S.25-183

SFU FACULTY OF GRADUATE STUDIES

FACULTY OF GRADUATE STUDIES

8888 University Drive
Maggie Benston Centre, RM 1100
Burnaby B.C. Canada V5A 1S6

TEL + 1 778 782 3042
SFU.CA/GRADUATE-STUDIES

MEMORANDUM

ATTENTION	Senate	DATE	October 16, 2025
FROM	Mary O'Brien, Chair of Senate Graduate Studies Committee (SGSC)		
RE:	New Course		

For information:
Acting under delegated authority at its meeting of **October 7, 2025**, SGSC approved the following curriculum item, effective **Summer 2026:**

Faculty of Applied Sciences
School of Sustainable Energy Engineering

1) New Course: SEE 777 Business Foundations for Sustainable Energy Engineering (Fall 2026)

Faculty of Environment
Department of Archaeology

2) New Course: ARCH 740 Advanced Zooarchaeological Theory and Methods
   New Course: ARCH 773 Advanced Human Osteology
   New Course: ARCH 777 Advanced Historical Archaeology
   New Course: ARCH 782 Advanced Stone Tool Technology
   New Course: ARCH 783 Advanced Ancient and Forensic DNA

School of Environmental Science

3) New Course: EVSC 808 Environmental Science Seminar

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

SFU
OFFICE OF THE DEAN
Faculty of Applied Sciences
Simon Fraser University

MEMORANDUM

Attention: Dr. Mary O'Brien
Dean, Graduate Studies

Date: Sep 09, 2025

From: Dr. Colin Copeland, fas_ad_research_grad@sfu.ca
Faculty of Applied Science, Graduate Studies Committee

Re: FAS-SEE new course: SEE 777

The faculty of Applied Sciences Graduate Studies Committee is seeking approval for changes to the SEE MEng program requirements by replacing BUS790(2) and BUS791(2) with a new, 4-unit SEE course (SEE777).

The proposed course focuses on the foundational business practices in keeping with the two courses BUS790/791 it replaces but with a focus on sustainable energy engineering in keeping with the degree.

The change is anticipated for the 2026 cohort, with entry into the SFU calendar effective for the summer 2026 semester. The new course, SEE777, will be offered for the first time in fall 2026.

Regards,
Colin Copeland

SFU FACULTY OF APPLIED SCIENCES | SUSTAINABLE ENERGY ENGINEERING

10285 University Drive
Surrey, BC, V3T 0N1

TEL: 778-782-7308
fas_sry_admin@sfu.ca
www.sfu.ca/see

MEMORANDUM

ATTENTION	Associate Dean Research and Grad Studies, Faculty of Applied Sciences	**DATE**	20-Aug-2025
FROM	Dr. Vahid Hosseini, Graduate Program Chair, School of Sustainable Energy Engineering	**PAGES**	1
RE:	New course proposal for SEE777		

As described in the attached documents, the SEE graduate program committee is updating the MEng program requirements by replacing BUS790(2) and BUS791(2) with a new, 4-unit SEE course (SEE777). The change is to be implemented for the 2026 cohort, with entry into the SFU calendar effective for the summer 2026 semester. The new course, SEE777, will be offered for the first time in fall 2026. The documents were approved by SEE GPC on July 17, 2025 and by SEE School Council on August 20, 2025.

The proposed course addresses the learning outcomes for the SEE MEng students by focusing on the foundational business practices central to assessing and interpreting sustainable energy engineering, from new technologies to infrastructure and policy implications. Particular consideration is given to the pricing of energy and the use of economic tools to reduce carbon dioxide emissions.

The course can be delivered by SEE instructors within the current SEE faculty complement. SEE777 can be accommodated within the current per-term fee structure of the SEE MEng as approved by the BC Ministry of Post-Secondary Education and Future Skills, unlike BUS790/791, which would require additional student fees to be fiscally viable.

Attachments: SEE 777 new course approval form; SEE 777 course outline; SEE MEng degree program calendar language change
cc. SEE Director (Dr. Zafar Adeel)

Regards
Vahid Hosseini
Graduate Program Chair

SFU GRADUATE STUDIES

NEW GRADUATE COURSE PROPOSAL

Course Subject (eg. PSYC)	Number (eg. 810)	Units (eg. 4)
SEE	777	4

Course title (max. 100 characters): Business Foundations for Sustainable Energy Engineering

Short title (for enrollment/transcript, max. 30 characters): Business Foundations for SEE

Course description for SFU Calendar (course descriptions should be brief and should never begin with phrases such as "This course will..." or "The purpose of this course is..." If the grading basis is satisfactory/unsatisfactory include this in the description. Max. 50 words)

Introduction to economic evaluation of sustainable energy systems. Capital, operating, and disposal costs; discount rates; costing of externalities. Role of policy in market dynamics and impact on business case development. Calculating return on investment for small and large projects.

Rationale for introduction of this course (if more space is required, add a separate page)

This course will provide SEE MEng students with the foundational knowledge in economics and business considerations relating specifically to small- and large-scale energy engineering projects. This is a crucial complement to the MEng student's dedicated courses on foundational engineering; sustainable energy technologies; energy policy; and environmental impact of energy systems.

Term of initial offering (eg. Fall 2019): Fall 2026	**Course delivery** (eg. 3 hrs/week for 13 weeks): 3 hrs / week for 13 weeks
Frequency of offerings/year: 1/year	**Estimated enrollment per offering**: 20-40

EQUIVALENT COURSES

Courses that replicates the content of this course to such an extent that students should not receive credit for both courses. Please select the one that is most relevant.

☐ **SEQUENTIAL COURSE**	☐ **ONE-WAY EQUIVALENCY**	☐ **TWO-WAY EQUIVALENCY**
[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 603)) first may not then take this course for further credit.	[is not hard coded in SIMS.] (Place relevant course(s) in the blank below (ex: STAT 603)) will be accepted in lieu of this course.	[is hard coded and enforced by SIMS.] Students with credit for (place relevant course(s) in the blank below (ex: STAT 603)) 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).

Prerequisite and/or Corequisite

Criminal record check required? ☐ Yes (if yes is selected, add this as prerequisite) | **Additional course fees?** ☐ Yes ☑ No

Campus where course will be taught ☐ Burnaby ☑ Surrey ☐ Vancouver ☐ Great Northern Way ☐ Off campus

Course Components * ☑ Lecture ☐ Seminar ☐ Lab ☐ Capstone ☐ Practicum ☐ Online ☐ Other.

Grading Basis ☑ Letter grades ☐ Satisfactory/ Unsatisfactory ☐ In Progress / Complete

* See important definitions on the curriculum website.

Repeat for credit? ☐ Yes ☑ No	**Total completions allowed?** 1	**Repeat within a term?** ☐ Yes ☑ No
Required course? ☑ Yes ☐ No	**Final exam required?** ☐ Yes ☑ No	

Combined with an undergraduate course? ☐ Yes ☑ No If yes, identify which undergraduate course and the additional course requirements for graduate students. Please include a copy of the undergraduate course outline and fill out the Equivalent Courses section above.

RESOURCES

If additional resources are required to offer this course, provide information on the source(s) of those additional resources.

Faculty member(s) who will normally teach this course

Mehran Ahmadi, Kevin Oldknow

Additional faculty members, space, and/or specialized equipment required in order to offer this course

No additional space or specialized equipment required.

CONTACT PERSON

Academic Unit / Program	**Name (typically, Graduate Program Chair)**	**Email**
SEE	Kevin Oldknow	koldknow@sfu.ca

ACADEMIC UNIT APPROVAL

☑ A course outline / syllabus is included

Non-departmentalized faculties need not sign

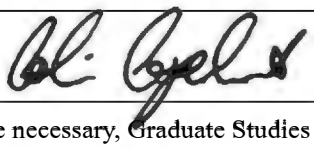
Graduate Program Committee Kevin Oldknow	**Signature** 	**Date** 20250-08-21
Department Chair Zafar Adeel	**Signature** 	**Date** 21 Aug 2025

FACULTY APPROVAL

The course form and outline must be sent by FGSC to the chairs of each FGSC (fgsc-list@sfu.ca) to check for an overlap in content

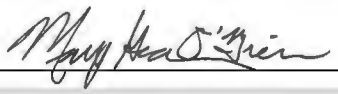
Overlap check done? ☑ YES

This approval indicates that all the necessary course content and overlap concerns have been resolved. The Faculty/Academic Unit commits to providing the necessary resources.

Faculty Graduate Studies Committee Colin Copeland	**Signature** 	**Date** 02/09/2025

A library review will be conducted. If additional funds are necessary, Graduate Studies will contact the academic unit prior to SGSC.

SENATE GRADUATE STUDIES COMMITTEE APPROVAL

Senate Graduate Studies Committee Mary O'Brien	**Signature** 	**Date** 15 October 2025

ADMINISTRATIVE SECTION (for Graduate Studies office only)

Library Check: _____

Course Attribute: _____

Course Attribute Value: _____

Instruction Mode: _____

Attendance Type: _____

If different from regular units:

Academic Progress Units: _____

Financial Aid Progress Units: _____

School of Sustainable Energy Engineering

SEE 777 – Business Foundations for Sustainable Energy Engineering

Units: 4
Lecture hours: 39

Course Description

This course introduces business fundamentals through the lens of sustainable energy engineering. Topics include capital and operational costing, financial analysis, and decision-making frameworks relevant to energy systems. Students will explore how policy, economics, and engineering data converge to inform investment, operations, and strategic planning. The course integrates key concepts from microeconomics, financial accounting, and business analytics tailored for engineers working in the sustainable energy sector.

