

OFFICE OF THE ASSOCIATE VICE-PRESIDENT, ACADEMIC

MEMORANDUM	8888 University Drive, Burnaby, BC Canada V5A 1S6	TEL: 778.782.4636 FAX: 778.782.5876	avpcioldsfu.ca www.sfu.ca/vpacado	emic
ATTENTION	Senate Mark Lechner, Acting Cl	DATE	May 5, 2017 1/2	
RE:	Senate Committee on Undergraduate Studies New Course Proposals (SCUS 17-21)	la sc_	

For information:

Acting under delegated authority at its meeting of May 4, 2017 SCUS approved the following curriculum revisions effective Spring 2018.

a. Faculty of Applied Sciences (SCUS 17-21a)

- 1. Mechatronic Systems Engineering
 - (i) New Course Proposal: MSE 452-3, Power Conversion in Alternative Energy Systems (Summer 2018)

b. Faculty of Communication, Art and Technology (SCUS 17-21b)

1. School for the Contemporary Arts

(i) New Course Proposal:

- CA 306-3, Internship in Contemporary Arts I
- CA 152-3, Acting I, Thinking as an Artist (Fall 2018)
- CA 153-3, Acting II, Playing with Form (Spring 2019)

c. Faculty of Science (SCUS 17-21c)

1. Department of Biological Sciences

(i) New Course Proposals:

- BISC 412-3, Aquatic Ecology
- BISC 423-3, Developmental Neurobiology (Spring 2019)
- BISC 424-3, Applied Genomics (Spring 2019)

2. Faculty of Science

(i) New Course Proposal: SCI 301-3, Science Communication: An Introduction (Fall 2018)

2

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SFU SENATE COMMITTEE ON UNDERGRADUATE STUDIES	NEW COURSE PROPOSAL 1 of 4 pages
COURSE SUBJECT MSE	NUMBER 452
COURSE TITLE LONG — for Calendar/schedule, no more than 100 cha Power Conversion in Alternative Energy Systems	racters including spaces and punctuation
COURSE TITLE SHORT — for enrollment/transcript, no more than 30 of Pwr Conv in Alt Energy Sys	characters including spaces and punctuation
CAMPUS where course will be normally taught: Burnaby	urrey Vancouver Great Northern Way Off campus
COURSE DESCRIPTION — 50 words max. Attach a course outline. Dor	a't include WQB or prerequisites info in this description box.
Introduction to power conversion technologies in alter power semiconductors, circuit topologies, switching an systems, power quality and grid integration, wind ener others. Prerequisite: MSE 353.	native energy systems. Main topics include: modern nd control of power converters in alternative energy gy systems, solar energy systems, fuel cell systems and
REPEAT FOR CREDIT YES VO How many times	»? Within a term? YES NO
LIBRARY RESOURCES NOTE: Senate has approved (S.93-11) that no new course should be appr materials. Each new course proposal must be accompanied by the email th please visit www.lib.sfu.ca/about/overview/collections/course-assessments	oved by Senate until funding has been committed for necessary library nat serves as proof of assessment. For more information, <u>s</u> .

RATIONALE FOR INTRODUCTION OF THIS COURSE

This course aims to enhance the current curriculum of the School of Mechatronic Systems Engineering (MSE) in the area of energy systems. It is designed to cover major topics on the front of electrical power and energy production and conversion in modern alternative energy systems. Prior to the introduction of this course, there is no course at SFU covering similar topics focusing on the electrical aspects of alternative energy systems, where there is a strong growth and need from industry both locally and internationally. The prerequisite of this course, MSE353, is offered as a third year core course which allows students to get a first touch of fundamentals on power electronics and electric machinery. Introduction of this new course as a fourth year elective provides students with the opportunity to learn more advanced and practical topics on modern power conversion technologies and their applications in various alternative energy systems such as solar and wind. To that end, the course supports the development of the energy systems discipline at MSE and SFU, which is also in accordance with demands from industry where a continuous growth in utilizing alternative energy sources has taken place over the past decade.



SCHEDULING AND ENROLLMENT INFORMATION Term and year course would first be offered (e.g. FALL 2016) Summer 2018					
Term in which course will typically be offered Spring Summer Fall					
Other (describe)					
Will this be a required or elective course in the curriculum? Required Elective					
What is the probable enrollment when offered? Estimate: 40					
UNITS Indicate number of units: 3					
Indicate no. of contact hours: 37.5 Lecture Seminar Tutorial 12 Lab Other; explain below					
OTHER					

FACULTY

Which of your present CFL faculty have the expertise to offer this course?

Jiacheng (Jason) Wang, Mehrdad Moallem, Ahmad Rad

WQB DESIGNATION

(attach approval from Curriculum Office)

n/a

PREREQUISITE AND / OR COREQUISITE

Prerequisite: MSE 353 Power Electronics and Electric Machinery



EQUIVALENT COURSES [For more information on equivalency, see Equivalency Statements under Information about Specific Course components.]

1. SEQUENTIAL COURSE [is not hard coded in the student information management system (SIMS).]

Students who have taken (place relevant course(s) in the blank below (ex: STAT 100)) first may not then take this course for further credit.

