

DEPARTMENT OF ANTHROPOLOGY AND ARCHAEOLOGY
ARKY 531: Remote Sensing for Archaeologists
Winter 2022, Tuesdays and Thursdays 12:30-1:45
GFC Hours (3-0)

Professor Kathryn Reese-Taylor
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Office hours: Tuesdays 2:00-3:00 PM

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Course description:

The seminar course is designed to provide students with a background in remote sensing applications used in archaeological research.

Required readings: Links to articles and chapters will be posted on D2L

Recommended textbook: (Free) ***Fundamentals of Remote Sensing (CCRS- Tutorial), 258 pp.*
https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/earthsciences/pdf/resource/tutor/fundam/pdf/fundamentals_e.pdf

Course learning outcomes:

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

- Demonstrate an understanding of the basic concepts, terminology, methods, theoretical perspectives, and issues in remote sensing
- Demonstrate knowledge of the contexts in which remote sensing is used in archaeological investigations.
- Think holistically, comparatively, and with cultural sensitivity.
- Use appropriate analytical methods to understand historic indigenous cultures.

Statement of class and online etiquette

This class will foster a tolerant and safe learning environment. All comments must be respectful.

Required learning technology

To successfully engage in their learning experiences at the University of Calgary, students taking are required to have reliable access to the following technology.

- A computer with an internet connection
- A current web browser
- Word processing software

Course grading:

- Participation in class discussion 10%
- Leading article discussions 20%
- Three critiques 30%
- Presentation 15%
- Research Paper 25%

Participation in class discussion 10%):

Meetings of the seminar will be devoted to discussion of selected topics. We will meet and discuss between three articles each class, when no lecture or presentation is scheduled. It is expected that you will accept the professional responsibility to carefully read the materials and participate actively in the discussion.

Please submit a discussion question covering the readings by 8:30 am on the morning of each class in which there will be a discussion. I will set up a dropbox folder for these submissions. I will randomly select two questions each class period to assist with our discussion. This is an important part of your participation grade. Failure to submit a question will result in an automatic deduction of 25% from your class participation grade on that day.

Leading class discussion (20%):

Working in teams of two, members of the seminar will be responsible leading a discussion on the readings twice during the semester. I will be assigning the teams randomly on the first day of classes. Team membership will change for each presentation. The topics covered will be selected from the list of topics to be provided.

Leading a discussion requires you to do the following:

1. *Your team will select two articles for the class* (due seven days prior to the class) I will select one additional reading. Your article selection should be to me at least seven days prior to the class so that I can select my articles to complement it and provide timely links to your classmates.
2. *Formulate questions for discussion:* I recommend that the team formulate at least three questions. You may wish to ask provocative questions to stimulate discussion. While questions asking for a description of the studies in question can help to ensure comprehension, they do not often generate discussion. In addition, two discussion questions from the class will be provided to the team members before class.
4. *Present the readings in class:* Each presentation should be 20 minutes in length. Each team member must talk during the presentation. All articles must be incorporated into a well-organized, cohesive presentation that addresses the main issues within the topic. Avoid covering the material we will discuss as a class; that is, don't answer the questions that you have been formulated to stimulate class discussion.
5. *Facilitate discussion:* This is often the most challenging aspect as it requires you to think on your feet, asking questions to stimulate critical evaluation of the article. You might ask for alternative explanations of observed outcomes, what we can learn from the author(s) research methods, and how we might improve upon the study. When thinking about questions for step 2 above, it is a good idea to keep a few tucked away to stimulate discussion when necessary.

We will divide the class into two discussion groups for the initial discussion (35 minutes). Each team member will lead one of the discussion groups. We will come back together for a general class discussion during the last 20 minutes of class.

Evaluation of presentation/discussion leadership will be based on the following:

- the appropriateness of the articles for the topic
- content of the presentation
- effectiveness in conveying information during the talk
- quality of discussion questions

Critiques (30%):

Three times during the semester you are required to submit a critique of the readings covered during one class. You may choose the day. This critique should highlight the common thread among the articles. It should also note the strength or weakness of the data presented, as well as the arguments and the conclusions reached. These summaries should be approximately 1000 words in length. They are due one week after the topic has been completed to give students the benefit of the class discussion. Information on how to write a critique and a grading rubric will be posted on D2L.