Topics Covered

- Foundations of energy system economics
- Lifecycle costing: capital, operational, and end-of-life
- Financial tools: net present value, internal rate of return, and discounting
- Accounting principles relevant to engineering project planning
- Energy markets: pricing, policy, and regulation
- Carbon pricing, incentives and trading mechanisms
- Business analytics for energy systems: data-informed decision-making
- Levelized cost and time value of energy and cost-benefit analysis
- Case studies: start-ups, utilities, and infrastructure-scale projects

Course Organization

Section 1 – Introduction to Business Engineering in Sustainable Energy
Section 2 – Financial and Economic Evaluation of Energy Technologies
Section 3 – Policy, Regulation, and Market Forces
Section 4 – Building and Evaluating Business Cases in Energy Engineering

Course Learning Outcomes

At the end of this course, learners will be able to:

1. Apply economic and accounting concepts to engineering-based energy projects
2. Analyze lifecycle costs and determine financial feasibility
3. Evaluate the role of policy and regulation in business outcomes
4. Use data analytics to inform strategic energy decisions
5. Develop and defend a techno-economic business case for a sustainable energy solution

Textbook:

Schwarz, Peter. Energy Economics, 2nd Ed. Routledge, 2023.

Additional readings from business analytics, accounting, and case studies in sustainable energy will be provided throughout the course.

Grading Scheme

- Class Tests: 25%
- Team Assignment & Presentation: 25%
- Final Individual Project (Business Case): 50%

SFU FACULTY OF ENVIRONMENT

TASC 2 Building, Room 8800
8888 University Drive, Burnaby, BC.
Canada V5A 1S6
www.sfu.ca/fenv

To: Senate Graduate Studies Committee (SGSC)
From: Christina Giovas, Associate Dean Research and Graduate Studies, Faculty of Environment
Re: Archaeology New Graduate Course Cross-Listings
Date: September 16, 2025

The following new course proposals are submitted for SGSC approval by the Faculty of Environment Graduate Studies Committee on behalf of Archaeology. The proposed courses are to cross-list graduate offerings with their undergraduate counterparts. Please include these materials on the next SGSC agenda.

- ARCH 740 – Advanced Zooarchaeological Theory and Methods
- ARCH 773 – Advanced Human Osteology
- ARCH 777 – Advanced Historical Archaeology
- ARCH 782 – Advanced Stone Tool Technology
- ARCH 783 – Advanced Ancient and Forensic DNA

We request these courses be implemented for Summer 2026. Additional details may be found in the attached memo from Archaeology Graduate Program Chair, Ross Jamieson.

Thank you for the committee's consideration.

Sincerely,

Christina Giovas
Associate Dean, Research and Graduate Studies
Faculty of Environment
P: 778 782 906 | E: fenv_adr@sfu.ca

SFU SIMON FRASER UNIVERSITY

FACULTY OF ENVIRONMENT
DEPARTMENT OF ARCHAEOLOGY

8888 University Drive
Burnaby B.C. Canada V5A 1S6

TEL + 1 778 782 3135
SFU.CA

To: Christina Giovas, Associate Dean Research and Graduate Studies, Faculty of Environment

From: Ross Jamieson, Graduate Program Chair, Department of Archaeology

Re: New graduate courses

Date: May 16, 2025

The following new courses have been approved by the Department of Archaeology and are forwarded to the Faculty of Environment for approval. These curriculum items should be effective for Summer 2026.

Department of Archaeology

New courses: ARCH 740, 773, 777, 782, 783

Department Graduate Chair

SFU GRADUATE STUDIES

NEW GRADUATE COURSE PROPOSAL

Course Subject (eg. PSYC) ARCH	**Number (eg. 810)** 740	**Units (eg. 4)** 5

Course title (max. 100 characters): Advanced Zooarchaeological Theory and Methods

Short title (for enrollment/transcript, max. 30 characters): Advanced Zooarchaeology

Course description for SFU Calendar (course descriptions should be brief and should never begin with phrases such as "This course will..." or "The purpose of this course is..." If the grading basis is satisfactory/unsatisfactory include this in the description. Max. 50 words)

The study of animal remains from archaeological sites. Coverage of the major concepts and methods used in the study of animal remains and detailed practical coverage of the vertebrate skeleton.

Rationale for introduction of this course (if more space is required, add a separate page)

This course is a graduate level crosslisting of the undergraduate Zooarchaeology course. Often students audit zooarchaeology, and are graded as a graduate-level directed readings. A crosslisted course reduces paperwork and also makes it more clear to students what courses are available for them to take.

Term of initial offering (eg. Fall 2019): Summer 2026	**Course delivery** (eg. 3 hrs/week for 13 weeks): LEC 3 hrs/wk for 13 weeks LAB 2 hrs/wk for 13 weeks
Frequency of offerings/year 1	**Estimated enrollment per offering** 2

EQUIVALENT COURSES

Courses that replicates the content of this course to such an extent that students should not receive credit for both courses. Please select the one that is most relevant.

☐ **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 603)) first may not then take this course for further credit.	☐ **ONE-WAY EQUIVALENCY** [is not hard coded in SIMS.] (Place relevant course(s) in the blank below (ex: STAT 603)) will be accepted in lieu of this course.	☑ **TWO-WAY EQUIVALENCY** [is hard coded and enforced by SIMS.] Students with credit for (place relevant course(s) in the blank below (ex: STAT 603)) may not take this course for further credit.
		ARCH 340

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).

Prerequisite and/or Corequisite

This course is only available for Archaeology graduate students. Department permission is required.

Criminal record check required? ☐ Yes (if yes is selected, add this as prerequisite) **Additional course fees?** ☐ Yes ☑ No

Campus where course will be taught ☑ Burnaby ☐ Surrey ☐ Vancouver ☐ Great Northern Way ☐ Off campus

Course Components * ☑ Lecture ☐ Seminar ☑ Lab ☐ Capstone ☐ Practicum ☐ Online ☐ Other: _____

Grading Basis ☑ Letter grades ☐ Satisfactory/ Unsatisfactory ☐ In Progress / Complete

* See important definitions on the curriculum website.

Repeat for credit? ☐ Yes ☑ No	**Total completions allowed?**	**Repeat within a term?** ☐ Yes ☑ No
Required course? ☐ Yes ☑ No	**Final exam required?** ☐ Yes ☑ No	

Combined with an undergraduate course? ☑ Yes ☐ No If yes, identify which undergraduate course and the additional course requirements for graduate students. Please include a copy of the undergraduate course outline and fill out the Equivalent Courses section above.

ARCH 340 is the equivalent course.

RESOURCES

If additional resources are required to offer this course, provide information on the source(s) of those additional resources.

Faculty member(s) who will normally teach this course Christina Giovas, David Maxwell
Additional faculty members, space, and/or specialized equipment required in order to offer this course

CONTACT PERSON

Academic Unit / Program	**Name (typically, Graduate Program Chair)**	**Email**
Archaeology	Ross Jamieson	archgc@sfu.ca, rossjami@sfu.ca

ACADEMIC UNIT APPROVAL

☑ A course outline / syllabus is included

Non-departmentalized faculties need not sign

Graduate Program Committee Ross W. Jamieson	**Signature**	**Date** Sept 9, 2025
Department Chair Robert J. Muir	**Signature**	**Date** Sept 9, 2025

FACULTY APPROVAL

The course form and outline must be sent by FGSC to the chairs of each FGSC (fgsc-list@sfu.ca) to check for an overlap in content

Overlap check done? ☑ YES

This approval indicates that all the necessary course content and overlap concerns have been resolved. The Faculty/Academic Unit commits to providing the necessary resources.

Faculty Graduate Studies Committee Christina Giovas	**Signature**	**Date** 16 September 2025

A library review will be conducted. If additional funds are necessary, Graduate Studies will contact the academic unit prior to SGSC.

SENATE GRADUATE STUDIES COMMITTEE APPROVAL

Senate Graduate Studies Committee Mary O'Brien	**Signature**	**Date** 15 October 2025

ADMINISTRATIVE SECTION (for Graduate Studies office only)

Library Check: _____
Course Attribute: _____
Course Attribute Value: _____
Instruction Mode: _____
Attendance Type: _____

If different from regular units:
Academic Progress Units: _____
Financial Aid Progress Units: _____

SFU FACULTY OF ENVIRONMENT | DEPARTMENT OF ARCHAEOLOGY

ARCH 740-5
Title: Zooarchaeology

Instructor:	**Dr. David Maxwell**	
Description/topics:	An introduction to the study of animal remains from archaeological sites. Coverage of the major concepts and methods used in the study of animal remains and detailed practical coverage of the vertebrate skeleton.	
Course details:	Zooarchaeology is the identification, analysis, and interpretation of animal remains from archaeological contexts. This course is designed to introduce students to the practical skill of identifying animal remains, and to develop an understanding of the method and theory behind the interpretation of faunal assemblages. The course has a significant laboratory component during which students will be expected to become familiar with the more common skeletal elements of the fish, reptile, amphibian, bird, and mammal skeletons. Lab time will also be devoted to learning to recognize common taphonomic damage, such as burn and weathering stages. Weekly quizzes will be used to evaluate identification skills. Lectures will focus on zooarchaeological method and theory, with topics including animal taxonomy, quantitative methods, the role of fauna in ritual, and taxon-specific issues. Students will be required to prepare an original research paper (term paper) relating to some aspect of zooarchaeology. Paper topics **must** be discussed with and approved by the instructor by the 4th week of classes. Papers on human osteology, forensic science, or paleontology *are not acceptable* in this course.	
Graduate requirements:	Graduate students are expected to complete the same requirements as undergraduate students, with the significant change of having to provide a much more substantial research paper, which in turn is worth a much greater proportion of the course grade. Graduate students are required to submit an original research paper that is directly related to their own dissertation or thesis research and will form the basis for a chapter of their final research. Graduate students are expected to be able to demonstrate a high degree of expertise in previously published research in their topic and / or regional specialty. Graduate research papers are expected to be somewhere between 10,000 and 20,000 words in length, exclusive of references. Such papers should include a comprehensive bibliography on the topic, covering the vast majority of published sources. Graduate students are also expected to meet with the course instructor *and* their supervisor regarding this research paper on a regular basis, minimally every second week; it is not necessary that both the instructor and the supervisor meet	

simultaneously. Such meetings are intended to keep the student on track, and to ensure that their research progresses at an acceptable rate.