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2. ONE-WAY EQUIVALENCY [is not hard coded in SIMS.]

(Place relevant course(s) in the blank below (ex: STAT 100)) will be accepted in lieu of this course.

n/a

3. TWO-WAY EQUIVALENCY [is hard coded and enforced by SIMS.]

Students with credit for (place relevant course(s) in the blank below (ex: STAT 100)) may not take this course for further credit.

n/a

Does the partner academic unit agree that this is a two-way equivalency? YES NO Please also have the partner academic unit submit a course change form to update the course equivalency for their course(s).

4. SPECIAL TOPICS PRECLUSION STATEMENT [is not hard coded in SIMS.]

Students who took MSE 490 - Selected Topics in Mechatronic Systems Engineering: Power Conversion in Alternative Energy Systems in Summer 2014, 2015, 2016 or 2017 cannot take this course for further credit.

FEES

Are there any proposed student fees associated with this course other than tuition fees?

COURSE - LEVEL EDUCATIONAL GOALS (OPTIONAL)

Upon successful completion of this course, students will:

Gain knowledge of electrical power and energy production with modern alternative energy systems; Understand state-of-the-art power conversion configurations, operation methods, and use in alternative energy systems;

NO

Analyze parameters and features of various power conversion systems, switching schemes, and control; Analyze, model and design power conversion systems for different alternative energy systems; Implement and verify operation and control of alternative energy systems with suitable engineering tools.



RESOURCES

List any outstanding resource issues to be addressed prior to implementation: space, laboratory equipment, etc:

n/a					
10					
OTHER IMPLICATIONS	_				
Final exam required YES	NO				
Criminal Record Check required	YES	V NO			

Criminal Record Check required

OVERLAP CHECK

Checking for overlap is the responsiblity of the Associate Dean.

Each new course proposal must have confirmation of an overlap check completed prior to submission to the Faculty Curriculum Committee.

Name of Originator

Jiacheng (Jason) Wang



senate committee on undergraduate studies

1 OF 4 PAGES

COURSE SUBJECT CA NUMBER 306-3
COURSE TITLE LONG — for Calendar/schedule, no more than 100 characters including spaces and punctuation Internship in Contemporary Arts I
COURSE TITLE SHORT — for enrollment/transcript, no more than 30 characters including spaces and punctuation Internship I
CAMPUS where course will be normally taught: Burnaby Surrey Vancouver Great Northern Way Off campus
COURSE DESCRIPTION — 50 words max. Attach a course outline. Don't include WQB or prerequisites info in this description box.
This course is intended for advanced students to gain hands- on learning experience with an arts organization. This can include artist run centres, film festivals, media arts or performance venues, galleries, museums, and arts publications. The students time in the internship should total approximately 80 hours, to be carried out over the course of a semester. Under the supervision of a faculty member, projects can involve research, writing, organizing events, curating exhibitions and programs, public relations, media production, archiving, and related activities. A written report is produced by the student at the conclusion of the internship
REPEAT FOR CREDIT V ES NO Total completions allowed 2 Within a term? V ES NO
LIBRARY RESOURCES NOTE: Senate has approved (S.93-11) that no new course should be approved by Senate until funding has been committed for necessary library materials. Each new course proposal must be accompanied by the email that serves as proof of assessment. For more information, please visit <u>www.lib.sfu.ca/about/overview/collections/course-assessments</u> .
RATIONALE FOR INTRODUCTION OF THIS COURSE
A 4 credit, 400-level internship course, CA 406, is already being offered and by adding a 3 credit, 300-level internship course provide s more opportunity for students to take the internship earlier in their degree, therefore having more experiential learning earlier in their r academic career and to build on that experience throughout their degree. Students can take CA 406 for repeat credit which makes it a challenge administratively, so this is a way to offer more experiential lear ning opportunities without having to repeat a course. By offering CA 306 as a 3 credit course, it provides both students and internship host organizations more flexibility in the type of inte rnship opportunities which may allow for more internships in general. There has been consistent enrollment in the CA 406 since Spring 2014.
March 2017



senate committee on undergraduate studies

NEW COURSE PROPOSAL

2 OF 4 PAGES

SCHEDULING AND ENROLLMENT INFORMATION				
Term and year course would first be offered (e.g. FALL 2016) Spring 2018				
Term in which course will typically be offered Spring Summer Fall				
Other (describe)				
Will this be a required or elective course in the curriculum? Required Elective				
What is the probable enrollment when offered? Estimate: 15				
UNITS Indicate number of units: 3				
Indicate no. of contact hours: Lecture Seminar Tutorial Lab 3 Other; explain below				
OTHER				
practicum				

FACULTY

Which of your present CFL faculty have the expertise to offer this course?

Coordinated by the Professional Development Coordinator	

WQB DESIGNATION

(attach approval from Curriculum Office)

PREREQUISITE AND / OR COREQUISITE

45 Credits



senate committee on undergraduate studies

EQUIVALENT COURSES [For more information on equivalency, see Equivalency Statements under Information about Specific Course components.]