Presentation of research paper (15%):

The final presentation will cover your research paper and should be 20 minutes in length with an additional 5 minutes for questions. A guideline for presentations and a grading rubric will be posted on D2L.

Final research paper, due the last day of classes (25%):

Your final paper should be approximately 15-18 pages in length and address the same topic as your presentation. Your paper is due on the last day of class. If the paper is submitted after the deadline, 5% of the grade will be subtracted for each subsequent day.

Your paper should present a strong thesis statement. This is a question or a problem that you intend to address in your paper. Your paper should be thoroughly researched, well organized, and well written. Your argument should be supported with points from the literature and your conclusions should be based on the data you present in your paper. Detailed paper guidelines and a grading rubric will be posted on D2L.

If you have never written a research paper like this before, please make an appointment to see me or go to the writing center in Mac Hall for help.

It is not essential to pass all components to pass the course as whole.

There is no final examination for this course.

Missed or late assignments:

Official excused absences must be reported to the instructor within 24 hours. Please see the university policy regarding documentation of absences at the link below.

<https://www.ucalgary.ca/pubs/calendar/current/m-1.html>

Students with official excused absences will be given an opportunity to reschedule their discussion leadership when possible. If rescheduling is not possible, the students may submit an additional written critique.

Research papers and critiques may only be turned in late with an official excuse as per university policy. 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. Alternative arrangements will be based on individual circumstances.

A penalty of 5% per day will be imposed on late papers and critiques, unless prior arrangements have been made.

Grading scale:

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

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>

SUPPLEMENTAL INFORMATION:**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 instructors. 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 Instructor or the Department Head. The full policy on Student Accommodations is available at <https://www.ucalgary.ca/legal-services/university-policies-procedures/accommodation-students-disabilities-procedure>.

Academic misconduct

“Academic misconduct” includes such things as cheating, falsification, plagiarism, unauthorized assistance, and failure to comply with exam regulations or an Instructor’s expectations regarding conduct required of Students completing academic assessments. Students who participate in, or encourage the commission of, Academic Misconduct will be subject to disciplinary action which could include Probation, Suspension, or Expulsion from the University. For information on academic misconduct and its consequences, please see the University of Calgary Calendar at <https://www.ucalgary.ca/pubs/calendar/current/k-3.html>

Further support on academic integrity is available at: <https://ucalgary.ca/student-services/student-success/learning/academic-integrity>

Instructor 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.

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 instructor 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.

Support and resources

Please visit the Registrar's website at: <https://www.ucalgary.ca/registrar/registration/course-outlines> for additional important information on the following:

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

<i>Date</i>	<i>Lecture and reading schedule</i>	<i>Assignments</i>
<i>Jan 11</i>	Introduction to class syllabus and readings	
<i>Jan 13</i>	Lecture 1- History of remote sensing in archaeology	
<i>Jan 18</i>	Lecture 2-Fundamentals of remote sensing, data collection, and technology	
<i>Jan 20</i>	Reading 1	
<i>Jan 25</i>	Reading 2	
<i>Jan 27</i>	Reading 3	
<i>Feb 1</i>	Reading 4	
<i>Feb 3</i>	Lecture 3-Processing techniques and imagery analysis	
<i>Feb 8</i>	Reading 5	
<i>Feb 10</i>	Reading 6	
<i>Feb 15</i>	Reading 7	
<i>Feb 17</i>	Reading 8	
<i>Feb 20-26</i>	Reading week, no classes	
<i>Mar 1</i>	Lecture 4-Interpretations, landscape approaches, and case studies	
<i>Mar 3</i>	Reading 9	
<i>Mar 8</i>	Reading 10	
<i>Mar 10</i>	Reading 11	
<i>Mar 15</i>	Reading 12	
<i>Mar 17</i>	Lecture 5-Decolonizing remote sensing	
<i>Mar 22</i>	Reading 13 conservation and heritage management	
<i>Mar 24</i>	Reading 14 ethics	
<i>Mar 29</i>	Reading 15 access and control of data	
<i>Mar 31</i>	Presentations (4)	
<i>Apr 5</i>	Presentations (4)	
<i>Apr 7</i>	Presentations (4)	
<i>Apr 12</i>	Presentations (3)	