



RENr 401H / BIOL 290

Beringian palaeobiology / Beringia: its Pleistocene environments and palaeoecology

In Winter 2021, BIOL 290, *Beringia: Its pleistocene environments and paleoecology*, is being offered at Yukon University concurrent with the University of Alberta's RENr 401H, *Beringian palaeobiology*, as part of the Northern Environmental and Conservation Sciences, B.Sc. Program. All students registered in BIOL 290 or RENr 401H must adhere to requirements outlined in this course syllabus. University of Alberta students must also be aware of, and adhere to, the University's Code of Student Behaviour, referenced in the outline; Yukon University students must be aware of, and adhere to, Yukon University's Academic Regulations, also referenced in the outline.

INSTRUCTOR: Tyler Kuhn
OFFICE HOURS: by appointment
OFFICE LOCATION: TBD
TELEPHONE/E-MAIL: tyler@akstudios.ca
FAX: NA

CLASS DAYS & TIMES: Tuesday, 6:00 – 7:30 pm
CLASS LOCATION: Zoom (online)

COURSE DESCRIPTION:

This course presents a natural history overview of the subcontinent of Beringia—the landmass that has, at times in the past, connected eastern Siberia, Alaska and Yukon. We will cover a variety of topics ranging from the geologic formation of Beringia and the evolution of its flora and fauna to the history of human inhabitation. The objective of lectures will be to synthesize a variety of primary data and scientific theory so students

can develop an understanding of the physical, climatological, ecological and biogeographical mechanisms shaping Beringia's landscapes and ecosystems.

STUDENT LEARNING OUTCOMES AND COMPETENCIES:

Upon successful completion of this course students will be able to do the following:

- understand the geologic formation of Beringia and its place in the world
- better understand the evolution and ecology of Beringia's animals, plants, and ecosystems, including their history of extinctions and appearances
- be able to define and explain major geological, climatological, biological, and archaeological events in Beringia prehistory
- understand and critically evaluate the types of data and analyses used by paleo-scientists to reconstruct events in the past and to test paleo-hypotheses
- be able to explain the forces shaping Beringia's modern landscapes
- be able to use their knowledge of Beringia's prehistory as context to better understand and evaluate current issues facing Yukon and the north

COURSE FORMAT (3-0-0):

Lectures will be delivered online, covering approximately 3 hours of lecture material each week. This will be split between synchronous (real-time) lectures on Zoom (Tuesdays, 6-7:30pm), and asynchronous content (e.g. pre-recorded videos) posted on the course Moodle page. Asynchronous content will be posted online on Tuesday evenings. Each week's lectures will be divided into 2 class-segments related to a particular topic. The first class-segment will introduce students to the background, concepts and theories related to the week's topic. The second class-segment will consist of a discussion related to assigned course readings relevant to the week's topic.

COURSE PREREQUISITES AND/OR CO-REQUISITES:

For students taking the course as BIOL 290: YukonU BIOL 101 or NOST 201, or permission of a program advisor.

For students taking the course as RENR 401H: Registration in Yukon University/University of Alberta B.Sc. in Environmental and Conservation Sciences degree program, and successful completion of: U of A BIOL 108; or Yukon University BIOL 101 or NOST 201, or an equivalent first-year biology course; or permission of an ENCS Program Advisor.

REQUIRED TEXTBOOKS/MATERIALS:

There is no textbook for this course. Each week, students will receive digital copies of 1-2 assigned readings (papers) relevant to the following week's lecture.

COURSE WEBSITE

Course materials will be available on Yukon University's Moodle online course system. Course readings and materials will be posted weekly. Course lecture recordings will be available as well.

YUKON UNIVERSITY ACADEMIC STANDARDS AND REGULATIONS

Information on academic standing and student rights and responsibilities can be found in the current Academic Regulations that are posted on the Student Services/ Admissions & Registration web page.

Plagiarism

Plagiarism is a serious academic offence. Plagiarism occurs when a student submits work for credit that includes the words, ideas, or data of others, without citing the source from which the material is taken. Plagiarism can be the deliberate use of a whole piece of work, but more frequently it occurs when students fail to acknowledge and document sources from which they have taken material according to an accepted manuscript style (e.g., APA, CSE, MLA, etc.). Students may use sources which are public domain or licensed under Creative Commons; however, academic documentation standards must still be followed. Except with explicit permission of the instructor, resubmitting work which has previously received credit is also considered plagiarism. Students who plagiarize material for assignments will receive a mark of zero (F) on the assignment and may fail the course. Plagiarism may also result in dismissal from a program of study or the University.