1. SEQUENTIAL COURSE [is not hard coded in the student information management system (SIMS).]

Students who have taken (place relevant course(s) in the blank below (ex: STAT 100)) first may not then take this course for further credit.

2. ONE-WAY EQUIVALENCY [is not hard coded in SIMS.]

(Place relevant course(s) in the blank below (ex: STAT 100)) will be accepted in lieu of this course.

3. TWO-WAY EQUIVALENCY [is hard coded and enforced by SIMS.]

Students with credit for (place relevant course(s) in the blank below (ex: STAT 100)) may not take this course for further credit.

Does the partner academic unit agree that this is a two-way equivalency? YES NO Please also have the partner academic unit submit a course change form to update the course equivalency for their course(s).

4. SPECIAL TOPICS PRECLUSION STATEMENT [is not hard coded in SIMS.]

1 223

Are there any proposed student fees associated with this course other than tuition fees?

COURSE - LEVEL EDUCATIONAL GOALS (OPTIONAL)

V NO

YES



RESOURCES

List any outstanding resource issues to be addressed prior to implementation: space, laboratory equipment, etc:

OTHER IMPLICATIONS

Final exam required YES NO

OVERLAP CHECK

Checking for overlap is the responsiblity of the Associate Dean.

Each new course proposal must have confirmation of an overlap check completed prior to submission to the Faculty Curriculum Committee.

Name of Originator



COURSE SUBJECT	Theatre		NUMBER CA 152	2-3			
COURSE TITLE LONG Acting I: Thinkin	— for Calendar/s ig as an Artist	chedule, no more than 100 ch	aracters including spaces a	nd punctuatio	on		-
COURSE TITLE SHOR Acting I: Thinkin	RT — for enrollme og as an Artist	nt/transcript, no more than 30	characters including space	es and punctu	ation		
CAMPUS where course	e will be normally	taught: Burnaby	Surrey 🖌 Vancouver	Grea	t Northern W	Yay Off campus	
COURSE DESCRIPTIO The first of six Pe ensemble, and wi interpretation and	DN — 50 words m erformance ac thin society. l original crea	ax. Attach a course outline. Do ting courses. The acto Emphasis is placed upo tion.	on't include WQB or pren r is trained as an inc on physical experien	equisites info dividual annce and in	in this descrip rtist within nagination	tion box. a collaborative as sources for	
REPEAT FOR CREDIT	YES	NO How many time	es? With	hin a term?	YES	NO	
LIBRARY RESOURCE	S roved (S.93-11) tha	t no new course should be apr	proved by Senate until fund	ding has been	committed fo	r necessary library	

NOTE: Senate has approved (5.95-11) that no new course should be approved by Senate until funding has been committed for necessary lib materials. Each new course proposal must be accompanied by the email that serves as proof of assessment. For more information, please visit <u>www.lib.sfu.ca/about/overview/collections/course-assessments</u>.

RATIONALE FOR INTRODUCTION OF THIS COURSE

Since we began to admit students into the BFA Theatre Performance in first year during the 2013-14 academic year, our first year BFA cohort has attended a special section of CA 150 (Introduction to Acting) in the fall of the first year. This became confusing to students, and difficult to administer. CA 152 establishes a distinct first year fall term BFA cohort acting class. The subtitle - Thinking as an Artist - is the first of six descriptive subtitles for our cohort acting courses. The successive subtitles and descriptions describe an arc of performance training, and make explicit the distinctive focus of our program.

SFU SENA	TE COMMITTEE OI Rgraduate stud	N IES		Ν	NEW COURSE PROPOSAL 2 OF 4 PAGES
SCHEDULING AND ENROLLM Term and year course would first	ENT INFORMATION be offered (e.g. FALL 20	₀₁₆₎ Fall 2018			
Term in which course will typical	ly be offered 🔲 Spri	ng Summer	Fall		
	Oth	ner (describe)			
Will this be a required or elective	course in the curriculun	n? 🛃 Required	Elective		
What is the probable enrollment v	when offered? Estimate	.: 20			
UNITS 3 Indicate number of units:					
Indicate no. of contact hours:	Lecture	Seminar	Tutorial	Lab 6	Other; explain below
OTHER					
Studio					

FACULTY

Which of your present CFL faculty have the expertise to offer this course?

.

This course will be taught in rotation by our tenured or tenure-track faculty - Steven Hill, Ker Wells, and Cole Lewis.

WQB DESIGNATION

(attach approval from Curriculum Office)

PREREQUISITE AND / OR COREQUISITE By audition.



EQUIVALENT COURSES [For more information on equivalency, see Equivalency Statements under Information about Specific Course components.]

1. SEQUENTIAL COURSE [is not hard coded in the student information management system (SIMS).]

Students who have taken (place relevant course(s) in the blank below (ex: STAT 100)) first may not then take this course for further credit.

2. ONE-WAY EQUIVALENCY [is not hard coded in SIMS.]

(Place relevant course(s) in the blank below (ex: STAT 100)) will be accepted in lieu of this course.

3. TWO-WAY EQUIVALENCY [is hard coded and enforced by SIMS.]

Students with credit for (place relevant course(s) in the blank below (ex: STAT 100)) may not take this course for further credit.

