Course Syllabus

GEOGRAHY 1780: Aerial Mapping of Earth (PS)

Instructor: R. Adam Dastrup, Associate Professor and Geosciences Coordinator
Contact Information: Canvas Learning Management System
Geosciences Department Website

REQUIRED MATERIAL
Textbook: Remote Sensing of Earth, by R. Adam Dastrup
Making Spatial Decisions Using GIS and Remote Sensing, by Kathryn Keranen and Robert Kolvoord
Supplemental website: SLCC Student ePortfolio, Canvas, and All Access

COURSE DESCRIPTION
Using the geospatial technology of satellite imagery, this hands-on course will investigate land-cover patterns of the physical and social environmental spatially and over time using remote sensing applications for analysis along with geographic information systems (GIS). The Geography Department has listed the following as its desired outcomes for students, who upon the completion of GEOG 1780 should be able to:

Students communicate effectively. This includes developing critical literacies - reading, writing, speaking, listening, visual understanding—that they can apply in various contexts; Organizing and presenting ideas and information visually, orally, and in writing according to standard usage; Understanding and using the elements of effective communication in interpersonal, small group, and mass settings.

- *Apply basic cartographic design rules for clear, visual communication os spatial data.*
- *Clearly discuss a variety of topics related to geospatial technology in regards to privacy, ethics, environmental monitoring, geopolitics and more.*

Students develop quantitative literacies necessary for their chosen field of study. This includes approaching practical problems by choosing and applying appropriate mathematical techniques; Using information represented as data, graphs, tables, and schematics in a variety of disciplines; Applying mathematical theory, concepts, and methods of inquiry appropriate to program-specific problems.

- D*escribe basic physics concepts on which remote sensing is based upon.*
- *Perform basic remote workflows to solve problems (such as acquiring data, feature extraction, change detection, pre- and post-processing, create composite images, and image classification.*
- *Interpret, analyze, and summarize results in a remote sensing workflow.*

Students think critically and creatively. This includes reasoning effectively from available evidence; demonstrating effective problem solving; engaging in creative thinking, expression, and application; Engaging in reflective thinking and expression; Demonstrating higher-order skills such as analysis, synthesis, and evaluation; Making connections across disciplines; Applying scientific methods to the inquiry process.

- *Discover how to select appropriate data sets for remote sensing applications based on spectral, temporal, radiometric, and spatial resolution.*
- *Compare the characteristics of passive and active remote sensing systems.*

Students develop the knowledge and skills to be civically engaged. This includes understanding the natural, political, historical, social, and economic underpinnings of the local, national, and global communities to which they belong; Developing the awareness of both civil rights and civil responsibilities for individual and collective action in a democracy; Engaging in service-learning for community building and an enhanced academic experience; Develop the knowledge and skills to take leadership roles.

- *Discover the variety of ways remote sensing is used in society along with future trends.*

Students develop computer and information literacy. This includes using contemporary computer hardware and software to effectively complete college-level assignments; Gathering and analyzing information using technology, library resources, and other modalities; Understanding and acting upon ethical and security principles with respect to computer technology and to information acquisition and distribution; distinguishing between credible and non-credible sources of information, and using the former in their work in an appropriately documented fashion.

SLCC GENERAL EDUCATION STATEMENT

This course fulfills the *Physical Science* requirement for the General Education Program at Salt Lake Community College. It is designed not only to

teach the information and skills required by the discipline, but also to develop vital workplace skills and to teach strategies and skills that can be used for life-long learning. General Education courses teach basic skills as well as broaden a student's knowledge of a wide range of subjects. Education is much more than the acquisition of facts; it is being able to use information in meaningful ways in order to enrich one's life.
While the subject of each course is important and useful, we become truly educated through making connections of such varied information with the different methods of organizing human experience that are practiced by different disciplines. Therefore, this course, when combined with other General Education courses, will enable you to develop broader perspectives and deeper understandings of your community and the world, as well as challenge previously held assumptions about the world and its inhabitants.

SLCC EPORTFOLIO STATEMENT
In order for SLCC students to have a place to display and chronicle projects that demonstrate discipline-specific skills, critical thinking, and collaboration, SLCC has instituted a Gen Ed ePortfolio requirement in which students display their work from General Education courses. Students taking Gen Ed courses must place significant projects from those courses on a website they create that acts as a virtual portfolio of accomplishments in each course. In this way, prospective employers, community members, and transfer institutions can easily see the best of what each student has accomplished while attending SLCC. Your ePortfolio will allow you to include your educational goals, describe your extracurricular activities, and post your resume. When you finish your time at SLCC, your ePortfolio will then be a multi-media showcase of your educational experience. Visit http://www.slcc.edu/gened/eportfolio for more details.

You may visit the ePortfolio Lab in the basement of the Taylorsville Redwood Library during business hours, and staff will help you without an appointment. Finally, questions regarding the ePortfolio can be directed to eportfolio@slcc.edu.

GRADING SCALE
93-100 = A 90-92 = A- 87-89 = B+ 84-86 = B 80-83 = B- 77-79 = C+
74-76 = C 70-73 = C- 67-69 = D+ 64-66 = D 60-63 = D- 0-59 = E

INCOMPLETE GRADES
Students must be passing and have completed 80% of the course work in order to be granted an incomplete. Students are responsible for making arrangements to complete the course.

LATE WORK

I expect all assignments and discussions to be turned in on time. Late work will not be accepted unless you are maimed, very sick, or otherwise incapable of using your fingers or your brain. If you experience such calamities, you may ask for an extension – providing documentation.

ONLINE PARTICIPATION AND ATTENDANCE

For this course participation is attendance. Simply filling an “electronic” seat space is not participating in the class. In my view, being “intellectually absent” from class discussions/activities is no different than being physically absent for class. I expect you to come to log into Canvas DAILY, read the assigned textbook chapters, and engage in online class discussions/activities.

PLAGIARISM

Students commit plagiarism when they submit another person’s work as their own. Plagiarism also includes the failure to attribute unique phrases, passages, or ideas to their original source (I will not grade any papers that do not contain both in-text and Works Cited citations). Plagiarism is a violation of the student code of conduct. Students who commit plagiarism will receive either an automatic E for that assignment or an E for the course, depending upon the severity of the plagiarism.

ACCOMMODATION FOR STUDENTS WITH DISABILITIES

Students with medical, psychological, learning or other disabilities desiring accommodations or services under ADA, must contact the Disability Resource Center (DRC). The DRC determines eligibility for and authorizes the provision of these accommodations and services for the college." Please contact the DRC at the Student Center, Suite 244, Redwood Campus, 4600 So. Redwood Rd, 84123. Phone: (801) 957-4659, TTY: 957-4646.