



**ARKY 415 (LEC01)
Lithic Technology
GFC Hours 3-3
Fall 2023**

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| Professor: | Dr. Elizabeth Paris | Lecture/Lab Location: | ES 859 |
| Phone: | 403-220-7765 | Days/Time: | |
| Email: | Elizabeth.paris@ucalgary.ca | Lecture: | TR 09:30 - 10:45 |
| Office: | ES 818 | Lab: | TR 11:00 - 12:15 |
| Office Hours: | By appointment | | |
| Teaching Assistant: | Kyra Matechuk | | |
| TA Email: | kyra.matechuk@ucalgary.ca | | |

Prerequisite(s): ARKY 201.

COURSE DESCRIPTION

This course will introduce you to the analysis of stone (lithic) tool form, manufacture, and use as applied to reconstruction of past human lifeways. Topics covered include: methods of shaping stone into tools; reconstruction of the lithic reduction process and stages from discarded debitage; lithic fracture mechanics; identification of lithic material types and sourcing to specific quarries; the meaning of stone tool morphology; tool typology; lithic usewear analysis; and the integrative use of these sources of information to reconstruct aspects of tool use, activity areas, site type, settlement patterns, social group, cultural change through space and time, and trade.

LEARNING OUTCOMES

The Department of Anthropology and Archaeology is committed to student knowledge and skill development.

Upon completion of this course, students should be able to:

- Grasp the historical development of the field of stone tool analysis in archaeology, including theoretical approaches and methods used in archaeology today.
- Apply archaeological methods, techniques and concepts through lab exercises.

- Understand the sources of analogy and principles of experimentation by which researchers test hypotheses regarding ancient technologies.
- Practice hands-on learning and develop basic skills in flintknapping and use-wear analysis.

READINGS AND TEXTBOOKS

- Brian Kooyman. 2000. Understanding Stone Tools and Archaeological Sites. University of Calgary Press and University of New Mexico Press.
- John C. Whittaker. 1994. Flintknapping: Making and Understanding Stone Tools. University of Texas Press, Austin.
- Readings from the relevant literature and digital videos, as indicated in the Course Schedule (see below). Links are provided on D2L in modules that correspond to the week in which they are due.
- All readings and videos are required, unless otherwise indicated.

REQUIRED TECHNOLOGY and EQUIPMENT

In order to successfully engage in online assignments for this course, please make sure that you have reliable access to the following technology:

- A computer with a supported operating system, as well as the latest security and malware updates
- A current and updated web browser
- Word processing, spreadsheet software, and presentation software (Instruction will be given using MS Word, MS Excel, and MS Powerpoint; Google Docs, Google Sheets, and Google Slides will also be accepted)
- D2L

SUPPLEMENTARY FEES

None

COURSE REQUIREMENTS AND ASSESSMENT

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| 1. | Participation | 10% | See schedule |
| 2. | Discussion leadership | 10% | See schedule |
| 3. | Lab exercises | 20% | See schedule |
| 4. | Lab quizzes | 20% | Sept 19, Sept 21, Sept 28, Oct 5 |
| 5. | Lithic Analysis Final Project | 40% | Portions due Nov 23 and Dec 6 |

NOTE: There is no registrar-scheduled final examination for this course. Students do not need to pass each individual course component in order to pass the course as a whole.

1. PARTICIPATION (10%)

This is a lab class, and regular attendance for both the lecture and lab portions is important and required. Students will be graded for their participation in in-class discussions and activities.

- Grading for “participation” assumes that you come to class regularly and on time, ready to talk about the required reading/assignments during the lecture portion, and to participate in the lab activities. Your in-class comments during discussion should demonstrate to me that you have done the readings and thought seriously about them. You must also follow the rules of course etiquette (see below).
- Your participation grade will also include your participation in lab activities. This includes full participation in activity-based labs, and meeting progress goals for the Final Project. You are expected to remain for the entire lab period and make progress on your Final Project; participation points will be deducted if you do not.
- Participation grades for each course meeting will be assessed out of 5 points, which will include participation in lecture discussions and lab activities. You will receive a separate grade for submitted practice labs.
- If you find you are having difficulties in class, please come and see myself or the TA early in the semester to work on them. It will be hard to turn things around if you wait until the last two weeks of class to seek help.