Does the partner academic unit agree that this is a two-way equivalency? **L** YES **NO** Please also have the partner academic unit submit a course change form to update the course equivalency for their course(s).

4. SPECIAL TOPICS PRECLUSION STATEMENT [is not hard coded in SIMS.]

FEES

Are there any proposed student fees associated with this course other than tuition fees?

YES	~	NC
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COURSE - LEVEL EDUCATIONAL GOALS (OPTIONAL)



RESOURCES

List any outstanding resource issues to be addressed prior to implementation: space, laboratory equipment, etc:



OVERLAP CHECK

Checking for overlap is the responsiblity of the Associate Dean.

Each new course proposal must have confirmation of an overlap check completed prior to submission to the Faculty Curriculum Committee.

Name of Originator

DD Kugler



COURSE SUBJECT	Theatre		NUMBER CA	A 153-3				
COURSE TITLE LONG Acting II: Playing	COURSE TITLE LONG — for Calendar/schedule, no more than 100 characters including spaces and punctuation Acting II: Playing with Form							
COURSE TITLE SHOR Acting II: Playing	COURSE TITLE SHORT — for enrollment/transcript, no more than 30 characters including spaces and punctuation Acting II: Playing with Form							
CAMPUS where course	CAMPUS where course will be normally taught: 🔲 Burnaby 🔛 Surrey 🖌 Vancouver 🚺 Great Northern Way 🚺 Off campus							
COURSE DESCRIPTION — 50 words max. Attach a course outline. Don't include WQB or prerequisites info in this description box. The second Performance acting course. Work focuses on a range of established dramatic forms and techniques, with and without text.								
REPEAT FOR CREDIT	YES	NO How many ti	mes?	Within a term?	YES	NO		

NOTE: Senate has approved (S.93-11) that no new course should be approved by Senate until funding has been committed for necessary library materials. Each new course proposal must be accompanied by the email that serves as proof of assessment. For more information, please visit <u>www.lib.sfu.ca/about/overview/collections/course-assessments</u>.

RATIONALE FOR INTRODUCTION OF THIS COURSE

Since we began to admit students into the BFA Theatre Performance in first year during the 2013-14 academic year, our first year BFA cohort has attended a special topics acting course (CA 289) in the spring of the first year. This became confusing to students, and difficult to administer. CA 153 establishes a distinct first year spring term BFA cohort acting class. The subtitle - Playing with Form- is the second of six descriptive subtitles for our cohort acting courses. The successive subtitles and descriptions describe an arc of performance training, and make explicit the distinctive focus of our program.

SFU	SENATE COM UNDERGRAD	IMITTEE ON UATE STUDIES				NEW	2 OF 4 PAGES
SCHEDULING AND EN Term and year course wo	ROLLMENT INF uld first be offered	ORMATION d (e.g. FALL 2016)	Spring 2019				
Term in which course wi	ll typically be offer	red V Spring Other (de	Summer	Fall			
Will this be a required or What is the probable enro	elective course in	the curriculum? red? Estimate: 20	Required	L Elective			
UNITS	2						
Indicate number of units:	5						
Indicate no. of contact ho	urs: L	ecture	Seminar	Tutorial	Lab	6	Other; explain below
OTHER							

Studio

FACULTY

Which of your present CFL faculty have the expertise to offer this course?

This course will be taught in rotation by our tenured or tenure-track faculty - Steven Hill, Ker Wells, and Cole Lewis.

WQB DESIGNATION

(attach approval from Curriculum Office)

PREREQUISITE AND / OR COREQUISITE CA 152



EQUIVALENT COURSES [For more information on equivalency, see Equivalency Statements under Information about Specific Course components.]

1. SEQUENTIAL COURSE [is not hard coded in the student information management system (SIMS).]

Students who have taken (place relevant course(s) in the blank below (ex: STAT 100)) first may not then take this course for further credit.

2. ONE-WAY EQUIVALENCY [is not hard coded in SIMS.]

(Place relevant course(s) in the blank below (ex: STAT 100)) will be accepted in lieu of this course.

3. TWO-WAY EQUIVALENCY [is hard coded and enforced by SIMS.]

Students with credit for (place relevant course(s) in the blank below (ex: STAT 100)) may not take this course for further credit.

Does the partner academic unit agree that this is a two-way equivalency? YES NO Please also have the partner academic unit submit a course change form to update the course equivalency for their course(s).

4. SPECIAL TOPICS PRECLUSION STATEMENT [is not hard coded in SIMS.]

STUDENTS WHO HAVE TAKEN FPA/CA 289 AS A SPECIAL TOPICS ACTING COURSE CANNOT TAKE THIS COURSE FOR FUTURE CASSIT.

FEES

Are there any proposed student fees associated with this course other than tuition fees?

YES 🖌 NO

COURSE - LEVEL EDUCATIONAL GOALS (OPTIONAL)



RESOURCES

List any outstanding resource issues to be addressed prior to implementation: space, laboratory equipment, etc:



OVERLAP CHECK

Checking for overlap is the responsibility of the Associate Dean.