Grading:	**Assignment**	**% value**
	Lab Quizzes (8 @ 2.5% each)	20%
	Cumulative Lab Quiz Research	20%
	Paper	60%

Required text(s):	Broughton, J.M. and S.D. Miller. 2016. *Zooarchaeology and Field Ecology: A Photographic Atlas*. Salt Lake City: University of Utah Press.
Reading list:	Provided in course syllabus.
Prerequisite:	
Notes:	Each student is responsible for his or her conduct as it affects the University community. Academic dishonesty, in whatever form, is ultimately destructive of the values of the University. Furthermore, it is unfair and discouraging to the majority of students who pursue their studies honestly. Scholarly integrity is required of all members of the University. http://www.sfu.ca/policies/gazette/student/s10-01.html Students with hidden or visible disabilities who believe they may need classroom or exam accommodations are encouraged to register with the SFU Centre for Students with Disabilities (1250 Maggie Benston Centre) as soon as possible to ensure that they are eligible and that approved accommodations and services are implemented in a timely fashion. Deferred grades will be given only on the basis of authenticated medical disability.

SPRING 2025 - ARCH 340 D100

ZOOARCHAEOLOGY (5)

Class Number: 4823 *Delivery Method: In Person*

COURSE TIMES + LOCATION:

Jan 6 – Apr 9, 2025: Mon, 9:30 a.m.–12:20 p.m.
Burnaby

INSTRUCTOR:

David Maxwell
dma50@sfu.ca

PREREQUISITES:

ARCH 101 or ARCH 201.

Description

CALENDAR DESCRIPTION:

An introduction to the study of animal remains from archaeological sites. Coverage of the major concepts and methods used in the study of animal remains and detailed practical coverage of the vertebrate skeleton.

COURSE DETAILS:

Zooarchaeology is the identification, analysis, and interpretation of animal remains from archaeological contexts. This course is designed to introduce students to the practical skill of identifying animal remains, and to develop an understanding of the method and theory behind the interpretation of faunal assemblages.

The course has a significant laboratory component during which students will be expected to become familiar with the more common skeletal elements of the fish, reptile, amphibian, bird, and mammal skeletons. Lab time will also be devoted to learning to recognize common taphonomic damage, such as burn and weathering stages. Weekly quizzes will be used to evaluate identification skills. Lectures will focus on zooarchaeological method and theory, with topics including animal taxonomy, quantitative methods, the role of fauna in ritual, and taxon-specific issues.

Students will be required to prepare an original research paper (term paper) relating to some aspect of zooarchaeology. Paper topics **must** be discussed with and approved by the instructor by the 7th week of classes. Papers on human osteology or forensic science *are not acceptable* in this course

Grading

Semi-Weekly Lab Quizzes (8 @ 5% each)	40%
Cumulative Lab Quiz	30%
Research Paper	30%

Materials

REQUIRED READING:

Broughton, J.M. and Miller, S.D. 2016. *Zooarchaeology and Field Ecology: A Photographic Atlas*. University of Utah Press: Salt Lake City

REQUIRED READING NOTES:

Your personalized Course Material list, including digital and physical textbooks, are available through the SFU Bookstore website by simply entering your Computing ID at: shop.sfu.ca/course-materials/my-personalized-course-materials.

DEPARTMENT UNDERGRADUATE NOTES:

Students with hidden or visible disabilities who may need class or exam accommodations, including in the context of remote learning, are advised to register with the SFU Centre for Accessible Learning (caladmin@sfu.ca or 778-782-3112) as soon as possible to ensure that they are eligible and that approved accommodations and services are implemented in a timely fashion.

Deferred grades will be given only on the basis of authenticated medical disability.

REGISTRAR NOTES:

ACADEMIC INTEGRITY: YOUR WORK, YOUR SUCCESS

SFU's Academic Integrity website http://www.sfu.ca/students/academicintegrity.html is filled with information on what is meant by academic dishonesty, where you can find resources to help with your studies and the consequences of cheating. Check out the site for more information and videos that help explain the issues in plain English.

Each student is responsible for his or her conduct as it affects the university community. Academic dishonesty, in whatever form, is ultimately destructive of the values of the university. Furthermore, it is unfair and discouraging to the majority of students who pursue their studies honestly. Scholarly integrity is required of all members of the university. http://www.sfu.ca/policies/gazette/student/s10-01.html

RELIGIOUS ACCOMMODATION

Students with a faith background who may need accommodations during the term are encouraged to assess their needs as soon as possible and review the Multifaith religious accommodations website. The page outlines ways they begin working toward an accommodation and ensure solutions can be reached in a timely fashion.

SFU GRADUATE STUDIES

NEW GRADUATE COURSE PROPOSAL

Course Subject (eg. PSYC)	Number (eg. 810)	Units (eg. 4)
ARCH	773	5

Course title (max. 100 characters): Advanced Human Osteology

Short title (for enrollment/transcript, max. 30 characters): Advanced Human Osteology

Course description for SFU Calendar (course descriptions should be brief and should never begin with phrases such as "This course will..." or "The purpose of this course is..." If the grading basis is satisfactory/unsatisfactory include this in the description. Max. 50 words)

A detailed and lab-intensive study of the human skeletal remains and dental variation. Designed for students to learn how to identify all the bones in the human skeleton, both whole and fragmentary. Focuses on archaeological and forensic field and lab applications for the study of the human skeleton.

Rationale for introduction of this course (if more space is required, add a separate page)

This course is a graduate level crosslisting of the undergraduate osteology course. Often students audit osteology and are graded as a graduate-level directed readings. A crosslisted course reduces paperwork and also makes it more clear to students what courses are available for them to take.

Term of initial offering (eg. Fall 2019)	Summer 2026	**Course delivery** (eg. 3 hrs/week for 13 weeks)	LEC 3 hrs/wk for 13 weeks LAB 2 hrs/wk for 13 weeks
Frequency of offerings/year	1	**Estimated enrollment per offering**	2

EQUIVALENT COURSES

Courses that replicates the content of this course to such an extent that students should not receive credit for both courses. Please select the one that is most relevant.

☐ **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 603)) first may not then take this course for further credit.	☐ **ONE-WAY EQUIVALENCY** [is not hard coded in SIMS.] (Place relevant course(s) in the blank below (ex: STAT 603)) will be accepted in lieu of this course.	☑ **TWO-WAY EQUIVALENCY** [is hard coded and enforced by SIMS.] Students with credit for (place relevant course(s) in the blank below (ex: STAT 603)) may not take this course for further credit.
		ARCH 373

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).

Prerequisite and/or Corequisite

This course is only available for Archaeology graduate students. Department permission is required.

Criminal record check required? ☐ Yes (if yes is selected, add this as prerequisite) **Additional course fees?** ☐ Yes ☑ No

Campus where course will be taught ☑ Burnaby ☐ Surrey ☐ Vancouver ☐ Great Northern Way ☐ Off campus

Course Components * ☑ Lecture ☐ Seminar ☑ Lab ☐ Capstone ☐ Practicum ☐ Online ☐ Other: _____

Grading Basis ☑ Letter grades ☐ Satisfactory/ Unsatisfactory ☐ In Progress / Complete

* See important definitions on the curriculum website.

Repeat for credit? ☐ Yes ☑ No	**Total completions allowed?**	**Repeat within a term?** ☐ Yes ☑ No
Required course? ☐ Yes ☑ No	**Final exam required?** ☑ Yes ☐ No	

Combined with an undergraduate course? ☑ Yes ☐ No If yes, identify which undergraduate course and the additional course requirements for graduate students. Please include a copy of the undergraduate course outline and fill out the Equivalent Courses section above.

ARCH 373 is the equivalent course.

RESOURCES

If additional resources are required to offer this course, provide information on the source(s) of those additional resources.

Faculty member(s) who will normally teach this course

Dongya Yang, Hugo Cardoso, Casey Kirkpatrick

Additional faculty members, space, and/or specialized equipment required in order to offer this course

CONTACT PERSON

Academic Unit / Program	**Name (typically, Graduate Program Chair)**	**Email**
Archaeology	Ross Jamieson	archgc@sfu.ca, rossjami@sfu.ca

ACADEMIC UNIT APPROVAL

☑ A course outline / syllabus is included

Non-departmentalized faculties need not sign

Graduate Program Committee Ross W. Jamieson	**Signature**	**Date** Sept 9, 2025
Department Chair Robert J. Muir	**Signature**	**Date** Sept 9, 2025

FACULTY APPROVAL

The course form and outline must be sent by FGSC to the chairs of each FGSC (fgsc-list@sfu.ca) to check for an overlap in content

Overlap check done? ☑ YES

This approval indicates that all the necessary course content and overlap concerns have been resolved. The Faculty/Academic Unit commits to providing the necessary resources.

Faculty Graduate Studies Committee Christina Giovas	**Signature**	**Date** 16 September 2025

A library review will be conducted. If additional funds are necessary, Graduate Studies will contact the academic unit prior to SGSC.