2. DISCUSSION LEADERSHIP (10%)

During the second week of class, you will sign up for discussion leader project dates, normally in groups of four (depending on enrollment). You will work together to create a 25-minute presentation on a single topic related to lithic analysis, to be agreed upon by the group, and approved by the professor. Each student will select a peer-reviewed article and incorporate it into the presentation; all of the articles need to be uploaded to a D2L folder by the day of the presentation (in the form of a stable URL through the library or other open access site). Students should divide the spoken portion of the presentation evenly between them, and also work collectively to create the Powerpoint. Students will be graded both on the appropriateness of their own article for the topic, and the success of the in-class presentation as a whole.

Students are responsible for communicating with their group in a timely, responsible and collegial manner, and contributing equitably to the workload. If these obligations are not fulfilled, the professor reserves the right to request documentation from some or all group members as relevant, and may remove one or more individuals from the group, which may involve grade penalties.

3. LAB EXERCISES (20%)

There will be scheduled Lab Exercises throughout the course. These are a very important course component, as they will provide hands-on experience with course concepts. Some exercises will involve practical exercises using type collections; others will involve hands-on flintknapping and other experimental methods. In most cases, there will be a worksheet to fill out and turn in at the end of class; in some cases, there will be additional portions of the exercise to complete at home and turn in on D2L, usually by the beginning of the following course meeting. Please see the course schedule below. The lab exercises may vary as to the number of marks they are worth. The average scores for your “boxes”

for your Final Project will represent 5%, while the other lab exercises will constitute the remaining 15%. In total, Lab Exercises will represent 20% of your final course grade. Lab Exercises are posted on the Course Schedule.

You need to make sure to dress appropriately for this class. Flintknapping days and use-wear analysis days will require long pants and close-toed shoes. You will also be required to wear protective eyewear and gloves; you may wish to wear a labcoat to protect your clothing during certain lab activities. Protective eyewear and kneepads will be provided during flintknapping. You will be required to purchase your own protective leather gloves to wear during flintknapping, as student hand size varies significantly. We have only a few lab coats available to be borrowed on a first-come, first-served basis, so please supply your own lab coat if you intend to wear one.

4. LAB QUIZZES (20%)

There will be four lab quizzes in the course. Please see the course schedule below for the quiz dates. Quizzes will take place first thing during the lecture portion of the class. The quizzes will require you to apply the knowledge that you have learned from previous lab exercises to a set of unlabeled specimens, in bell-ringer format. Each quiz will be worth 5% of your final course grade, for a total of 20% of the final course grade. Quiz dates are posted on the Course Schedule.

5. LITHIC ANALYSIS FINAL PROJECT (40%)

The final project in this course will simulate the type of investigation that you would be expected to perform as a lithic analysis specialist on a professional research project, whether in academia or the public sector. For this project, you will analyze an actual archaeological sample of approximately 300 specimens. You must hand in a research report that contains a full analysis of your sample, using the techniques that have been taught throughout the class.

A separate Lithic Analysis Final Project Description will be given to you with the specifications for the assignment. Make sure to follow the directions very carefully in order to receive credit.

Please note that you will receive some class time to complete the projects, but you should also plan to spend extra time outside of class to complete your analysis. Access to the prep room will be granted conditional on continuing appropriate usage; any damage to specimens or equipment must be reported immediately or this access may be revoked for individuals or for the class as a whole. Access to comparative collections may be arranged during professor/TA office hours.

Removing any lithic specimens from laboratory spaces is not permitted for any reason. This includes materials assigned for projects and comparative collections. Removing course materials, knowingly or negligently damaging collections and/or university equipment will be reported to the university as misconduct. At the professor's discretion, the misconduct may result in failure of the assignment and/or the course.

Students are responsible for turning in original work for their assignment, for knowing and following university standards for academic integrity, and for avoiding academic

misconduct and plagiarism in their assignments (see below). ChatGPT and other AI-based writing aids are strictly prohibited for this assignment, and use of these aids will constitute academic misconduct in this course.