Each new course proposal must have confirmation of an overlap check completed prior to submission to the Faculty Curriculum Committee.

Name of Originator

DD Kugler

SCUS 17-21c



SENATE COMMITTEE ON UNDERGRADUATE STUDIES

1 OF 4 PAGES

COURSE SUBJECT BISC NUMBER 412								
COURSE TITLE LONG — for Calendar/schedule, no more than 100 characters including spaces and punctuation								
COURSE TITLE SHORT — for enrollment/transcript, no more than 30 characters including spaces and punctuation								
Aquatic Ecology								
CAMPUS where course will be normally taught: Burnaby Surrey Vancouver Great Northern Way Off campus								
COURSE DESCRIPTION — 50 words max. Attach a course outline. Don't include WQB or prerequisites info in this description box.								
The scientific study of marine and freshwater ecosystems. Through a combination of lecture and field/lab components, the course will examine a combination of fundamental concepts of aquatic ecology as well as challenges posed to these ecosystems by environmental change. Students will gain hands-on experience with data collection, analysis, and communication.								
REPEAT FOR CREDIT YES NO How many times? Within a term? YES NO								
LIBRARY RESOURCES NOTE: Senate has approved (S.93-11) that no new course should be approved by Senate until funding has been committed for necessary library materials. Each new course proposal must be accompanied by the email that serves as proof of assessment. For more information, please visit <u>www.lib.sfu.ca/about/overview/collections/course-assessments</u> .								
RATIONALE FOR INTRODUCTION OF THIS COURSE								
This course has been previously offered as a special topics course. Here we seek to regularize it. Once regularized, Aquatic Ecology will be added as a stream elective to the Ecology, Evolution, and Conservation (EEC) stream in Biological Sciences. Students in Biological Sciences are required to complete 5 lab courses; this course provides an additional lab option for our students.								



NEW COURSE PROPOSAL

2 OF 4 PAGES

SCHEDULING AND ENROLLMENT INFORMATION							
Term and year course would first be offered (e.g. FALL 2016) SPRING 2018							
Term in which course will typically be offered Spring Summer Fall Other (describe)							
Will this be a required or elective course in the curriculum? Required Elective							
What is the probable enrollment when offered? Estimate: 48							
UNITS Indicate number of units: 3							
Indicate no. of contact hours: 1 Lecture Seminar Tutorial 4 Lab Other; explain below							
OTHER							

FACULTY

Which of your present CFL faculty have the expertise to offer this course?

Drs Jon Moore, Wendy Palen, Isabelle Cote, Nick Dulvy.

WQB DESIGNATION

(attach approval from Curriculum Office)

NA

PREREQUISITE AND / OR COREQUISITE

BISC 101, BISC 102, and either BISC 204 or GEOG 215; all with a grade of C- or better.



EQUIVALENT COURSES [For more information on equivalency, see Equivalency Statements under Information about Specific Course components.]

1. SEQUENTIAL COURSE [is not hard coded in the student information management system (SIMS).]

Students who have taken (place relevant course(s) in the blank below (ex: STAT 100)) first may not then take this course for further credit.

2. ONE-WAY EQUIVALENCY [is not hard coded in SIMS.]

(Place relevant course(s) in the blank below (ex: STAT 100)) will be accepted in lieu of this course.

3. TWO-WAY EQUIVALENCY [is hard coded and enforced by SIMS.]

Students with credit for (place relevant course(s) in the blank below (ex: STAT 100)) may not take this course for further credit.

Does the partner academic unit agree that this is a two-way equivalency? <u>YES</u> NO Please also have the partner academic unit submit a course change form to update the course equivalency for their course(s).

4. SPECIAL TOPICS PRECLUSION STATEMENT [is not hard coded in SIMS.]

Students who have completed Special Topics BISC 473 Aquatic Ecology, may not repeat BISC 412 for further credit.

✓ YES

NO

FEES

Are there any proposed student fees associated with this course other than tuition fees?

COURSE - LEVEL EDUCATIONAL GOALS (OPTIONAL)

Students are expected to achieve the following learning objectives upon successful completion of the course: • Explain basic research methodologies for aquatic ecology.

- · Identify some local aquatic taxa.
- Describe life-cycle of several key aquatic taxa.
- · Collect scientific data in a collaborative team.
- Manipulate, analyze, and interpret datasets.
- · Construct scientific hypothesis and design project to address hypothesis.
- Illustrate effective communication of science.
- Explain link between science and several management or conservation challenges.



RESOURCES

List any outstanding resource issues to be addressed prior to implementation: space, laboratory equipment, etc:

Laboratory	space with basi	c equipment (i.	e., microscopes) is available.	The forms for	course fees hav	e been
submitted.							

OTHER IMPLICATIONS

Final exam required	YES	V _{NO}	
Criminal Record Chee	ck required	YES	✓ NO

OVERLAP CHECK

Checking for overlap is the responsiblity of the Associate Dean.

Each new course proposal must have confirmation of an overlap check completed prior to submission to the Faculty Curriculum Committee.