SENATE GRADUATE STUDIES COMMITTEE APPROVAL

Senate Graduate Studies Committee Mary O'Brien	**Signature**	**Date** 15 October 2025

ADMINISTRATIVE SECTION (for Graduate Studies office only)

Library Check: _____
Course Attribute: _____
Course Attribute Value: _____
Instruction Mode: _____
Attendance Type: _____

If different from regular units:
Academic Progress Units: _____
Financial Aid Progress Units: _____

SFU FACULTY OF ENVIRONMENT | DEPARTMENT OF ARCHAEOLOGY

ARCH 773-5
Title: Advanced Human Osteology

Instructor:	**Dr. Hugo Cardoso**	
Description/topics:	A detailed and lab-intensive training in human skeletal and dental variation. Designed for students to learn how to identify all the bones in the human skeleton, both whole and fragmentary. Focuses on paleoanthropological, archaeological and forensic field and lab applications for the study of the human skeleton.	
Course details:	This course is designed to provide the student with extensive and in-depth laboratory and hands-on training in human adult skeletal and dental anatomy, with an emphasis in anatomical variation and bone identification. Students will learn to identify all 206 bones in the human skeleton, both whole and fragmentary, including key features and anatomical placement. Students will also be introduced to basic bone biology and function, as well as to individual, developmental, sexual, pathological and population-based variation. These elements are essential for understanding the evolution of human anatomy, reconstructing the lifeways of archaeological populations or for identifying skeletonized individuals in forensic investigations. Ethical considerations, and best practices related to the excavation, analysis and interpretation of human skeletal remains will also be covered.	
Graduate requirements:	Graduate students who wish to take this course for graduate credit, must complete all of the learning assignments and will benefit from the flexible assignment and grading scheme, with the following modifications: 1) Lab assignments <u>are graded</u>; 2) Mid-term paper is expected to reflect greater maturity in thought process and writing of the student, providing greater depth of understanding and reflection to the topic covered on a longer and more detailed review, and <u>cannot replace</u> the final exam; 3) Extra-credit will applied to the development of a lab binder, but also to <u>student participation</u> in the lectures and labs that reflect greater depth and breadth of knowledge.	
Grading:	**Assignment** Lab Assignments Lab Quizzes (or Lab Final Exam) Mid-term Paper Final Exam Student Participation + Lab Binder	**% value** 10% 50% (or 60%) 20% (or 15%) 20% (or 15%) Extra credit (up to 5%)

Flexible Grading Scheme	Final grades will be calculated by using one of the following two grade schemes, whichever will generate the highest grade: - 10% lab assignments + 50% (lab quizzes OR lab final) + 20% mid-term paper + 20% final written exam. - 10% lab assignments + 60% (lab quizzes OR lab final) + 15% mid-term paper + 15% final written exam.
Required text(s):	White TD and Folkens PA. 2005. *Human Bone Manual*. Academic Press. (ISBN: 0120884674). *Students may also use:* White TD, Black MT and Folkens PA. 2012. *Human Osteology*, Third Edition. Academic Press. (ISBN 9780123741349) *OR* White TD and Folkens PA. 2000. *Human Osteology*, Second edition. Academic Press. (ISBN 0127466126). **Secondary/Recommended Resource:** Digital Atlas of the Human Skeleton (free download)
Reading list:	Provided in course syllabus.
Prerequisite:	
Notes:	**Statement on Learning Technology** Students are allowed to use computers to attend lectures. Due to the sensitive nature of the subject matter and ownership of images, students are prohibited of sharing lecture videos or sharing screencasts/screenshots of the lecture presentations. Laptops are allowed in the labs for note taking and use of approved anatomy apps is support of learning. Due to the sensitive nature of the subject matter and materials used, the use of voice recorders, digital photography (including cell phone cameras) and video recorders is strictly prohibited in the labs. **Classroom Conduct** Cell phones and other means of electronic communication will not be allowed in class or exams. Disruptive behaviour during lectures is a demonstration of disrespect to the speaker and other students and will not be tolerated. Each student is responsible for his or her conduct as it affects the University community. Academic dishonesty, in whatever form, is ultimately destructive of the values of the University. Furthermore, it is unfair and discouraging to the majority of students who pursue their studies honestly. Scholarly integrity is required of all members of the University. http://www.sfu.ca/policies/gazette/student/s10-01.html Students with hidden or visible disabilities who believe they may need classroom or exam accommodations are encouraged to register with the SFU Centre for Students with Disabilities (1250 Maggie Benston Centre) as soon as possible to ensure that they are eligible and that approved accommodations and services are implemented in a timely fashion. Deferred grades will be given only on the basis of authenticated medical disability.

SPRING 2025 - ARCH 373 D100

HUMAN OSTEOLOGY (5)

Class Number: 4867 *Delivery Method: In Person*

COURSE TIMES + LOCATION:

Jan 6 – Apr 9, 2025: Mon, 12:30–2:20 p.m.
Burnaby

INSTRUCTOR:

Hua Zhang
zhangh@sfu.ca

PREREQUISITES:

ARCH 131 or any lower division ARCH, BISC, HSCI, or BPK course.

Description

CALENDAR DESCRIPTION:

A detailed and lab-intensive study of the human skeletal remains and dental variation. Designed for students to learn how to identify all the bones in the human skeleton, both whole and fragmentary. Focuses on archaeological and forensic field and lab applications for the study of the human skeleton.

COURSE DETAILS:

This course is designed to provide the student with extensive laboratory training in human skeletal and dental anatomy, variation and identification. Students will learn how to identify all 206 bones in the human skeleton, both whole and fragmentary, what their particular features are and how to place them anatomically. Students will also be introduced to basic bone biology and function, as well as to individual, developmental, sexual, pathological and population-based variation in the skeleton that is used to reconstruct the lifeways of archaeological populations, or assist in the identification of individual human remains in a forensic setting. Issues related to the ethics, excavation, analysis and interpretation of human skeletal remains will also be addressed.

Grading

Biweekly Lab Quizzes	50%
Weekly Lab Assignments	10%
Mid-term Paper	20%
Final Exam	20%

Materials

MATERIALS + SUPPLIES:

This course will be taught by a blend of in-person lectures and face-to-face laboratories. Labs include a 3 hour per week regular lab component plus weekly open labs. All labs will be based on handling real human bones and students are always expected to be respectful to the learning materials.

REQUIRED READING:

The Human Bone Manual, 2005, Tim D. White and Pieter A. Folkens
ISBN: 978-0-12-088467-4

REQUIRED READING NOTES:

Your personalized Course Material list, including digital and physical textbooks, are available through the SFU Bookstore website by simply entering your Computing ID at: shop.sfu.ca/course-materials/my-personalized-course-materials.

DEPARTMENT UNDERGRADUATE NOTES:

Students with hidden or visible disabilities who may need class or exam accommodations, including in the context of remote learning, are advised to register with the SFU Centre for Accessible Learning (caladmin@sfu.ca or 778-782-3112) as soon as possible to ensure that they are eligible and that approved accommodations and services are implemented in a timely fashion.

Deferred grades will be given only on the basis of authenticated medical disability.

REGISTRAR NOTES:

ACADEMIC INTEGRITY: YOUR WORK, YOUR SUCCESS

SFU's Academic Integrity website http://www.sfu.ca/students/academicintegrity.html is filled with information on what is meant by academic dishonesty, where you can find resources to help with your studies and the consequences of cheating. Check out the site for more information and videos that help explain the issues in plain English.

Each student is responsible for his or her conduct as it affects the university community. Academic dishonesty, in whatever form, is ultimately destructive of the values of the university. Furthermore, it is unfair and discouraging to the majority of students who pursue their studies honestly. Scholarly integrity is required of all members of the university. http://www.sfu.ca/policies/gazette/student/s10-01.html

RELIGIOUS ACCOMMODATION

Students with a faith background who may need accommodations during the term are encouraged to assess their needs as soon as possible and review the Multifaith religious accommodations website. The page outlines ways they begin working toward an accommodation and ensure solutions can be reached in a timely fashion.

SFU GRADUATE STUDIES

NEW GRADUATE COURSE PROPOSAL

Course Subject (eg. PSYC)	Number (eg. 810)	Units (eg. 4)
ARCH	777	4

Course title (max. 100 characters): Advanced Historical Archaeology

Short title (for enrollment/transcript, max. 30 characters): Advanced Historical Archaeology

Course description for SFU Calendar (course descriptions should be brief and should never begin with phrases such as "This course will..." or "The purpose of this course is..." If the grading basis is satisfactory/unsatisfactory include this in the description. Max. 50 words)

Theory and method in North American historical archaeology. Laboratory instruction is provided in historic artifact analysis and interpretation.

Rationale for introduction of this course (if more space is required, add a separate page)

This course is a graduate level crosslisting of the undergraduate Historical Archaeology course. Often students audit this course, and are graded as a graduate-level directed readings. A crosslisted course reduces paperwork and also makes it more clear to students what courses are available for them to take.

Term of initial offering (eg. Fall 2019): Summer 2026	**Course delivery** (eg. 3 hrs/week for 13 weeks): 5 hrs/wk for 13 weeks
Frequency of offerings/year: 1	**Estimated enrollment per offering**: 2

EQUIVALENT COURSES

Courses that replicates the content of this course to such an extent that students should not receive credit for both courses. Please select the one that is most relevant.

☐ **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 603)) first may not then take this course for further credit.	☐ **ONE-WAY EQUIVALENCY** [is not hard coded in SIMS.] (Place relevant course(s) in the blank below (ex: STAT 603)) will be accepted in lieu of this course.	☑ **TWO-WAY EQUIVALENCY** [is hard coded and enforced by SIMS.] Students with credit for (place relevant course(s) in the blank below (ex: STAT 603)) may not take this course for further credit.
		ARCH 377

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).

Prerequisite and/or Corequisite

This course is only available for Archaeology graduate students. Department permission is required.

Criminal record check required? ☐ Yes (if yes is selected, add this as prerequisite) **Additional course fees?** ☐ Yes ☑ No

Campus where course will be taught ☑ Burnaby ☐ Surrey ☐ Vancouver ☐ Great Northern Way ☐ Off campus

Course Components * ☑ Lecture ☐ Seminar ☐ Lab ☐ Capstone ☐ Practicum ☐ Online ☐ Other: _____

Grading Basis ☑ Letter grades ☐ Satisfactory/ Unsatisfactory ☐ In Progress / Complete

* See important definitions on the curriculum website.

Repeat for credit? ☐ Yes ☑ No	**Total completions allowed?**	**Repeat within a term?** ☐ Yes ☑ No
Required course? ☐ Yes ☑ No	**Final exam required?** ☐ Yes ☑ No	

Combined with an undergraduate course? ☑ Yes ☐ No If yes, identify which undergraduate course and the additional course requirements for graduate students. Please include a copy of the undergraduate course outline and fill out the Equivalent Courses section above.