MAKEUP POLICY

Assignments may only be deferred in the case of serious illness or medical emergency, religious observance, or domestic affliction. Students may be asked to provide supporting documentation for an exemption/special request. This may include, but is not limited to, a prolonged absence from a course where participation is required, a missed course assessment, a deferred examination, or an appeal. Students are encouraged to submit documentation that will support their situation. Supporting documentation may be dependent on the reason noted in their personal statement/explanation provided to explain their situation. This could be medical certificate/documentation, references, police reports, invitation letter, or a statutory declaration, etc. The decision to provide supporting documentation that best suits the situation is at the discretion of the student. Students cannot be required to provide specific supporting documentation, such as a medical note.

Falsification of any supporting documentation will be taken very seriously and may result in disciplinary action through the Academic Discipline regulations or the Student Non-Academic Misconduct policy.

If you fall ill with COVID19, RSV, or another serious contagious illness, please follow all university and AHS guidelines with regard to isolation and testing recommendations: <https://www.alberta.ca/isolation.aspx>. Please do not attend in-person classes until your recommended isolation period is complete, and follow any masking recommendations. Please contact Dr. Paris by email within 24 hours to report the situation. Deferred exams/assignments, make-up activities and/or grade redistribution will be considered on a case-by-case basis.

Should the need for a deferral arise, students are responsible for familiarizing themselves with regulations under the Deferral of Term Work section of the university calendar.

Participation: Participation in lecture discussions and lab activities will be assessed on a daily basis. Each student is allowed one “sick day” emergency absence, documented by emailing the professor as soon as possible. To be officially excused from any additional course meetings, emergency circumstances will need to be confirmed with the professor through supporting documentation. There are 25 total course meetings, meaning that your attendance will be calculated as a specific proportion of 24 meetings. Two late arrivals (i.e., walking into class after course activities have begun) will count as one absence when calculating participation. Where students have excused absences with documentation, the grade will be calculated as a proportion from the course meetings attended.

Labs and Quizzes: Lab exercises and quizzes may only be deferred in the case of serious illness or medical emergency, religious observance, or domestic affliction. Students who miss a lab or quiz have up to 48 hours to contact the professor to ask for a makeup test/exam. Students who do not contact the professor to schedule a makeup lab or quiz

within this 48-hour period forfeit the right to a makeup assignment, and will receive a mark of zero on the assignment. Makeup quizzes may differ in format and/or content from the regularly scheduled quiz.

For more information on deferred exams, see:

<https://www.ucalgary.ca/registrar/exams/deferred-final-exams>.

Rescheduling of labs and quizzes is extremely difficult due to their involved nature. Students will need to be flexible and work with us for any attempts to reschedule. If a lab or quiz cannot be rescheduled within a two-week period, the professor reserves the right to transfer the weight of the missed lab to other Lab Exercises, or the weight of the Lab Quiz to the other Lab Quizzes.

Discussion Leadership: There are limited opportunities to schedule a missed discussion leader session. It is thus important that you honor your commitment. Opportunities to re-schedule presentations are limited. Normally, a student with an emergency situation will be required to join another group whose presentation is scheduled later in the semester.

Final Projects: As it is possible to turn in written assignments prior to the due date, foreseen schedule conflicts resulting from university athletic competitions, religious observances, etc. must be arranged individually with the professor in advance. Unforeseen emergency or situations should be reported to the professor as soon as possible, and any alternative arrangements will be based on individual circumstances, and will require documentation (see above). If the situation does not meet the criteria for medical/emergency circumstances, late submissions will be assessed a 5% penalty per day.