Name of Originator

Jonathan Moore



NEW COURSE PROPOSAL

1 OF 4 PAGES

COURSE SUBJECT	BISC	NUMBER 423	
COURSE TITLE LONG Developmental N	— for Calendar/schedule, no more than 100 char Neurobiology	acters including spaces and punctuation	
COURSE TITLE SHOR Developmental N	RT — for enrollment/transcript, no more than 30 c Neurobiology	haracters including spaces and punctuation	
CAMPUS where course	e will be normally taught: 🚺 Burnaby 🔲 St	urrey 🗌 Vancouver 🗌 Great Northern	Way Off campus
COURSE DESCRIPTIO	DN — 50 words max. Attach a course outline. Don	't include WQB or prerequisites info in this desc	ription box.
embryo to the for will be studied w	All aspects of neuronal developments of neuronal circumstance and maturation of neuronal circumstance in the molecular basis of the molec	nent from the specification of neuror rcuits. Both invertebrate and vertebra f nervous system development.	ns in the early ate model organisms
REPEAT FOR CREDIT LIBRARY RESOURCE NOTE: Senate has appr materials. Each new cou please visit www.lib.sfu.	YES NO How many times S roved (S.93-11) that no new course should be appro- urse proposal must be accompanied by the email that ca/about/overview/collections/course-assessments.	Within a term? YES wed by Senate until funding has been committed at serves as proof of assessment. For more information	no for necessary library ation,
RATIONALE FOR INT	RODUCTION OF THIS COURSE		
BISC and MBB are v not offered this cours System Developmen elective for our CMP Neurobiology will co (MBB 444) and Prog	working together to shift Developmental Neur se in several years. In the meantime, BISC has t, that would be more appropriately titled Dev 9 stream (Cells, Molecules, Physiology). BISC ontinue to be accessible to MBB and FHS stud gram Change forms. FHS has already submitted	robiology from MBB (MBB 444) to BISC (s twice offered a similar Special Topics cou velopmental Neurobiology. We will also be C is committed to ensuring that BISC 423 D dents. BISC is coordinating with MBB on the ed forms to remove MBB 444 from their pro-	BISC 423). MBB has rse called Nervous adding this as a stream evelopmental ne course deletion form ogram options.



NEW COURSE PROPOSAL

2 OF 4 PAGES

SCHEDULING AND ENROLLMENT INFORMATION
Term and year course would first be offered (e.g. FALL 2016) Spring 2019
Term in which course will typically be offered Spring Summer Fall Other (describe)
Will this be a required or elective course in the curriculum? Required Elective
What is the probable enrollment when offered? Estimate: 40
Indicate number of units: 3
Indicate no. of contact hours: 3 Lecture Seminar 1 Tutorial Lab Other; explain below
OTHER

FACULTY

Which of your present CFL faculty have the expertise to offer this course?

Drs Harald Hutter (BISC), Nancy Hawkins (MBB)	

WQB DESIGNATION

(attach approval from Curriculum Office)

none

PREREQUISITE AND / OR COREQUISITE

Required: BISC 101, BISC 102, BISC 202, MBB 222, MBB 231; all with a grade of C- or better; Recommended: BISC 333 or MBB 331.



EQUIVALENT COURSES [For more information on equivalency, see Equivalency Statements under Information about Specific Course components.]

1. SEQUENTIAL COURSE [is not hard coded in the student information management system (SIMS).]

Students who have taken (place relevant course(s) in the blank below (ex: STAT 100)) first may not then take this course for further credit.

2. ONE-WAY EQUIVALENCY [is not hard coded in SIMS.]

(Place relevant course(s) in the blank below (ex: STAT 100)) will be accepted in lieu of this course.

3. TWO-WAY EQUIVALENCY [is hard coded and enforced by SIMS.]

Students with credit for (place relevant course(s) in the blank below (ex: STAT 100)) may not take this course for further credit.

MBB 444 Developmental Neurobiology

Does the partner academic unit agree that this is a two-way equivalency? YES NO Please also have the partner academic unit submit a course change form to update the course equivalency for their course(s).

4. SPECIAL TOPICS PRECLUSION STATEMENT [is not hard coded in SIMS.]

Students who have taken Special Topics BISC 472 or 474 Nervous System Development may not take BISC 423 for further credit.

✓ NO

YES

FEES

Are there any proposed student fees associated with this course other than tuition fees?

COURSE - LEVEL EDUCATIONAL GOALS (OPTIONAL)



RESOURCES

List any outstanding resource issues to be addressed prior to implementation: space, laboratory equipment, etc:

None		
OTHER IMPLICATIONS		

Final exam required	✓ YES	NO	
Criminal Record Chee	ck required	YES	✓ NO

OVERLAP CHECK

Checking for overlap is the responsiblity of the Associate Dean.

Each new course proposal must have confirmation of an overlap check completed prior to submission to the Faculty Curriculum Committee.