ARCH 377 is the equivalent course.

RESOURCES

If additional resources are required to offer this course, provide information on the source(s) of those additional resources.

Faculty member(s) who will normally teach this course

Ross Jamieson, Eric Guiry

Additional faculty members, space, and/or specialized equipment required in order to offer this course

CONTACT PERSON

Academic Unit / Program	**Name (typically, Graduate Program Chair)**	**Email**
Archaeology	Ross Jamieson	archgc@sfu.ca, rossjami@sfu.ca

ACADEMIC UNIT APPROVAL

☐ A course outline / syllabus is included

Non-departmentalized faculties need not sign

Graduate Program Committee Ross Jamieson	**Signature**	**Date** Sept 9, 2025
Department Chair Robert J. Muir	**Signature**	**Date** Sept 9, 2025

FACULTY APPROVAL

The course form and outline must be sent by FGSC to the chairs of each FGSC (fgsc-list@sfu.ca) to check for an overlap in content

Overlap check done? ☑ YES

This approval indicates that all the necessary course content and overlap concerns have been resolved. The Faculty/Academic Unit commits to providing the necessary resources.

Faculty Graduate Studies Committee Christina Giovas	**Signature**	**Date** 16 September 2025

A library review will be conducted. If additional funds are necessary, Graduate Studies will contact the academic unit prior to SGSC.

SENATE GRADUATE STUDIES COMMITTEE APPROVAL

Senate Graduate Studies Committee Mary O'Brien	**Signature**	**Date** 15 October 2025

ADMINISTRATIVE SECTION (for Graduate Studies office only)

Library Check: _____
Course Attribute: _____
Course Attribute Value: _____
Instruction Mode: _____
Attendance Type: _____

If different from regular units:
Academic Progress Units: _____
Financial Aid Progress Units: _____

SFU FACULTY OF ENVIRONMENT | DEPARTMENT OF ARCHAEOLOGY

ARCH 777-4
Title: Advanced Historical Archaeology

Instructor:	**Dr. Ross Jamieson**	
Description/topics:	An introduction to theory and method in North American historical archaeology. Laboratory instruction is provided in historic artifact analysis and interpretation.	
Course details:	This course will provide the student with a firm grounding in the field of historical archaeology, through an understanding of its general principles and theory. The lectures and readings will emphasize the application of archaeological methods to the period since the beginning of European colonialism, with a particular focus on the New World. Laboratories will give the student hands-on training in the identification and analysis of historic material culture.	
Graduate requirements:	Graduate students who wish to take this course for graduate credit, must complete all materials and assignments for the undergraduate course. In addition, graduate credit requires a set of steps to complete a large research paper. This will include an annotated bibliography, a completed draft paper, and then a revised and expanded final paper for the course in addition to the undergraduate materials.	
Grading:	**Assignment** Lecture Quizzes Laboratory Quizzes Commemoration Assignment Lab Assignments Seminar Participation Annotated Bib and Essay Draft Final Graduate Essay	**% value** 15% 15% 15% 15% 10% 10% 20%
Required text(s):	There will be weekly seminar readings and weekly laboratory readings. Readings will come from materials available online through Canvas/SFU library.	
Reading list:	Provided in course syllabus.	
Prerequisite:		
Notes:	Each student is responsible for his or her conduct as it affects the University community. Academic dishonesty, in whatever form, is ultimately destructive of the values of the University. Furthermore, it is unfair and discouraging to the majority of students who pursue their studies honestly. Scholarly integrity is required of all members of the University. http://www.sfu.ca/policies/gazette/student/s10-01.html Students with hidden or visible disabilities who believe they may need classroom or exam accommodations are encouraged to register with the SFU Centre for Students with	

	Disabilities (1250 Maggie Benston Centre) as soon as possible to ensure that they are eligible and that approved accommodations and services are implemented in a timely fashion. Deferred grades will be given only on the basis of authenticated medical disability.

FALL 2024 - ARCH 377 D100

HISTORICAL ARCHAEOLOGY (4)

Class Number: 6478 *Delivery Method: In Person*

COURSE TIMES + LOCATION:

Sep 4 – Oct 11, 2024: Tue, 12:30–2:20 p.m.
Location: TBA

Oct 16 – Dec 3, 2024: Tue, 12:30–2:20 p.m.
Burnaby

INSTRUCTOR:

Ross Jamieson
rossjami@sfu.ca
Office Hours: Tuesdays 10:30-12:20

PREREQUISITES:

ARCH 101 or ARCH 201, and one lower division ARCH course.

Description

CALENDAR DESCRIPTION:

An introduction to theory and method in North American historical archaeology. Laboratory instruction is provided in historic artifact analysis and interpretation.

COURSE DETAILS:

This course will provide the student with a firm grounding in the field of historical archaeology, through an understanding of its general principles and theory. The lectures and readings will emphasize the application of archaeological methods to the period since the beginning of European colonialism, with a particular focus on the New World. Laboratories will give the student hands-on training in the identification and analysis of historic material culture.

Grading

Lecture Quizzes	20%
Laboratory Quizzes	20%
Commemoration Assignment	30%
Lab Assignments	20%
Seminar Participation	10%

Materials

REQUIRED READING:

There will be weekly seminar readings and weekly laboratory readings. Readings will come from materials available online through Canvas/SFU library.

REQUIRED READING NOTES:

Your personalized Course Material list, including digital and physical textbooks, are available through the SFU Bookstore website by simply entering your Computing ID at: shop.sfu.ca/course-materials/my-personalized-course-materials.

DEPARTMENT UNDERGRADUATE NOTES:

Students with hidden or visible disabilities who may need class or exam accommodations, including in the context of remote learning, are advised to register with the SFU Centre for Accessible Learning (caladmin@sfu.ca or 778-782-3112) as soon as possible to ensure that they are eligible and that approved accommodations and services are implemented in a timely fashion.

Deferred grades will be given only on the basis of authenticated medical disability.

REGISTRAR NOTES:

ACADEMIC INTEGRITY: YOUR WORK, YOUR SUCCESS

SFU's Academic Integrity website http://www.sfu.ca/students/academicintegrity.html is filled with information on what is meant by academic dishonesty, where you can find resources to help with your studies and the consequences of cheating. Check out the site for more information and videos that help explain the issues in plain English.

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RELIGIOUS ACCOMMODATION

Students with a faith background who may need accommodations during the term are encouraged to assess their needs as soon as possible and review the Multifaith religious accommodations website. The page outlines ways they begin working toward an accommodation and ensure solutions can be reached in a timely fashion.

SFU GRADUATE STUDIES

NEW GRADUATE COURSE PROPOSAL

Course Subject (eg. PSYC) ARCH	Number (eg. 810) 782	Units (eg. 4) 4

Course title (max. 100 characters) Advanced Stone Tool Technology

Short title (for enrollment/transcript, max. 30 characters) Advanced Stone Tool Tech

Course description for SFU Calendar (course descriptions should be brief and should never begin with phrases such as "This course will..." or "The purpose of this course is..." If the grading basis is satisfactory/unsatisfactory include this in the description. Max. 50 words)

An in-depth study of types of stone tools and how they were manufactured and used throughout world prehistory. Includes identifying stone tool raw materials, fracture mechanics, analyzing stone tools, and theoretical approaches to understanding their functions and roles in the past. Students receive hands-on experience making stone tools.

Rationale for introduction of this course (if more space is required, add a separate page)

This course is a graduate level crosslisting of the undergraduate Stone Tool Technology (name change for Fall 2025 attached) course. Often students audit this course, and are graded as a graduate-level directed readings. A crosslisted course reduces paperwork and also makes it more clear to students what courses are available for them to take.

Term of initial offering (eg. Fall 2019) Summer 2026	Course delivery (eg. 3 hrs/week for 13 weeks) LEC 3 hrs/wk for 13 weeks LAB 2 hrs/wk for 13 weeks
Frequency of offerings/year 1	Estimated enrollment per offering 2

EQUIVALENT COURSES

Courses that replicates the content of this course to such an extent that students should not receive credit for both courses. Please select the one that is most relevant.

☐ 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 603)) first may not then take this course for further credit.	☐ ONE-WAY EQUIVALENCY [is not hard coded in SIMS.] (Place relevant course(s) in the blank below (ex: STAT 603)) will be accepted in lieu of this course.	☑ TWO-WAY EQUIVALENCY [is hard coded and enforced by SIMS.] Students with credit for (place relevant course(s) in the blank below (ex: STAT 603)) may not take this course for further credit.
		ARCH 382 ARCH 485

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).

Prerequisite and/or Corequisite

This course is only available for Archaeology graduate students. Department permission is required.

Criminal record check required? ☐ Yes (if yes is selected, add this as prerequisite) **Additional course fees?** ☐ Yes ☑ No

Campus where course will be taught ☑ Burnaby ☐ Surrey ☐ Vancouver ☐ Great Northern Way ☐ Off campus

Course Components * ☑ Lecture ☐ Seminar ☑ Lab ☐ Capstone ☐ Practicum ☐ Online ☐ Other: _____

Grading Basis ☑ Letter grades ☐ Satisfactory/ Unsatisfactory ☐ In Progress / Complete

* See important definitions on the curriculum website.

Repeat for credit? ☐ Yes ☑ No	**Total completions allowed?**	**Repeat within a term?** ☐ Yes ☑ No
Required course? ☐ Yes ☑ No	**Final exam required?** ☐ Yes ☑ No	

Combined with an undergraduate course? ☑ Yes ☐ No If yes, identify which undergraduate course and the additional course requirements for graduate students. Please include a copy of the undergraduate course outline and fill out the Equivalent Courses section above.

ARCH 382 and 485 are equivalent courses.

RESOURCES

If additional resources are required to offer this course, provide information on the source(s) of those additional resources.