Reappraisal of Graded Term Work: <http://www.ucalgary.ca/pubs/calendar/current/i-2.html>

Reappraisal of Final Grade: <http://www.ucalgary.ca/pubs/calendar/current/i-3.html>

Department of Anthropology and Archaeology Grading Scheme:

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| A+ 95 – 100% | B+ 80 – 84.9% | C+ 67 – 70.9% | D+ 55 – 58.9% |
| A 90 – 94.9% | B 75 – 79.9% | C 63 – 66.9% | D 50 – 54.9% |
| A- 85 – 89.9% | B- 71 – 74.9% | C- 59 – 62.9% | F < 50% |

No 'make up' work is available in this class. Extra credit opportunities are not guaranteed, and in the case that they are made available, they will be announced in class to all students present. You do not need to pass each course component to earn a passing grade in the class.

Land Acknowledgement

The University of Calgary, located in the heart of Southern Alberta, both acknowledges and pays tribute to the traditional territories of the peoples of Treaty 7, which include the Blackfoot Confederacy (comprised of the Siksika, the Piikani, and the Kainai First Nations), the Tsuut'ina First Nation, and the Stoney Nakoda (including Chiniki, Bearspaw, and Goodstoney First Nations). The City of Calgary is also home to the Métis Nation of Alberta Region 3.

Acknowledgment and Respect for Diversity

The Department of Anthropology and Archaeology views diversity of identity as a strength and resource. Your experiences and different perspectives are encouraged and add to a rich learning environment that fosters critical thought through respectful discussion and inclusion.

COURSE POLICIES

LAB RULES

- Lithic specimens may not be removed from the labs and prep rooms in which they are stored.
- Continuing use of the prep room (ES 853) is conditional on the rules being followed precisely by all members of the class. Failure to comply with these rules will be treated as misconduct and may result in prep room privileges being removed. In case of extreme breach of these rules by multiple persons, entire class privileges may be removed.
- Food is not permitted in lab classrooms or prep rooms, because it can leave damaging residues on artifacts and analysis surfaces. This is a long seminar with a substantial lab component, so plan accordingly. If you anticipate being hungry, please eat before coming to class. You may step out to the 8th floor carrel area for a snack during the short break. In either case, you need to wash your hands with soap after eating to remove food residues before handling specimens.
- You may bring only water, tea, or coffee in a non-spill container (NOT flimsy disposable to-go cups with ill-fitting plastic lids). Please keep your drink stowed while you handle specimens.
- Please note that the prep room may be shared by multiple classes. You may not use the prep room if it is reserved for other courses—this will be communicated by the professor. The prep room must be kept clean and organized at all times. Equipment must be treated carefully and professionally.
- Specimens must be treated with care and respect, with every effort made to avoid damage. Any damage that does occur must be reported to the professor immediately.
- Only students currently enrolled in the course are permitted in the prep room.
- The prep room should remain a space where all can concentrate on work. Please refrain from loud discussions, and take any phone calls in the 8th floor carrel space.
- This class includes lab activities that have mild safety risks, including flintknapping and use-wear analysis. By remaining in the class, you agree to promptly follow all safety instructions from the professor and teaching assistant. Unsafe behavior will not be tolerated, and may result in your removal from the class.
- Students are required to remain until the end of the lab period to assist with clean-up activities following labs, and to dispose of all materials in a safe manner, as directed by the professor and TA.

CLASSROOM ETIQUETTE

- Please make this class a scheduling priority. It is important to arrive on time. Please only leave class before the end of the period if there is an emergency, in which case, please notify the professor as soon as possible. We will schedule a short break during the lab, normally corresponding to 10:45 to 11:00, but if you need to use the restroom or grab a drink of water, please do so quietly and discretely. However, you may not leave the room during a scheduled Lab quiz, for academic honesty reasons.
- Treat everyone in the class as a colleague—show respect to both your fellow students and myself, even if you strongly disagree with someone's opinion. Be friendly, courteous and kind during discussions. Do not talk over or interrupt the professor or other students.
- Silence and stow your phones, and do not use them during class. They are distracting to everyone.
- Only use laptops and tablets for note-taking purposes. Using them for other activities is highly distracting. If your laptop or tablet is distracting the professor or your fellow students, you will be asked to place it on the podium for the remainder of the class period, and you will lose participation points for that day.
- You may not make photo, video and audio recordings of lectures and review sessions without the explicit consent of the professor, nor transfer them to another student, whether or not that student is enrolled in the course. Please see the statement on Professor Intellectual Property below.

