture (which will be scheduled in addition to the lab time) will also lead to a more efficient use of time during the laboratory and overall, will lead to better learning outcomes for the students.								