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MEMORANDUM

ATTENTION	Senate	DATE	July 7, 2017
FROM	Gordon Myers, Chair Senate Committee on Undergraduate Studies	PAGES	1/1
RE:	New Course Proposals		

For information:

Acting under delegated authority at its meeting of July 6, 2017 SCUS approved the following curriculum revisions effective Summer 2018.

a. Faculty of Science (SCUS 17-26c)

1. Department of Chemistry

(i) New Course Proposals:

- CHEM 284-1, Organic Chemistry IIb
- CHEM 399-3, Special Topics in Chemistry and Society

2. Department of Mathematics

- (i) New Course Proposals: MATH 301-3, Mathematical Journeys I (*effective Fall 2019*)



COURSE SUBJECT CHEM

NUMBER 284

COURSE TITLE LONG — for Calendar/schedule, no more than 100 characters including spaces and punctuation
Organic Chemistry Iib

COURSE TITLE SHORT — for enrollment/transcript, no more than 30 characters including spaces and punctuation
Organic Chemistry Iib

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.
Intended for students planning to take upper division organic chemistry courses. Advanced treatment of topics beyond those covered in CHEM 281 and CHEM 282, including radical reactions, organometallic reagents and metal-based catalysis, pericyclic reactions and planning multi-step syntheses.

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 www.lib.sfu.ca/about/overview/collections/course-assessments.

RATIONALE FOR INTRODUCTION OF THIS COURSE

Currently, students taking 2nd year Organic Chemistry II have two options: CHEM 282-2 (Organic Chemistry II), which runs for the first 2/3 of the term, and CHEM 283-3 Organic Chemistry Iib, which includes the CHEM 282 portion and then continues for the remaining 1/3 of the term. Chemistry Majors are required to take CHEM 283-3 but non-Majors have the flexibility to take the 9-week version or to remain for the last 4 weeks of instruction to obtain 3 credits.

However, students who complete CHEM 282-2 in one term and then change their mind in a future term and want to continue in Chemistry (or in a Joint Major that includes Chemistry) currently require the last 4-week period of instruction associated with CHEM 283-3, but have no mechanism by which they can attend ONLY this additional period. They should not have to re-take the first 9-weeks of CHEM 282 simply to gain access to the more advanced section associated with CHEM 283.

This "add-on" course addresses this difficulty; students who completed CHEM 282-2 in a prior term will be able to take CHEM 284-1, which is equivalent to the last 4 weeks of CHEM 283. The CHEM 284 students would join the CHEM 283 students in the last 4 weeks of class (after the CHEM 282 portion is finished) and thus access the requisite additional information without having to re-take CHEM 283. Thus, the combination of CHEM 282 in one term and CHEM 284 in another subsequent term would be equivalent to CHEM 283.

In order to clarify the course orderings, the courses will be renamed as CHEM 282 Organic Chemistry Iia; CHEM 284 Organic Chemistry Iib; CHEM 283 Organic Chemistry Iiab (i.e., the combination of 282/284).

No new resources are required for this since the students would simply join the already in-progress CHEM 283 class for the last 1/3 of the term.



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: 20-40

UNITS

Indicate number of units: 1

Indicate no. of contact hours: 1 Lecture Seminar Tutorial Lab Other; explain below

OTHER

FACULTY

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

This course will be taught by faculty members that have taught Organic Chemistry I and/or II in the past, including Andrew Bennet, Neil Branda, Robert Britton, Uwe Kreis, Roger Linington, Nabyl Merbouh, Erika Plettner, Vance Williams, and Peter Wilson.

WQB DESIGNATION

(attach approval from Curriculum Office)

PREREQUISITE AND / OR COREQUISITE

Prerequisite: CHEM 282 with at least a C+ grade or permission of the Department



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.
CHEM 283

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.
CHEM 283

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.]

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:

None

OTHER IMPLICATIONS

Final exam required YES NO

Criminal Record Check required YES NO

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

Daniel Leznoff, Chemistry Undergraduate Studies Committee Chair



COURSE SUBJECT CHEM

NUMBER 399

COURSE TITLE LONG — for Calendar/schedule, no more than 100 characters including spaces and punctuation
Special Topics in Chemistry and Society

COURSE TITLE SHORT — for enrollment/transcript, no more than 30 characters including spaces and punctuation
Special Topics in Chemistry and Society

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.
Selected topics in chemistry and its role in broader society, with an emphasis on using chemistry to solve technological, environmental and economic challenges. Intended for non-science students.