The University Calendar includes a statement on the principles of conduct expected of all members of the university community (including students, faculty, administrators, any category of staff, practicum supervisors, and volunteers), whether on or off university property. This statement applies in all situations where members of the university community are acting in their university capacities. All members of the university community have a responsibility to familiarize themselves with the principles of conduct statement, which is available at: www.ucalgary.ca/pubs/calendar/current/

UNIVERSITY POLICIES

ACADEMIC ACCOMMODATIONS

Students seeking an accommodation based on disability or medical concerns should contact Student Accessibility Services; SAS will process the request and issue letters of accommodation to professors. For additional information on support services and accommodations for students with disabilities, visit <https://live-ucalgary.ucalgary.ca/student-services/access>. Students who require an accommodation in relation to their coursework based on a protected ground other than disability should communicate this need in writing to their Professor or the Department Head. The full policy on Student Accommodations is available at <https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Student-Accommodation-Policy.pdf>.

ACADEMIC INTEGRITY POLICY

Academic integrity is the foundation of the development and acquisition of knowledge and is based on values of honesty, trust, responsibility, and respect. We expect members of our community to act with integrity. The University Calendar includes a statement on the principles of conduct expected of all members of the university community (including students, faculty, administrators, any category of staff, practicum supervisors, and volunteers), whether on or off

university property. This statement applies in all situations where members of the university community are acting in their university capacities. All members of the university community have a responsibility to familiarize themselves with the principles of conduct statement, which is available at: www.ucalgary.ca/pubs/calendar/current/k.html.

ACADEMIC MISCONDUCT

The University of Calgary 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.

Academic dishonesty is not an acceptable activity at the University of Calgary, and students are **strongly advised** to read the Student Misconduct section in the University Calendar at: www.ucalgary.ca/pubs/calendar/current/k-3.html. Often, students are unaware of what constitutes academic dishonesty or plagiarism. The most common are (1) presenting another student's work as your own, (2) presenting an author's work or ideas as your own without adequate citation, and (3) using work completed for another course. Such activities will not be tolerated in this course, and students suspected of academic misconduct will be dealt with according to the procedures outlined in the calendar at:

<https://www.ucalgary.ca/legal-services/university-policies-procedures/student-academic-misconduct-procedure>

For students wishing to know more about what constitutes plagiarism and how to properly cite the work of others, the Department of Geography recommends that they attend Academic Integrity workshops offered through the Student Success Centre:

<https://www.ucalgary.ca/student-services/student-success/learning/academic-integrity>

PROFESSOR INTELLECTUAL PROPERTY

Course materials created by professor(s) (including course outlines, presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the professor(s). These materials may NOT be reproduced, redistributed or copied without the explicit consent of the professor. The posting of course materials to third party websites such as note-sharing sites without permission is prohibited. Sharing of extracts of these course materials with other students enrolled in the course at the same time may be allowed under fair dealing. Information on Professor Intellectual Property can be found at:

<https://www.ucalgary.ca/legal-services/university-policies-procedures/intellectual-property-policy>

FREEDOM OF INFORMATION AND PROTECTION OF PRIVACY ACT

Student information will be collected in accordance with typical (or usual) classroom practice. Students' assignments will be accessible only by the authorized course faculty. Private information related to the individual student is treated with the utmost regard by the faculty at the University of Calgary.

COPYRIGHT LEGISLATION

All students are required to read the University of Calgary policy on Acceptable Use of Material Protected by Copyright (<https://ucalgary.ca/legal-services/university-policies-procedures/acceptable-use-material-protected-copyright-policy>) and requirements of the copyright act (<https://laws-lois.justice.gc.ca/eng/acts/C-42/index.html>) to ensure they are aware of the consequences of unauthorized sharing of course materials (including professor notes, electronic versions of textbooks, etc.). Students who use material protected by copyright in violation of this policy may be disciplined under the Non-Academic Misconduct Policy.