Faculty member(s) who will normally teach this course

Dennis Sandgathe, Bryn Letham

Additional faculty members, space, and/or specialized equipment required in order to offer this course

CONTACT PERSON

Academic Unit / Program	**Name (typically, Graduate Program Chair)**	**Email**
Archaeology	Ross Jamieson	archgc@sfu.ca, rossjami@sfu.ca

ACADEMIC UNIT APPROVAL

☐ A course outline / syllabus is included

Non-departmentalized faculties need not sign

Graduate Program Committee Ross W. Jamieson	**Signature**	**Date** Sept 9, 2025
Department Chair Robert J. Muir	**Signature**	**Date** Sept 9, 2025

FACULTY APPROVAL

The course form and outline must be sent by FGSC to the chairs of each FGSC (fgsc-list@sfu.ca) to check for an overlap in content

Overlap check done? ☑ YES

This approval indicates that all the necessary course content and overlap concerns have been resolved. The Faculty/Academic Unit commits to providing the necessary resources.

Faculty Graduate Studies Committee Christina Giovas	**Signature**	**Date** 16 September 2025

A library review will be conducted. If additional funds are necessary, Graduate Studies will contact the academic unit prior to SGSC.

SENATE GRADUATE STUDIES COMMITTEE APPROVAL

Senate Graduate Studies Committee Mary O'Brien	**Signature**	**Date** 15 October 2025

ADMINISTRATIVE SECTION (for Graduate Studies office only)

Library Check: _____
Course Attribute: _____
Course Attribute Value: _____
Instruction Mode: _____
Attendance Type: _____

If different from regular units:
Academic Progress Units: _____
Financial Aid Progress Units: _____

SFU FACULTY OF ENVIRONMENT | DEPARTMENT OF ARCHAEOLOGY

ARCH 782-4
Title: Advanced Stone Tool Technology (4)

Instructor:	**Dr. Dennis Sandgathe**	
Description/topics:	An in-depth study of how to manufacture and analyze stone tools. Includes rock and mineral identification, stone working by students,fracture mechanics, and relevance to theoretical problems. Students with credit for ARCH 485 may not take this course for further credit.	
Course details:	This course is an examination of prehistoric stone tool technology, from its simplest forms adopted by early hominins in Africa through thedevelopment of increasingly sophisticated technologies used in the Old and New Worlds. Closer examinations will be made of the lithic technologies and culture histories of Europe and North America. Basic components of the course will be: a review of the history of stone toolresearch and early approaches to lithic analysis, but the major components will be an examination of current approaches to lithic research(including the construction of typologies, stone tool replicative research, technological analysis, debitage analysis, and functional analysis)and an examination of the basic lithic strategies employed by prehistoric cultures. Students will also be provided with a basic knowledge of stone tool raw material (rock) types and properties, and time will be spent with both theoretical and hands-on learning of the physics andmechanics of flaking stone and manufacturing specific tool types. Some of the labs will be spent learning to flintknap and manufacturing simple stone tools.	
Graduate requirements:	Graduate students are expected to complete all regular assignments plus a research paper on a lithics-related topic (to be selected in consultation with the instructor).	
Grading:	**Assignment**	**Undergrad % value** / **Grad % value**
	Quizzes/Exercises/Participation	50% / 35%
	Midterm Exam	20% / 20%
	Lithic Analysis Project	30% / 20%
	Research paper	25%
Required text(s):	Andrefsky, William Jr. 2005. Lithics: Macroscopic Approaches to Analysis, 2nd edition. Cambridge University Press.ISBN: 978-0-5216-1500-6 The text will be supplemented with several articles on different aspects of stone tool research.	

Reading list:	Provided in course syllabus.
Prerequisite:	
Notes:	Each student is responsible for his or her conduct as it affects the University community. Academic dishonesty, in whatever form, is ultimately destructive of the values of the University. Furthermore, it is unfair and discouraging to the majority of students who pursue their studies honestly. Scholarly integrity is required of all members of the University. http://www.sfu.ca/policies/gazette/student/s10-01.html Students with hidden or visible disabilities who believe they may need classroom or exam accommodations are encouraged to register with the SFU Centre for Students with Disabilities (1250 Maggie Benston Centre) as soon as possible to ensure that they are eligible and that approved accommodations and services are implemented in a timely fashion. Deferred grades will be given only on the basis of authenticated medical disability.

SPRING 2025 - ARCH 382 D100

LITHIC TECHNOLOGY (4)

Class Number: 6933 Delivery Method: In Person

COURSE TIMES + LOCATION:

Jan 6 – Apr 9, 2025: Tue, 12:30–2:20 p.m.
Burnaby

INSTRUCTOR:

Dennis Sandgathe
dms@sfu.ca

PREREQUISITES:

ARCH 282 or 372.

Description

CALENDAR DESCRIPTION:

An in-depth study of how to manufacture and analyze stone tools. Includes rock and mineral identification, stone working by students, fracture mechanics, and relevance to theoretical problems. Students with credit for ARCH 485 may not take this course for further credit.

COURSE DETAILS:

This course is an examination of prehistoric stone tool technology, from its simplest forms adopted by early hominins in Africa through the development of increasingly sophisticated technologies used in the Old and New Worlds. Closer examinations will be made of the lithic technologies and culture histories of Europe and North America. Basic components of the course will be: a review of the history of stone tool research and early approaches to lithic analysis, but the major components will be an examination of current approaches to lithic research (including the construction of typologies, stone tool replicative research, technological analysis, debitage analysis, and functional analysis) and an examination of the basic lithic strategies employed by prehistoric cultures. Students will also be provided with a basic knowledge of stone tool raw material (rock) types and properties, and time will be spent with both theoretical and hands-on learning of the physics and mechanics of flaking stone and manufacturing specific tool types. Some of the labs will be spent learning to flint knap and manufacturing simple stone tools.

Grading

Quizzes/Exercises/Participation	50%
Midterm Exam	20%
Lithic Analysis Project	30%

Materials

REQUIRED READING:

Andrefsky, William Jr. 2005. Lithics: Macroscopic Approaches to Analysis, 2nd edition. Cambridge University Press.
ISBN: 978-0-5216-1500-6

The text will be supplemented with several articles on different aspects of stone tool research.

REQUIRED READING NOTES:

Your personalized Course Material list, including digital and physical textbooks, are available through the SFU Bookstore website by simply entering your Computing ID at: shop.sfu.ca/course-materials/my-personalized-course-materials.

DEPARTMENT UNDERGRADUATE NOTES:

Students with hidden or visible disabilities who may need class or exam accommodations, including in the context of remote learning, are advised to register with the SFU Centre for Accessible Learning (caladmin@sfu.ca or 778-782-3112) as soon as possible to ensure that they are eligible and that approved accommodations and services are implemented in a timely fashion.

Deferred grades will be given only on the basis of authenticated medical disability.

REGISTRAR NOTES:

ACADEMIC INTEGRITY: YOUR WORK, YOUR SUCCESS

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RELIGIOUS ACCOMMODATION

Students with a faith background who may need accommodations during the term are encouraged to assess their needs as soon as possible and review the Multifaith religious accommodations website. The page outlines ways they begin working toward an accommodation and ensure solutions can be reached in a timely fashion.

SFU GRADUATE STUDIES

NEW GRADUATE COURSE PROPOSAL

Course Subject (eg. PSYC) ARCH	Number (eg. 810) 783	Units (eg. 4) 3

Course title (max. 100 characters): Advanced Ancient and Forensic DNA

Short title (for enrollment/transcript, max. 30 characters): Adv Ancient and Forensic DNA

Course description for SFU Calendar (course descriptions should be brief and should never begin with phrases such as "This course will..." or "The purpose of this course is..." If the grading basis is satisfactory/unsatisfactory include this in the description. Max. 50 words)

Investigates molecular biology techniques used to analyze DNA to address archaeological questions and applications to degraded DNA samples for forensic identification of human remains and conservation of endangered species.

Rationale for introduction of this course (if more space is required, add a separate page)

This course is a graduate level crosslisting of the undergraduate Ancient DNA course. Often students audit this course, and are graded as a graduate-level directed readings. A crosslisted course reduces paperwork and also makes it more clear to students what courses are available for them to take.

Term of initial offering (eg. Fall 2019) Summer 2026	Course delivery (eg. 3 hrs/week for 13 weeks) 5 hrs/wk for 13 weeks
Frequency of offerings/year 1	Estimated enrollment per offering 2

EQUIVALENT COURSES

Courses that replicates the content of this course to such an extent that students should not receive credit for both courses. Please select the one that is most relevant.

☐ 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 603)) first may not then take this course for further credit.	☐ ONE-WAY EQUIVALENCY [is not hard coded in SIMS.] (Place relevant course(s) in the blank below (ex: STAT 603)) will be accepted in lieu of this course.	☑ TWO-WAY EQUIVALENCY [is hard coded and enforced by SIMS.] Students with credit for (place relevant course(s) in the blank below (ex: STAT 603)) may not take this course for further credit.
		ARCH 383

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).

Prerequisite and/or Corequisite

This course is only available for Archaeology graduate students. Department permission is required.

Criminal record check required? ☐ Yes (if yes is selected, add this as prerequisite) **Additional course fees?** ☐ Yes ☑ No

Campus where course will be taught ☑ Burnaby ☐ Surrey ☐ Vancouver ☐ Great Northern Way ☐ Off campus

Course Components * ☑ Lecture ☐ Seminar ☐ Lab ☐ Capstone ☐ Practicum ☐ Online ☐ Other: _____

Grading Basis ☑ Letter grades ☐ Satisfactory/ Unsatisfactory ☐ In Progress / Complete

* See important definitions on the curriculum website.

Repeat for credit? ☐ Yes ☑ No	**Total completions allowed?**	**Repeat within a term?** ☐ Yes ☑ No
Required course? ☐ Yes ☑ No	**Final exam required?** ☐ Yes ☑ No	

Combined with an undergraduate course? ☑ Yes ☐ No If yes, identify which undergraduate course and the additional course requirements for graduate students. Please include a copy of the undergraduate course outline and fill out the Equivalent Courses section above.