UNIVERSITY OF ALBERTA ACADEMIC INTEGRITY AND CODE OF STUDENT BEHAVIOUR

Academic Integrity

The University of Alberta is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are

particularly urged to familiarize themselves with the provisions of the Code of Student Behaviour (online at www.governance.ualberta.ca) and avoid any behaviour which could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.

Code of Student Behaviour

All students at the University of Alberta are subject to the Code of Student Behaviour, as outlined at:

<http://www.governance.ualberta.ca/en/CodesofConductandResidenceCommunityStandards/CodeofStudentBehaviour.aspx> Please familiarize yourself with it and ensure that you do not participate in any inappropriate behavior as defined by the Code. Key components of the code include the following statements.

30.3.2(1) No Student shall submit the words, ideas, images or data of another person as the Student's own in any academic writing, essay, thesis, project, assignment, presentation or poster in a course or program of study.

30.3.2(2) c. No Student shall represent another's substantial editorial or compositional assistance on an assignment as the Student's own work.

PROFESSIONALISM AND CLASSROOM RULES OF ENGAGEMENT

Students are expected to attend all lectures and labs, be engaged and courteous in all course activities, and to be on time for class. Please do not use cellular phones during class. Laptops are permitted for note taking and in-class work; however, please do not use laptops in class for non-class-related activities. While in computer labs, students are expected to refrain from using the computers to engage in non-class-related activities (e.g. Facebook, etc.).

COURSE REQUIREMENTS/EVALUATION:

Class Readings & Related Assignments

Each week will be composed of a lecture class discussing a particular topic, and a discussion class of assigned readings related to the lecture topic.

Students enrolled in the course as RENR 401H:

The majority of the readings will be drawn from the primary literature, although general syntheses or review papers may also be assigned. Class readings will be chosen such that students will develop a feeling for the methods and data used in Beringian palaeobiology research. RENR 401H class readings will be chosen to allow for a deeper exploration of topics addressed in BIOL 290 assigned readings. Some papers will be a challenge to read, and rather than getting bogged down in an intense study of each paper, students are advised to do their best to read through each one to gain familiarity with the broader questions, approaches (methods), types of data, and conclusions being discussed.

For each assigned reading, students will receive a set of key questions related to the assigned reading. Students will submit typed answers to the questions at the start of the next class. Typically, this will entail 3 to 4 questions that should be answered in 1 or 2 pages (total). There will be one assignment each week.

At the beginning of the term, each RENR 401H student will be assigned one of the weekly topics. For this topic, they will present a 15-minute class presentation discussing the context for the topic, as well as linking their assigned class reading(s) to the more general review papers assigned to BIOL 290 students. Following the class presentation, the student will lead the discussion with a series of questions drawn from both the RENR 401H and BIOL 290 class readings.

ENCS students will be expected to contribute to all class discussions. As a result students enrolled in RENR 401H will also be evaluated on class participation and discussion.

Students enrolled in the course as BIOL 290:

Most of the readings will be general syntheses or review papers chosen for readability, but a few come from the primary literature, so students will develop a feeling for the methods and data used in Beringian research. Some papers will be a challenge to read, and rather than getting bogged down in an intense study of each paper, students are advised to do their best to read through each one to gain familiarity with the broader questions, approaches (methods), types of data, and conclusions being discussed.

For each assigned reading, students will receive a set of key questions related to the assigned reading. Students will submit typed answers to the questions at the start of the next class. Typically, this will entail 3 to 4 questions that should be answered in 1 or 2 pages (total). There will be one assignment each week. Assignments will be graded mostly to determine whether students are reading the papers and can extract key points from these readings. Students will be expected to provide analyses and discussions at a level consistent with topics covered during the lecture class.

Paper Critique

Students enrolled in the course as **RENr 401H only:**

Students completing the course as RENr 401H will complete a written critique of a recent paper related to Beringian palaeobiology. Additional details on this assignment will be provided in class. Students will be able to choose from a list of suitable papers, or a paper of their choosing, so long as it is approved by the instructor. The paper critique will be due on April 13th, 2021 by 11:59pm.

Exams

There is no final exam or midterm for this class.