Name of Originator

Erin Barley



1 OF 4 PAGES

COURSE SUBJECT BISC	NUMBER 424
COURSE TITLE LONG — for Calendar/schedule, no more than 100 char	acters including spaces and punctuation
COURSE TITLE SHORT — for enrollment/transcript, no more than 30 c	haracters including spaces and punctuation
Applied Genomics	
CAMPUS where course will be normally taught: Burnaby S	urrey Vancouver Great Northern Way Off campus
COURSE DESCRIPTION — 50 words max. Attach a course outline. Dor	i't include WQB or prerequisites info in this description box.
The course provides an overview of "omics" methods is organisms, and demonstrates how this knowledge can breeding.	n large-scale identification of gene functions in various be applied in genomics fields, including plant and animal
REPEAT FOR CREDIT YES V NO How many times	? Within a term? YES NO
LIBRARY RESOURCES NOTE: Senate has approved (S.93-11) that no new course should be appro- materials. Each new course proposal must be accompanied by the email th please visit <u>www.lib.sfu.ca/about/overview/collections/course-assessments</u>	oved by Senate until funding has been committed for necessary library at serves as proof of assessment. For more information,
RATIONALE FOR INTRODUCTION OF THIS COURSE	
This course has been taught as a special topics course and the dep elective for our CMP (Cells, Molecules, Physiology) stream to inc Departmental External Review. The course will also contribute to	artment wishes to regularize it. The course will be added as a stream crease upper division options, as recommended in our last course offerings in MBB's Genomics certificate.
Genomics technologies are increasingly being used in various disc technologies have revolutionized not only the discovery of genes functional genomics (large-scale elucidation of gene functions), as toxicology and pest management. Similarly, companies and non-p to customers and end users.	ciplines of both basic and applied biological research. Genomics and gene variants behind human disease, but also fields such as gricultural breeding, ecology and environmental research, profit institutes have emerged that provide various genomics services
While some courses in the department discuss the use of genomic currently no course in the department that focuses on genomics ter research. As a consequence, the majority of students that have tak understanding of the involved technologies, their applications, and There is also evidence that this course has contributed to successful Vancouver.	s to answer specific questions (evolution in particular), there is chnologies and its various applications in basic and applied en this course as a special topics offering came with no 1 the job opportunities that exist in both academia and industry. ul hires for example at the BC Genome Science Centre in
This course will be offered not only to BISC students, but also as and Biochemistry (MBB) department. Existing genomics courses cancer biology, comparison and evolution of genomes, and bioinf sequencing technologies work), the proposed course focuses on no this course, functional genomics, used to be taught by Dr. David E current gap in the MBB curriculum.	part of the Genomics Certificate program in the Molecular Biology in MBB focuses on the application of genomics in human genetics, ormatics. While there is inevitable overlap (for example, on how on-human genomics research, in particular plants. A component of Bailie in MBB. He is now retired, and this course therefore can fill a



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SCHEDULING AND ENROLLMENT INFORMATION				
Term and year course would first be offered (e.g. FALL 2016) Spring 2019				
Term in which course will typically be offered \checkmark Spring \square Summer \square Fall				
Other (describe)				
Will this be a required or elective course in the curriculum? Required Elective				
What is the probable enrollment when offered? Estimate: 30-60				
Indicate number of units: 3				
Indicate no. of contact hours: 3 Lecture Seminar 1 Tutorial Lab Other; explain below				
OTHER				

FACULTY

Which of your present CFL faculty have the expertise to offer this course?

Drs Jim Mattsson, Kathleen Fitzpatrick, Harald Hutter	
	+

WQB DESIGNATION

(attach approval from Curriculum Office)

none

PREREQUISITE AND / OR COREQUISITE

BISC 101, BISC 102, BISC 202, MBB 222, MBB 231, and either BISC 357 or MBB 331; all with a grade of C- or better.



EQUIVALENT COURSES [For more information on equivalency, see Equivalency Statements under Information about Specific Course components.]

1. SEQUENTIAL COURSE [is not hard coded in the student information management system (SIMS).]

Students who have taken (place relevant course(s) in the blank below (ex: STAT 100)) first may not then take this course for further credit.

none

2. ONE-WAY EQUIVALENCY [is not hard coded in SIMS.]

(Place relevant course(s) in the blank below (ex: STAT 100)) will be accepted in lieu of this course.

none

3. TWO-WAY EQUIVALENCY [is hard coded and enforced by SIMS.]

Students with credit for (place relevant course(s) in the blank below (ex: STAT 100)) may not take this course for further credit.

none

Does the partner academic unit agree that this is a two-way equivalency? YES NO Please also have the partner academic unit submit a course change form to update the course equivalency for their course(s).

4. SPECIAL TOPICS PRECLUSION STATEMENT [is not hard coded in SIMS.]

Students who have taken Special Topics BISC 471 Applied Genomics may not take BISC 424 for further credit.

✓ NO

YES

FEES

Are there any proposed student fees associated with this course other than tuition fees?

COURSE - LEVEL EDUCATIONAL GOALS (OPTIONAL)

See attached course outline with learning objectives	



RESOURCES

List any outstanding resource issues to be addressed prior to implementation: space, laboratory equipment, etc:

none				
OTHER IMPLICATIONS		e.		
Final exam required YES	NO			

Criminal Record Check required YES VO

OVERLAP CHECK

Checking for overlap is the responsiblity of the Associate Dean.

Each new course proposal must have confirmation of an overlap check completed prior to submission to the Faculty Curriculum Committee.