ARCH 383 is the equivalent course.

RESOURCES

If additional resources are required to offer this course, provide information on the source(s) of those additional resources.

Faculty member(s) who will normally teach this course Dongya Yang, Hugo Cardoso
Additional faculty members, space, and/or specialized equipment required in order to offer this course

CONTACT PERSON

Academic Unit / Program	**Name (typically, Graduate Program Chair)**	**Email**
Archaeology	Ross Jamieson	archgc@sfu.ca, rossjami@sfu.ca

ACADEMIC UNIT APPROVAL

☐ A course outline / syllabus is included

Non-departmentalized faculties need not sign

Graduate Program Committee Ross W. Jamieson	**Signature**	**Date** Sept 9, 2025
Department Chair Robert J. Muir	**Signature**	**Date** Sept 9, 2025

FACULTY APPROVAL

The course form and outline must be sent by FGSC to the chairs of each FGSC (fgsc-list@sfu.ca) to check for an overlap in content

Overlap check done? ☑ YES

This approval indicates that all the necessary course content and overlap concerns have been resolved. The Faculty/Academic Unit commits to providing the necessary resources.

Faculty Graduate Studies Committee Christina Giovas	**Signature**	**Date** 16 September 2025

A library review will be conducted. If additional funds are necessary, Graduate Studies will contact the academic unit prior to SGSC.

SENATE GRADUATE STUDIES COMMITTEE APPROVAL

Senate Graduate Studies Committee Mary O'Brien	**Signature**	**Date** 15 October 2025

ADMINISTRATIVE SECTION (for Graduate Studies office only)

Library Check: _____
Course Attribute: _____
Course Attribute Value: _____
Instruction Mode: _____
Attendance Type: _____

If different from regular units:
Academic Progress Units: _____
Financial Aid Progress Units: _____

Arch 783-3: Advanced Ancient and Forensic DNA 2023

Instructor: Dr. Dongya Yang, donyang@sfu.ca
Website: www.sfu.ca/~donyang
Mailing list: arch783-all@sfu.ca

Ancient DNA (aDNA) recovered from archaeological human, animal, and plant remains hold important genetic information that can be used to address many important archaeological questions. The methodology of ancient DNA has also proven to be very useful for the analysis of recent, but degraded, forensic DNA samples in many cold or older cases.

The Course Components: This course will provide students with opportunities to learn the fundamental principles and methods of DNA and aDNA analyses. Students will also grow to appreciate the unique contributions of DNA and aDNA research to learning about the archaeological past and to assist with challenging forensic investigations in the present. Through computer lab exercises, students will gain hands-on experience working with DNA sequences, including retrieval from GenBank, sequence analysis, and data interpretation. By participating in class discussions, students will learn how to critically review ancient and forensic DNA publications and how to avoid potential misuses or overuses of DNA data in archaeological research and forensic investigations.

The student is also expected to develop a mock (or real) research proposal that uses DNA/aDNA analysis and genetic information to study an archaeological research question/topic or forensic case/scenario of interest. This proposal is conceived, developed, and finalized through the course itself as well as through brainstorming and discussion with classmates, the TA and/or the instructor.

Additional Expectations for Graduate Students: By the end of the course, graduate students are held to higher expectations than the undergraduate students enrolled in ARCH 383. In particular, graduate students will learn how to integrate ancient (and forensic) DNA analysis more efficiently and meaningfully with other lines of evidence to enhance archaeological (or forensic) investigations. This expectation will be evaluated through their research proposal.

Justification for the Cross-listing: Ancient DNA has become a routine analytical tool in archaeological investigations; however, only a few universities in North America offer a dedicated undergraduate course on this subject. As a result, most incoming graduate students from outside of SFU may not have had the opportunity to take an undergraduate course on ancient DNA. Therefore, this cross-listed graduate course (ARCH 838) will provide new graduate students with an opportunity to build their expertise

Grading 783:	Written exam	30%
	Lab report	20%
	Participation in publication critiques	10%
	Proposal development and write-up	40%
Grading 383:	Written exam	40%
	Lab report	15%
	Participation in publication critiques	10%
	Group presentation and class participation Proposal development and write-up	10% 25%

Notes:

The reconstruction of the evaluation formula would allow the graduate students to concentrate more on research-oriented assignments, but the written exam would still require a significant commitment of time and effort, be aware, and be prepared!

More specifically, the evaluation of ARCH 783 will place more weight on the lab report, the proposal development and write-up than undergraduate ARCH 383 (a one-person project vs a group project), but less weight on the written exam. The quality of the proposal is expected to be much higher in ARCH 783 than in ARCH 383. The written exam and the computer lab project will be the same for ARCH 783 and ARCH 383 although their percentage toward the final grade is slightly different.

Required texts: Elizabeth Matisoo-Smith and K. Ann Horsburgh. *DNA for Archaeologists*. Left Coast Press, 2012. ISBN-13: 978-1598746815.

Jane Moira Taupin. Introduction to Forensic DNA Evidence for Criminal Justice Professionals. CRC Press; 2014. ISBN-13: 978-1-4398-9910-6

[Note, the PDF of these two books can be downloaded via SFU Library]

One or two extra journal articles/book chapters may also be assigned weekly.

REQUIRED READINGS

- Louhelainen J, Miller D. Forensic investigation of a shawl linked to the "Jack the Ripper" murders. Journal of forensic sciences. 2020 Jan;65(1):295-303.
- Kennedy JR, Rogers L, Kaestle FA. Ancient DNA evidence for the regional trade of bear paws by Chinese diaspora communities in 19th-century western North America. Journal of Archaeological Science. 2018 Nov 1;99:135-42.

- Knipper C, Mittnik A, Massy K, Kociumaka C, Kucukkalipci I, Maus M, Wittenborn F, Metz SE, Staskiewicz A, Krause J, Stockhammer PW. Female exogamy and gene pool diversification at the transition from the Final Neolithic to the Early Bronze Age in central Europe. Proceedings of the National Academy of Sciences. 2017 Sep 19;114(38):10083-8.
- King TE, Fortes GG, Balaresque P, Thomas MG, Balding D, Delser PM, Neumann R, Parson W, Knapp M, Walsh S, Tonasso L. Identification of the remains of King Richard III. Nature Communications. 2014 Dec; 5(1):1-8.
- Prendergast ME, Sawchuk E. Boots on the ground in Africa's ancient DNA 'revolution': archaeological perspectives on ethics and best practices. Antiquity. 2018 Jun;92(363):803-15.
- Stone AC, Ozga AT. Ancient DNA in the study of ancient disease. In Ortner's identification of pathological conditions in human skeletal remains 2019 Jan 1 (pp. 183-210). Academic Press.
- Samuel G, Howard HC, Cornel M, van El C, Hall A, Forzano F, Prainsack B. A response to the forensic genetics policy initiative's report "Establishing Best Practice for Forensic DNA Databases". Forensic Science International: Genetics. 2018 Sep 1;36:e19-21.

FALL 2024 - ARCH 383 D100

ANCIENT AND FORENSIC DNA (3)

Class Number: 7508 *Delivery Method: In Person*

COURSE TIMES + LOCATION:

Sep 4 – Dec 3, 2024: Mon, 12:30–2:20 p.m.
Burnaby

Oct 15, 2024: Tue, 12:30–2:20 p.m.
Burnaby

EXAM TIMES + LOCATION:

Dec 9, 2024
Mon, 11:59–11:59 p.m.
Burnaby

INSTRUCTOR:

Dongya Yang
donyang@sfu.ca
Office: EDB 9629
Office Hours: Wednesday 2:30-3:30pm

PREREQUISITES:

Any lower division ARCH, BISC, BPK, CHEM, CRIM or HSCI course.

Description

CALENDAR DESCRIPTION:

Introduces molecular biology techniques used to analyze DNA to address archaeological questions and applications to degraded DNA samples for forensic identification of human remains and conservation of endangered species.

COURSE DETAILS:

Ancient DNA (aDNA) recovered from archaeological human, animal, and plant remains holds important genetic information that can be used to address many important archaeological questions. The methodology of ancient DNA has also proven to be very useful for the analysis of recent yet degraded forensic DNA samples in many cold or old cases.

This course consists of three main components: classroom lectures, hands-on DNA labs, and a group-work research proposal.

Classroom Lectures The weekly two-hour lecture will focus on the fundamental principles and methods of DNA and aDNA analyses and their unique contributions to archaeological research of the past and challenging forensic investigations of the present.

Hands-on DNA labs The course has been modified to include a weekly one-hour lab to give students hands-on lab experience. This lab will develop skills involving PCR set-up to amplify trace amounts of DNA to determine species ID of the DNA samples. Students will also learn the difficulties of avoiding human contamination when working on ancient human DNA or degraded forensic human DNA. Through DNA sequence analysis, students will gain experience with DNA GenBank search, DNA sequence comparison, and phylogenetic reconstruction.

Group-work Research Proposal Working in groups of 2-3, throughout the semester, students will develop a mock research proposal that uses DNA/aDNA analysis to obtain genetic information to study an archaeological question / topic or forensic /case scenario of their interest. The proposal project will be conceived, developed, and finalized through brainstorming and in-class presentations.

Grading

Written Exam	45%
Lab Report	25%
Proposal Presentation	5%
Proposal Write-up	25%

Materials

REQUIRED READING:

Elizabeth Matisoo-Smith and K. Ann Horsburgh. DNA for Archaeologists. Left Coast Press, 2012.
ISBN: 978-1598746815

Jane Moira Taupin. Introduction to Forensic DNA Evidence for Criminal Justice Professionals. CRC Press; 2014.

ISBN: 978-1-4398-9910-6

[Note: the PDF of these two books can be downloaded via SFU Library].

