



8888 University Drive, Burnaby, BC Canada V5A 1S6
 TEL: 778.782.6654 FAX: 778.782.5876
 avpacad@sfu.ca www.sfu.ca/vpacademic

MEMORANDUM

ATTENTION Senate
 FROM Wade Parkhouse, Chair
 Senate Committee on
 Undergraduate Studies
 RE: New Course Proposals

DATE June 7, 2019

PAGES 1/1

For information:

Acting under delegated authority at its meeting of June 6, 2019 SCUS approved the following curriculum revisions effective Spring 2020.

a. Faculty of Environment (SCUS 19-39)**1. Department of Archaeology**

(i) New Course Proposals:

- ARCH 432-3, Historical Ecology & Coastal Archaeology
- ARCH 436, (3-6), Biological Anthropology Field Practicum

b. Faculty of Science (SCUS 19-40)**1. Department of Chemistry**

(i) New Course Proposal: CHEM 382-4, Introduction to Chemical Biology

Senators wishing to consult a more detailed report of curriculum revisions may do so on the Senate DocuShare repository at

<https://docushare.sfu.ca/dsweb/View/Collection-12682>.



COURSE SUBJECT NUMBER

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

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.

Introduce students to historical ecology from a coastal archaeological perspective. Examine archaeological and ecological data from coastal archaeological sites. Conduct analyses on archaeological samples. Students will attend field trips, lectures, labs, and marine station seminars introducing them to Indigenous history and the analytical potential of ecological data. Students will undertake laboratory and background research.

REPEAT FOR CREDIT YES NO Total completions allowed 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

The department has been offering this course every summer under ARCH 433 for over 10 years through the Bamfield Marine Science Centre. However, we also use ARCH 433 as part of both our local and international field schools. This causes confusion for the students and our advisor, as well as issues with using the Academic Progress report (APR). The course title is also not accurately reflected on the student transcripts, and is not an accurate representation of the course work being done. Therefore, we would like to create a stand alone course for use by BMSC, and also for use by the department. We recently hired a new faculty member who specializes in this area and she could teach this course as part of her own field school in the near future.



SCHEDULING AND ENROLLMENT INFORMATION

Effective term and year (e.g. FALL 2016) Spring 2020

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

Other (describe) []

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

What is the probable enrollment when offered? Estimate: 2-22

UNITS Indicate number of units: 3

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

OTHER

Field []

FACULTY

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

Christina Giovas, Dana Lepofsky, Iain McKechnie (UVIC) Bamfield

WQB DESIGNATION

(attach approval from Curriculum Office)

[]

PREREQUISITE AND / OR COREQUISITE

ARCH 372

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)

This course is designed to expose students to the potential of using coastal archaeological data to extend and contextualize contemporary ecological observations of the marine environment. In so doing, we also aim to learn standard archaeological and ecological analytical techniques and reporting conventions. We will work in small groups to develop and address archaeological and historical ecological research questions and share our observations with researchers and community members. In the last week of the course, each student will be responsible for writing a technical report that contributes to existing knowledge of Nuu-chah-nulth history and demonstrates how this information is ecologically and scientifically relevant today.

Upon successful completion of the course, students will have the ability to:

- Identify and describe common coastal archaeological site constituents and sampling methods.
- Create a basic sketch map using a compass, a baseline, measuring tapes, and GPS coordinates.
- Recognize and identify commonly encountered coastal archaeological site constituents such as human modified artifacts, faunal remains (mammal, fish, & bird bones and shellfish species).
- Become familiar with the complexity and relevance of Indigenous resource use and long-term human participation in coastal ecosystems that extends ecological observations.
- Consider the effects that palaeoenvironmental change has had on the distribution of archaeological sites and archaeological site potential (sea levels, geohazards, preservation potential).



RESOURCES

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

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

Dennis Sandgathe, UEC Chair, Archaeology

COURSE SUBJECT ARCH

NUMBER 436

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

Biological Anthropology Field Practicum

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

Bioanth Practicum

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.

A practical application of the background knowledge and specific techniques of ARCH 433 and 434. It takes place in a research oriented field excavation. Evaluation of student performance is based upon assessments of efficiency and accuracy of excavation techniques/recording procedures, and upon the student's overall contribution to the smooth functioning of the team. Students may repeat this course for credit.

REPEAT FOR CREDIT YES NO Total completions allowed 5 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

In Spring 2018 we began the expansion of the Biological Anthropology program with the creation of a certificate program. That summer we had our first International Field School in Biological Anthropology. The students were registered into our existing practicum course ARCH 435, however, this has created a couple of issues. First, the practicum is not applicable to our existing CRM certificate, which is confusing our students, and second, it also requires adjustments by the advisor to reflect these issues in the new Academic Progress Report (APR).

By creating a stand alone course for field practicums that are exclusive to biological anthropology we can streamline and clarify degree and certificate requirements both to students, our advisor, and the APR system. This will alleviate any confusion about whether the field school topic is applicable to the Bioanth certificate or the CRM certificate.

It is also important for a students transcript to actively reflect the work being done for prospective career options. For example, a student pursuing a job in forensics would need the bioanth notation on their transcript to prove they have experience working with human remains.