Due Dates and Late Assignments

Students enrolled in the course as RENr 401H:

Due Date	Assignment	Time
Weekly	Class reading assignments	6:00 pm
Variable	Class Presentation and discussion lead	
April 13	Paper Critique	11:59 pm

Students enrolled in the course as BIOL 290:

Due Date	Assignment	Time
Weekly	Class reading assignments	6:00 pm

Late assignments for weekly reading assignments will not be accepted. They must be delivered electronically prior to the start of class (6:00pm, Tuesdays) or be handed in at the beginning of class. These questions will be discussed in class on the day they are due. Students are only required to complete 6 of 10 assignments.

For all other assignments, late assignment submissions will be accepted. Late submissions will be subject to a 10% penalty, if not received by the date and time specified above, unless previously discussed with the instructor, or a valid reason for the delay is provided.

Evaluation

The course grade will be determined as follows:

Students enrolled in the course as BIOL 290:

	Percent
Weekly assignments (choose 8 of 11)	80%
Class participation	20%
Total	100%

Students enrolled in the course as RENR 401H:

	Percent
Class presentation and discussion lead	15%
Class participation	5%
Weekly assignments (choose 6 of 11)	40%
Paper critique (due April 13)	40%
Total	100%

Assignment of grades

The total numerical score will be converted to a grade on Yukon University's letter grading system (for students enrolled in BIOL 290), or University of Alberta's letter grading system (for students enrolled in RENR 401H).

ELECTRONIC DEVICES:

There are no restrictions on the use of electronic devices during lectures or when completing assignments.

RECORDING OF LECTURES, LABS, ETC.:

Audio or video recording, digital or otherwise, of lectures, labs, seminars or any other teaching environment by students is allowed only with the prior written consent of the instructor or as a part of an approved accommodation plan. Student or instructor

content, digital or otherwise, created and/or used within the context of the course is to be used solely for personal study, and is not to be used or distributed for any other purpose without prior written consent from the content author(s).

Please note that some classes may be recorded using web conferencing software, and links to recordings may be posted on the class website.

YUKON FIRST NATIONS CORE COMPETENCY

Yukon University recognizes that a greater understanding and awareness of Yukon First Nations history, culture and journey towards self-determination will help to build positive relationships among all Yukon citizens. As a result, to graduate from ANY Yukon University program, you will be required to achieve core competency in knowledge of Yukon First Nations. For details, please see www.yukonu.ca/yfnccr.

ACADEMIC ACCOMMODATION

Reasonable accommodations are available for students requiring an academic accommodation to fully participate in this class. These accommodations are available for students with a documented disability, chronic condition or any other grounds specified in section 8.0 of the Yukon University Academic Regulations (available on the Yukon University website). It is the student's responsibility to seek these accommodations. If a student requires an academic accommodation, they should contact the Learning Assistance Centre (LAC): lac@yukonu.ca.

EQUIVALENCY/TRANSFERABILITY:

BIOL 290 transfers as:

UBC	Eosc 1st yr (3)	SFU	Geog 1xx (3)
UNBC	Nors 2xx (3)	UR	Non-science elec. (3)
UAF	Biol Fin	UVIC	Biol 200L (1.5)
UAS	Biol S2 Elec. (3)		

For current information on course transferability see <http://www.bctransferguide.ca>

REN R 401H may be used to fill an Approved Program Elective (APE) in the B.Sc. ENCS program, on advisor approval.

TOPIC OUTLINE

Date	Lecture Topic
January 5	Course introduction; Geologic Setting – Building Early Beringia; The Mesozoic Era
January 12	Topic 1: Evolution of the Arctic Ocean
January 19	Topic 2: Glacial Cycles and Ice Age Geography
January 26	Topic 3: Pleistocene Vegetation and Ecosystems
February 2	Topic 4: The “Mammoth Steppe”
February 9	Topic 5: Beringian Mammals #1
February 16	Klondike Paleontology
February 23	No classes – Reading Week
March 2	Topic 6: Telling Time—Beringia Style
March 9	Topic 7: Beringian Mammals #2
March 16	Topic 8: Human Colonization of the Americas
March 23	Topic 9: Humans in Beringia
March 30	Topic 10: Late-Quaternary Extinctions
April 6	Topic 11: Post-glacial Landscapes and Holocene Ecosystems
April 13	REN 401H Term paper due No class lecture