REQUIRED READING NOTES:

Your personalized Course Material list, including digital and physical textbooks, are available through the SFU Bookstore website by simply entering your Computing ID at: shop.sfu.ca/course-materials/my-personalized-course-materials.

DEPARTMENT UNDERGRADUATE NOTES:

Students with hidden or visible disabilities who may need class or exam accommodations, including in the context of remote learning, are advised to register with the SFU Centre for Accessible Learning (caladmin@sfu.ca or 778-782-3112) as soon as possible to ensure that they are eligible and that approved accommodations and services are implemented in a timely fashion.

Deferred grades will be given only on the basis of authenticated medical disability.

REGISTRAR NOTES:

ACADEMIC INTEGRITY: YOUR WORK, YOUR SUCCESS

SFU's Academic Integrity website http://www.sfu.ca/students/academicintegrity.html is filled with information on what is meant by academic dishonesty, where you can find resources to help with your studies and the consequences of cheating. Check out the site for more information and videos that help explain the issues in plain English.

Each student is responsible for his or her conduct as it affects the university community. Academic dishonesty, in whatever form, is ultimately destructive of the values of the university. Furthermore, it is unfair and discouraging to the majority of students who pursue their studies honestly. Scholarly integrity is required of all members of the university. http://www.sfu.ca/policies/gazette/student/s10-01.html

RELIGIOUS ACCOMMODATION

Students with a faith background who may need accommodations during the term are encouraged to assess their needs as soon as possible and review the Multifaith religious accommodations website. The page outlines ways they begin working toward an accommodation and ensure solutions can be reached in a timely fashion.

SFU FACULTY OF ENVIRONMENT

TASC 2 Building, Room 8800
8888 University Drive, Burnaby, BC.
Canada V5A 1S6
www.sfu.ca/fenv

To: Senate Graduate Studies Committee (SGSC)
From: Christina Giovas, Associate Dean Research and Graduate Studies, Faculty of Environment
Re: New Course Proposal for EVSC 808
Date: August 28, 2025

The following new course proposal is submitted for SGSC approval by the Faculty of Environment Graduate Studies Committee on behalf of the School of Environmental Science.

- EVSC 808: Environmental Science Seminar

The course will allow PhD students to enrol for the graduate seminar when they have previously taken the Master's counterpart, EVSC 608. We request this course be implemented for Summer 2026. Additional details may be found in the attached memo from EVSC Director, Karen Kohfeld.

Please include these materials on the next SGSC agenda.

Thank you for the committee's consideration.

Sincerely,

Christina Giovas
Associate Dean, Research and Graduate Studies
Faculty of Environment
P: 778 782 906 | E: fenv_adr@sfu.ca

SFU **SCHOOL OF ENVIRONMENTAL SCIENCE**

Simon Fraser University
8888 University Drive
Burnaby, BC
V5A 1S6, Canada

Reception
TASC II 8900
TEL 778.782.5613
http://www.sfu.ca/EVSC/

Director, Karen Kohfeld
TASC II 8903
TEL 778-782-7651
SES_Director @sfu.ca

MEMORANDUM

ATTENTION	Dr. Christina Giovas, Dean Pro Tem and Associate Dean, Research and Graduate Studies, Faculty of Environment	DATE	August 19, 2025
FROM	Dr. Karen Kohfeld, Director, School of Environmental Science	PAGES	1
RE:	New Course Request: EVSC 808 – Environmental Science Seminar		

Dear Christina,

The School of Environmental Science would like to request the creation of a new course (EVSC 808: Environmental Science Seminar) for our incoming PhD students. EVSC 608 does not allow repeats for this required course; if any student transfers from our MSc to our PhD or stays at SFU to complete their doctorate degree after completing their MSc degree, the GoSFU system may not allow them to retake EVSC 608. Graduate Studies has advised us that the best course of action to avoid any potential registration errors in the future is to create a new course. The Graduate Program Development Committee (GPDC) affirmed this motion on July 30, 2025. Please see the attached documents.

Regards,

Karen Kohfeld

Director & Professor
School of Environmental Science
Faculty of Environment
Simon Fraser University
Burnaby BC, Canada
Email: SES_ Director@sfu.ca
www.sfu.ca/evsc.html

Professor
Resource & Environmental Management
Faculty of Environment
Simon Fraser University
Burnaby BC, Canada
Email: karen_kohfeld@sfu.ca
www.sfu.ca/rem/copelab/

SFU GRADUATE STUDIES

NEW GRADUATE COURSE PROPOSAL

Course Subject (eg. PSYC)	Number (eg. 810)	Units (eg. 4)
EVSC	808	1

Course title (max. 100 characters): Environmental Science Seminar

Short title (for enrollment/transcript, max. 30 characters): Environmental Science Seminar

Course description for SFU Calendar (course descriptions should be brief and should never begin with phrases such as "This course will..." or "The purpose of this course is..." If the grading basis is satisfactory/unsatisfactory include this in the description. Max. 50 words)

PhD students are required to attend the seminar series and provide brief written summaries of series. Graded on a satisfactory/unsatisfactory basis.

Rationale for introduction of this course (if more space is required, add a separate page)

Students cannot take EVSC 608 as a repeat; therefore, if MSc students transfer into the PhD program or if a student enrolls in the EVSC MSc program and then the PhD program, they will not be able to take EVSC 608 again which is a mandatory course in their degree. Introducing EVSC 808 will avoid this issue. All doctoral students can now enrol in this instead of EVSC 608.

Term of initial offering (eg. Fall 2019)	Summer 2026	**Course delivery** (eg. 3 hrs/week for 13 weeks)	1 hour seminar every 2 weeks
Frequency of offerings/year	Every term	**Estimated enrollment per offering**	8

EQUIVALENT COURSES

Courses that replicates the content of this course to such an extent that students should not receive credit for both courses. Please select the one that is most relevant.

☐ **SEQUENTIAL COURSE**	☐ **ONE-WAY EQUIVALENCY**	☐ **TWO-WAY EQUIVALENCY**
[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 603)) first may not then take this course for further credit.	[is not hard coded in SIMS.] (Place relevant course(s) in the blank below (ex: STAT 603)) will be accepted in lieu of this course.	[is hard coded and enforced by SIMS.] Students with credit for (place relevant course(s) in the blank below (ex: STAT 603)) 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).

Prerequisite and/or Corequisite

None

Criminal record check required? ☐ Yes (if yes is selected, add this as prerequisite) **Additional course fees?** ☐ Yes ☑ No

Campus where course will be taught ☑ Burnaby ☐ Surrey ☐ Vancouver ☐ Great Northern Way ☐ Off campus

Course Components * ☐ Lecture ☑ Seminar ☐ Lab ☐ Capstone ☐ Practicum ☐ Online ☐ Other: _____

Grading Basis ☐ Letter grades ☑ Satisfactory/ Unsatisfactory ☐ In Progress / Complete

* See important definitions on the curriculum website.

Repeat for credit? ☐ Yes ☑ No	**Total completions allowed?** 1	**Repeat within a term?** ☐ Yes ☑ No
Required course? ☑ Yes ☐ No	**Final exam required?** ☐ Yes ☑ No	

Combined with an undergraduate course? ☐ Yes ☑ No If yes, identify which undergraduate course and the additional course requirements for graduate students. Please include a copy of the undergraduate course outline and fill out the Equivalent Courses section above.

RESOURCES

If additional resources are required to offer this course, provide information on the source(s) of those additional resources.

Faculty member(s) who will normally teach this course

Dr. Chelsea Little, Dr. Brendan Murphy, Dr. Shawn Chartrand, Dr. Ruth Joy, Dr. Jeremy Venditti, Dr. Jessica Pilarczyk

Additional faculty members, space, and/or specialized equipment required in order to offer this course

None

CONTACT PERSON

Academic Unit / Program	**Name (typically, Graduate Program Chair)**	**Email**
Environmental Science/Doctor of Philosophy	Karen Kohfeld	sesdir@sfu.ca

ACADEMIC UNIT APPROVAL

☑ A course outline / syllabus is included

Non-departmentalized faculties need not sign

Graduate Program Committee Shawn Chartrand	**Signature** Shawn M. Chartrand	**Date** July 2, 2025
Department Chair Karen Kohfeld	**Signature** Karen Kohfeld Digitally signed by Karen Kohfeld Date: 2025.07.04 14:42:51 -07'00'	**Date**

FACULTY APPROVAL

The course form and outline must be sent by FGSC to the chairs of each FGSC (fgsc-list@sfu.ca) to check for an overlap in content

Overlap check done? ☑ YES

This approval indicates that all the necessary course content and overlap concerns have been resolved. The Faculty/Academic Unit commits to providing the necessary resources.

Faculty Graduate Studies Committee Christina Giovas	**Signature**	**Date** 28 August 2025

A library review will be conducted. If additional funds are necessary, Graduate Studies will contact the academic unit prior to SGSC.

SENATE GRADUATE STUDIES COMMITTEE APPROVAL

Senate Graduate Studies Committee Mary O'Brien	**Signature**	**Date** 15 October 2025

ADMINISTRATIVE SECTION (for Graduate Studies office only)

Library Check: _____
Course Attribute: _____
Course Attribute Value: _____
Instruction Mode: _____
Attendance Type: _____

If different from regular units:
Academic Progress Units: _____
Financial Aid Progress Units: _____

Course outline – EVSC 808 Environmental Science Seminar

Calendar Objective/Description:

Course for the Environmental Science seminar series. Graduate students enrolled in the PhD program are required to attend the seminar series and provide brief written summaries of seminars

Course Details:

Course for the Environmental Science seminar series. Graduate students enrolled in the PhD program are required to attend the seminar and provide brief written summaries of the seminars. Depending on speaker availability, students might attend 5-6 seminars during the semester. Students receive satisfactory if they submit short written summaries of the seminars. This course is required.

Grading

-Satisfactory/Unsatisfactory

Pre-requisites

n/a

Textbook and readings

n/a