Name of Originator

Erin Barley



NEW COURSE PROPOSAL

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COURSE SUBJECT SCI	NUMBER 301					
COURSE TITLE LONG — for Calendar/schedule, no more than 100 char	acters including spaces and punctuation					
Science Communication: An Introduction						
COURSE TITLE SHORT — for enrollment/transcript, no more than 30 c	haracters including spaces and punctuation					
Science Communication						
CAMPUS where course will be normally taught: U Burnaby	arrey Vancouver Great Northern Way Off campus					
COURSE DESCRIPTION — 50 words max. Attach a course outline. Don	't include WQB or prerequisites info in this description box.					
As the role of science in society grows, so too does the need for effective science communication. Students will explore why we communicate science, the importance of knowing your audience, and best practices for a range of science communication approaches from traditional media, face to face, to online.						
REPEAT FOR CREDIT YES V NO How many times	Within a term? YES NO					
LIBRARY RESOURCES NOTE: Senate has approved (S.93-11) that no new course should be appro- materials. Each new course proposal must be accompanied by the email th	wed by Senate until funding has been committed for necessary library at serves as proof of assessment. For more information,					

RATIONALE FOR INTRODUCTION OF THIS COURSE

Science plays a role in all of our lives, and increasingly is key in many important societal decisions around for example food, energy, water, environment, medicine, transportation, and mitigating natural hazards and impacts of climate change. While communicating with our peers has always been important in science, we must increasingly also communicate externally - to the public, whether to youth, local communities, policy makers, or the general public. As scientists, we have a responsibility to communicate what we do, why we do it, why it matters, and the benefits in ways that are as clear, effective and useful as possible, tailored for specific situations.

SFU is an engaged university. Our students avail of many opportunities to interact with communities both locally and further afield, whether through experiential learning situations, work terms or coops. Many engage in volunteer opportunities such as science outreach to youth, or community events, and most wish to make a difference to the world we live in. For all of these, an understanding and awareness of what effective science communication is, the different approaches, understanding the audience, the best practices in communicating in different formats, and the skills associated, would be beneficial. While many of our science faculty members model excellent science communication, for example through radio interviews, blogs, websites, public talks, etc, providing an opportunity to explicitly introduce students to science communication not only shows that the culture of the Faculty of Science is one where we value reaching out to the public about our science but also that we wish to empower our students to communicate their science as effectively as possible when they need to.

The SCI 301 course is for students pursuing a B.Sc. degree. It will introduce them to skills, approaches and practices to communicate science, which will be advantageous in their roles as future scientists, and increase their awareness of potential career opportunities as science communicators.



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SCHEDULING AND ENROLLMENT INFORMATION				
Term and year course would first be offered (e.g. FALL 2016) FALL 2018				
Term in which course will typically be offered Spring Summer Fall				
Will this be a required or elective course in the curriculum? Required Elective				
What is the probable enrollment when offered? Estimate: 50 - 100				
UNITS Indicate number of units: 3				
Indicate no. of contact hours: 3 Lecture Seminar 1 Tutorial Lab Other; explain below				
OTHER				

FACULTY

Which of your present CFL faculty have the expertise to offer this course?

Eileen van	der Flier-Keller	(EASC), Gl	yn Williams	Jones (EASC),	Zamir Punja	(BISC), Isabelle	Côté (BISC),
Uwe Kreis	(CHEM)						

WQB DESIGNATION

(attach approval from Curriculum Office)

PREREQUISITE AND / OR COREQUISITE

60 units towards a B.Sc. degree or permission of instructor.



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EQUIVALENT COURSES [For more information on equivalency, see Equivalency Statements under Information about Specific Course components.]

1. SEQUENTIAL COURSE [is not hard coded in the student information management system (SIMS).]

Students who have taken (place relevant course(s) in the blank below (ex: STAT 100)) first may not then take this course for further credit.

2. ONE-WAY EQUIVALENCY [is not hard coded in SIMS.]

(Place relevant course(s) in the blank below (ex: STAT 100)) will be accepted in lieu of this course.

3. TWO-WAY EQUIVALENCY [is hard coded and enforced by SIMS.]

Students with credit for (place relevant course(s) in the blank below (ex: STAT 100)) may not take this course for further credit.

Does the partner academic unit agree that this is a two-way equivalency? US NO Please also have the partner academic unit submit a course change form to update the course equivalency for their course(s).

4. SPECIAL TOPICS PRECLUSION STATEMENT [is not hard coded in SIMS.]

FEES				
Are there any proposed student fees associated with this course other than tuition fees?	YES	✓ NO		

COURSE - LEVEL EDUCATIONAL GOALS (OPTIONAL)



RESOURCES

List any outstanding resource issues to be addressed prior to implementation: space, laboratory equipment, etc:

OTHER IMPLICATIONS ✓ _{YES} NO Final exam required ✓ NO YES

Criminal Record Check required

OVERLAP CHECK

Checking for overlap is the responsibility of the Associate Dean.

Each new course proposal must have confirmation of an overlap check completed prior to submission to the Faculty Curriculum Committee.

Name of Originator