SUPPORTS FOR STUDENT LEARNING, SUCCESS, AND SAFETY

Please visit the Registrar's website at:

<https://www.ucalgary.ca/registrar/registration/course-outlines> for additional important information on the following:

- Wellness and Mental Health Resources
- Student Success Centre
- Student Ombuds Office
- Student Union (SU) Information
- Graduate Students' Association (GSA) Information
- Emergency Evacuation/Assembly Points
- Safewalk

TENTATIVE CLASS SCHEDULE

Students should do all readings and assignments by the date of the course meeting for which they are assigned.

**Note that the topics and readings are subject to change at any time at the professor's discretion.

| Week | DUE DATE | TOPICS AND READINGS |
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| Week 1 | T Sep 5 | Topic: Introduction to the course Lecture: Introduction to the course Lab: Film: Flintknapping by Bruce Bradley |
| | R Sep 7 | Topic: Physics and Fracture Mechanics I Read: Kooyman Chapters 1 and 2 Lecture: Fracture Mechanics and Flake Features Lab: Study Collection 1: Flake Features |
| Week 2 | T Sep 12 | Topic: Physics and Fracture Mechanics II Read: Whittaker Chapter 6 pp. 85-116 Lecture: Manufacturing Techniques |

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| | | Lab: Exercise 1: Flake Features |
| | R Sep 14 | Topic: Raw Materials, Quarries, and Sources I Read: Kooyman Chapter 3, Whittaker Chapter 4 Lecture: Raw Materials, Quarries, and Sources Lab: Study Collection 2: Alberta Raw Materials |
| Week 3 | T Sep 19 | QUIZ 1: Fracture Mechanics and Flake Features Topic: Raw Materials, Quarries, and Sources II Lecture: Sourcing, Compositional analysis, X-ray Fluorescence Read: Kooyman Chapter 4, Braswell et al. 2000 Optional: Kristensen et al. 2016 Lab: Exercise 2: Alberta Raw Materials |
| | R Sep 21 | QUIZ 2: Raw Materials and Sources Topic: Reduction Stages Read: Kooyman Chapter 5 Sections 5.3 to 5.6 Lecture: Reduction Stages Lab: Study Collection 3: Reduction Stages |
| Week 4 | T Sep 26 | Topic: Conceptual approaches to Lithic Analysis Read: Kooyman Chapter 5 Sections 5.1 and 5.2, Bleed 2001 Lecture: Conceptual approaches to Lithic Analysis Lab: Exercise 3: Reduction Stages |
| | R Sep 28 | QUIZ 3: Reduction stages Topic: Chipped stone tools Read: Kooyman Chapters 6 and 8, Whittaker Chapter 3 Optional: Driver 1993 Lecture: Chipped stone tools Lab: Study Collection 4: Formal Tools |
| Week 5 | T Oct 3 | Topic: Groundstone Tools Read: Adams 2013 Chapters 1-2 Review: Kooyman Chapter 5 pp. 64-65 Optional: Kovacevich and Callaghan 2018 Lecture: Groundstone Tools Lab: Exercise 4: Tool types |
| | R Oct 5 | QUIZ 4: Tool types Topic: Final Project overview, Drawing and Photographing Lithics Read: Porter 2013, 2014 Lecture: Constructing your project database Lecture: Drawing and Photographing Lithics Lab: Exercise 5: Drawing and Photographing Lithics |
| Week 6 | T Oct 10 | Topic: Mesoamerican prismatic blade technology Read: Clark and Bryant 1997, Clark 1982 Optional: Sheets 1975 Lecture: Mesoamerican prismatic blade technology Lab: Exercise 6: Flintknapping Day 1 (Hard-hammer) Read: Whittaker Chapters 5-6 |