REPEAT FOR CREDIT YES NO How many times? 1 Within a term? YES NO

LIBRARY RESOURCES

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RATIONALE FOR INTRODUCTION OF THIS COURSE

This course will serve as an umbrella under which the Department can offer different upper division Breadth (B) courses on a rotating basis, and thus we plan to pursue a Breadth-Science designation for this Special Topics course. Since this course will address topics at the interface of chemistry and broader society, emphasis will be placed on classroom discussions that encourage students to contribute their own broader societal perspectives and experiences. This will be best accomplished with students that have a higher level of academic maturity, hence the designation of this course as an upper division course and the accompanying prerequisite structure. Examples of topics include Pharmaceutical Chemistry/Science; Nuclear Science and Society; Chemistry in a Materials World; and Chemistry's role in Industry and the Environment.



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: 40-80

UNITS 3
Indicate number of units:

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?

All Chem. Faculty, depending on the topic.

WQB DESIGNATION

(attach approval from Curriculum Office)

B-Sci designation requested

PREREQUISITE AND / OR COREQUISITE

Prerequisite: A minimum of 45 units



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.]

Faculty of Science students may take this course as an elective, but may not apply this course toward their upper division program requirements.

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:

None

OTHER IMPLICATIONS

Final exam required YES NO

Criminal Record Check required YES NO

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

Daniel Leznoff, Chemistry Undergraduate Studies Chair



COURSE SUBJECT MATH

NUMBER 301

COURSE TITLE LONG — for Calendar/schedule, no more than 100 characters including spaces and punctuation
Mathematical Journeys I

COURSE TITLE SHORT — for enrollment/transcript, no more than 30 characters including spaces and punctuation
Math Journeys I

CAMPUS where course will be normally taught: [checked] 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.

A focused exploration of a special topic (varying from term to term) that builds on mathematical ideas from lower division courses and provides further challenges in quantitative and deductive reasoning. Each Journeys course is designed to appeal particularly to mathematics minor students and others with a broad interest in mathematics.

REPEAT FOR CREDIT [checked] 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 www.lib.sfu.ca/about/overview/collections/course-assessments.

RATIONALE FOR INTRODUCTION OF THIS COURSE

This course is being introduced in parallel with title and description changes for the similar courses MATH 302, 303 and 304, to provide a more unified naming scheme and clearer scheduling for our existing popular series of courses aimed at mathematics minors.

The courses MATH 302 (Computing with Mathematics), MATH 303 (Perspectives on Geometry) and MATH 304 (Quantifying Uncertainty) were introduced in 2009 as special topics courses designed to appeal especially to potential mathematics minor students and other non-majors broadly interested in mathematical ideas. These upper-division courses have been extremely successful, sometimes attracting up to 70 students. The number of Mathematics minors, from less than 10 in 2009, now number over 120 students. Because of the irregular rotation of faculty who were assigned to teach the class, the old course titles seldom corresponded to the special topic that was offered.

The proposed modification is to rename these courses all as "Mathematical Journeys", all sharing the same description, and to introduce an additional such course, MATH 301. This will permit us to offer a series of four special topics courses, named Mathematical Journeys I, II, III and IV, so to be distinct within our two-year cycle of course offerings. The appending of special topics titles will make both course advertising and students' transcripts less confusing. Most importantly, the distinct numbering should make it perfectly clear to potential minor students that there is a permanently scheduled selection of upper-division courses that they can use to satisfy their 5-course minor requirement.



SCHEDULING AND ENROLLMENT INFORMATION

Term and year course would first be offered (e.g. FALL 2016) Fall 2019

Term in which course will typically be offered [] Spring [] Summer [x] Fall

Other (describe) Offered in the Fall of odd-numbered years

Will this be a required or elective course in the curriculum? [] Required [x] Elective

What is the probable enrollment when offered? Estimate: 80 cap

UNITS

Indicate number of units: 3

Indicate no. of contact hours: 3 Lecture Seminar 1 Tutorial Lab Other; explain below

OTHER

Please classify as a special topics class, and append the topic on student's transcript.

FACULTY

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

All - depending on their chosen topic.

WQB DESIGNATION

(attach approval from Curriculum Office)

PREREQUISITE AND / OR COREQUISITE

MATH 152 or 155 or 158, and MATH 232 or 240. There may be additional prerequisites depending on the specific course topic.



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.]

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:

None

OTHER IMPLICATIONS

Final exam required YES NO

Criminal Record Check required YES NO

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

David Muraki