SCHEDULING AND ENROLLMENT INFORMATION

Effective term and year (e.g. FALL 2016) Spring 2020

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

Other (describe) []

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

What is the probable enrollment when offered? Estimate: 16-22

UNITS Indicate number of units: 3-6

Indicate no. of contact hours: [] Lecture [] Seminar [] Tutorial [] Lab 3-6 Other; explain below

OTHER

Field []

FACULTY

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

Hugo Cardoso, Dongya Yang, Dennis Sandgathe, Mark Collard, Birute Galdikas

WQB DESIGNATION

(attach approval from Curriculum Office)

[]

PREREQUISITE AND / OR COREQUISITE

ARCH 373 and permission of the Department. Normally taken concurrently with ARCH 433 and 434.

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)

· apply discipline-specific skills to real-world examples · developed a concrete, rather than just abstract, understanding of archaeological data

· Understand the inherent importance that knowing about our collective past plays in understanding modern society · Understand the role and importance of material culture in modern societies · Develop an appreciation for the importance of issues of ownership of cultural heritage · Understand that there are multiple stake holders in the collection, analysis, and interpretation of the archaeological record · Understand that the archaeological record is a finite resource and accessing it carries with it an inherent responsibility to the public trust · Appreciate the responsibility of sharing knowledge/data derived from the collection, analysis and interpretation of the archaeological record with the general public and, where appropriate, specific communities/stake holders.



RESOURCES

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

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

Dennis Sandgathe, UEC Chair, Archaeology

COURSE SUBJECT Chemistry

NUMBER 382

COURSE TITLE LONG — for Calendar/schedule, no more than 100 characters including spaces and punctuation
Introduction to Chemical Biology

COURSE TITLE SHORT — for enrollment/transcript, no more than 30 characters including spaces and punctuation
Introductory Chemical Biology

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.
Students will develop basic theoretical and practical knowledge in the field of chemical biology. This laboratory/lecture course will be taught as a Course-Based Undergraduate Research Experience (CURE) in which students perform research in small teams on an unsolved problem in chemical biology. Students will be exposed to current thinking and methods, covering chemoinformatics, enzyme assays, high-throughput screening, and chemical synthesis.

REPEAT FOR CREDIT YES NO Total completions allowed _____ 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

Given the popularity of the new Chemistry and MBB joint major program, we expect that this proposed course would see high enrollments. Chemical Biology draws from many traditional scientific disciplines including Chemistry, Biochemistry, Molecular Biology, and Cell Biology. At its core, Chemical Biology focuses on the identification and creation of chemicals both to aid in the study of and to manipulate biological systems. Clear understanding of both systems being studied is therefore necessitated, that of the chemical principles in operation, as well as how chemical tools can be created and optimized. Chemical Biology is also, broadly, foundational research that is translation-oriented.

The development of Chemical Biology undergraduate programs has proceeded steadily at many universities. These programs have proven highly successful in serving as signature programs and attracting new students to the university. The importance of this burgeoning interdisciplinary field is perhaps best testified to by the fact that Harvard, Cornell, and other eminent universities have renamed their Departments of Chemistry to Departments of Chemistry and Chemical Biology. The proposed course is an essential step in building distinctive offerings that differentiate SFU from Canadian universities and to attract high quality students.

SFU has significant faculty strength in the area of Chemical Biology throughout both the Departments of Chemistry and Molecular Biology and Biochemistry (MBB). These departments together launched the relatively new Chemistry and Molecular Biology Joint Majors program, which has proven successful. Unfortunately, there is no regularly offered core course in this joint major on Chemical Biology, which limits the learning and training opportunities for students in this emerging area. Improving this program is expected to differentiate our offerings from other universities and enhance enrollment.

Here we aim to build interdisciplinary capacity by bolstering the Chemistry and MBB Joint Major via development of a new third year lecture/lab course for the growing interest in interdisciplinary sciences spanning Chemistry and Biology. The goals are to:

- 1) Provide students with dedicated course material exposing them to key concepts in Chemical Biology, that will prepare them for emerging knowledge economy jobs in the areas of biotechnology, Synthetic Biology, and drug development.
- 2) Develop laboratory skills that expose students to cutting-edge Chemical Biology concepts, methods, and advanced equipment including robotics as applied to assay development, high-throughput screening, and the structural elucidation of molecules.
- 3) Enhance interdisciplinary thinking in students to enable them to gain an improved understanding of how many, new scientific opportunities are emerging at the interface of traditional research disciplines.



SCHEDULING AND ENROLLMENT INFORMATION

Effective term and year (e.g. FALL 2016) Jan 2020

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

Other (describe)

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

What is the probable enrollment when offered? Estimate: 18 to 24

UNITS 4
Indicate number of units:

Indicate no. of contact hours: 2 Lecture Seminar 1 Tutorial 4 Lab Other; explain below

OTHER

N/A

FACULTY

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

David Vocadlo, Roger Linington, Andrew Bennet, Erika Plettner, Nabyl Merbouh

WQB DESIGNATION

(attach approval from Curriculum Office)

N/A

PREREQUISITE AND / OR COREQUISITE

Prerequisites: MBB222, CHEM286, and CHEM283 or CHEM284, all with a minimum grade of C-, 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.
N/A

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.]

N/A

FEES

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

COURSE - LEVEL EDUCATIONAL GOALS (OPTIONAL)

N/A



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 Vocadlo