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| | R Oct 12 | Topic: Sources of Analogy in Lithic Analysis I Read: Kooyman Chapter 7, Whittaker Chapter 3, Nations and Clark 1983 Optional: Clark 1985 Lab: Exercise 7: Flintknapping Day 2 (Soft-hammer) Read: Whittaker Chapter 6-8 |
| Week 7 | T Oct 17 | Topic: Sources of Analogy in Lithic Analysis II Read: Hitchcock and Bleed 1997, Nations and Clark 1983 Optional: Clark 1985 Lab: Exercise 8: Flintknapping Day 3 (Pressure) |
| | R Oct 19 | Topic: Usewear and Tool Function Read: Kooyman Chapter 11, Odell 1980, Lewenstein 1991 Lab: Exercise 9: Flintknapping Day 4 (Blades, fluting, notching) |
| Week 8 | T Oct 24 | Topic: Usewear Replication Read: Bamforth 1988, McKillop and Aoyama 2018 Review: Kooyman Chapter 11, Odell 1980, Lewenstein 1991 Lab: Exercise 10: Usewear Replication (3 hour lab exercise) |
| | R Oct 26 | Lab Exercise 6: Usewear Microscopy Read: Stemp et al. 2015 Lab: Exercise 11: Usewear Microscopy (3 hour lab exercise) |
| Week 9 | T Oct 31 | Topic: Stone tools and human origins Read: Beyene et al. 2012 Optional: Shea 2007 Lecture: Student Presentations Day 1 Lab: Project Day 1 |
| | R Nov 2 | Topic: Stone tools and the peopling of the Americas Read: Storey et al. 2019 Optional: Crassard et al. 2020 Lecture: Student Presentations Day 2 Lab: Project Day 2 |
| Week 10 | T Nov 7 | Topic: Projectile Technology: Design, Durability and Reshaping Read: Hurst Thomas 1978, Flenniken and Raymond 1986, Hurst Thomas 1986 Lecture: Student Presentations Day 3 Lab: Project Day 3 |
| | R Nov 9 | Topic: Workshops vs. Activity Areas vs. Middens Read: Shafer and Hester 1991 Optional: Moholy-Nagy 1997, Hayden and Cannon 1983, Shafer and Hester 1983; Mallory 1986, Shafer and Hester 1992 Lecture: Student Presentations Day 4 Lab: Project Day 4 |
| Week 11 | T Nov 14 | READING WEEK |
| | R Nov 16 | READING WEEK |
| Week 12 | T Nov 21 | Topic: Exchange and Inequality Read: Aoyama 1994, Springer et al. 2018 Optional: Jones et al. 2003 Lecture: From Database to Final Paper |

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| | | Student Presentations Day 5 Lab: Project Day 5 |
| | R Nov 23 | Lab: Project Day 6 Lithic Database DUE on D2L at 11:59 pm |
| Week 13 | T Nov 28 | Topic: Residues on Stone Tools Read: Kooyman et al. 2001, Fedyniak and Giering 2016 Review: Kooyman Chapter 11 Lecture: Student Presentations Day 6 Lab: Project Day 7 |
| | R Nov 30 | Topic: Lithics in Religion and Ritual Read: Stemp and Awe 2014, Sievert 1994 Lecture: Student Presentations Day 7 Lab: Project Day 8 |
| Week 14 | T Dec 5 | Final Thoughts Topic: Lithic “Eccentrics” and unique shapes Read: Ibanez et al. 2020 Lecture: Student Presentations Day 8 Lab: Project Day 9 |
| | W, Dec. 6 | Lithic Project DUE on D2L at 11:59 pm |

IMPORTANT DATES

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| M Sept 4 | Labour Day, No Classes |
| T Sept 5 | Start of Classes |
| R Sept 14 | Last day to drop a class without a financial penalty |
| F Sept 15 | Last day to add or swap a course |
| F Sept 22 | Fee payment deadline for Fall Term full and half courses. |
| S Sept 30 | National Truth and Reconciliation Day |
| M Oct 9 | Thanksgiving Day, No Classes. |
| M Nov 13 | Remembrance Day Observance |
| Nov 12-18 | Reading Break. No classes. |
| W Dec 6 | Fall Term Lectures End. Last day to withdraw with permission from Fall Term half courses. |
| Dec 9-20 | Fall Final Exam Period. |
| Dec 25-31 | Holiday Observance, University Closed. |

<https://www.ucalgary.ca/pubs/calendar/current/academic-schedule.html#fall2017>