



Syllabus for FNR 33
Introduction to Remote Sensing

Course Information

Semester & Year: Fall 2020

Course ID & Section #: FNR-33-E0250

Time: Asynchronous, *Optional* Live Lab Demo Wednesday 4-5 PM, also recorded.

Location: Online

Course units: 3

Instructor Contact Information

Email address: Valerie-elder@redwoods.edu

Zoom Office Hours: Zoom-in on Wednesday's 5PM- 6PM or by appointment.

Meeting ID: 971 3122 6312

Password: 301120

Join from PC, Mac, Linux, iOS or Android:

<https://cccconfer.zoom.us/j/97131226312?pwd=WnpBMVRleGJZbmd1cTQ0c3c2VUI3UT09>

Catalog Description

An introduction to the interpretation and use of aerial photographs, electronically generated imagery, and remote-sensing data. Students will learn the theory and practice of gathering and examining remote-sensing data, the classification of land areas, and the measurement of ground-based objects from aerial and space derived data.

Course Learning Outcomes

- **Discuss theory and application of remote sensing data in natural resource management.**
- **Calculate, interpret, and analyze relevant data from aerial and space derived data.**
- **Lab Specific Outcome: Develop analyses and maps from remotely sensed data sources.**

Course Student Learning Objectives

- Describe the electromagnetic radiation spectrum and how this relates to remote sensing.
- Explain how various surfaces on the Earth's surface absorb, emit, and reflect shortwave and longwave radiation and how that is used in remote sensing.
- Determine how space derived and Earth derived remote sensing data is gathered, rendered, rectified, and displayed.
- Use current technologies to gather, display, manipulate, interpret, and present remotely sensing data (ArcGIS).
- Prepare a relevant cartographically correct map using remote sensing data.
- Know how to gather and apply different remote sensing systems: aerial photography (black and white, color, infrared, and color infrared), multispectral scanners, thermal, and other systems including Radar, and LiDAR systems.

Textbook

Remote Sensing Principles, Interpretation, and Applications
Fourth Edition by Floyd F. Sabins, Jr., James M. Ellis
ISBN 10: 1-4786-3710-2, ISBN 13: 978-1-4786-3710-3

Technical Requirements

As this is an online course, you already know you need reliable internet access (broadband or DSL) and a browser installed on your computer. If students encounter problems with their internet connection while working on this course, it is their responsibility to find an alternative internet access point. The **Chrome** browser is the recommended browser for interacting with the course. Note: Cookies and JavaScript must be enabled.

Students will be working from personal computers and are required to install or have access to the following software:

- **7-Zip** ([7-Zip](#) is a free, open-source file compression/decompression utility) [Installing 7zip on Windows 10](#))
- **ArcGIS Desktop Student Edition** (ArcGIS student licenses are available for all students currently enrolled in a geospatial class.) YOU MUST EMAIL THE INSTRUCTOR OF THE COURSE WITHIN THE FIRST WEEK OF CLASS TO RECEIVE YOUR PERSONAL ACTIVATION CODE. This is extremely important because currently CR has an extremely limited virtual lab, and students will need to run the ArcGIS software from their personal computers to be able to participate in this course. IT IS REQUIRED.
- [Microsoft Office](#)
- [Adobe Acrobat Reader](#)
- [Zoom](#)

Additional requirements for your personal computer:

Operating System	Windows 7, Windows 8/8.1, 10 or higher
Processor	2 GHz or higher
Memory	8 GB of RAM
Graphics Card	NVIDIA or AMD is required to work properly with some of the ESRI ArcGIS extensions.
Hard Drive Space	60GB free disk space
Plug-ins	Adobe Reader [Download from Adobe]
Additional Software	Java 1.7 or later (https://java.com/en/download/), Adobe Acrobat Reader
Speakers	Required (or headphones)
Monitor	Capable of at least 1024 x 768 resolution

Accessing the Software

Because of the transition to online instruction, access to software is the responsibility of individual students. If you will be working in the field, or other environment with intermittent internet access, please contact your instructor about other methods for acquiring the requisite course software.

Computers on Campus

Because of the need for social distancing and safety, lab policies and access have changed. Watch for announcements on the canvas course page for updates. There is potential virtual lab access, and the instructor will announce how to access the virtual lab for those students who require it. The virtual lab has limited space and will be reserved for students who do not have access to a personal computer that is capable of handling course software and materials. If you think that you may need access to the CR virtual lab, please contact the professor during the first week of the course.

Prerequisites

FNR31 - Introduction to Geospatial Concepts

Advisory: ENGL150 - Precollegiate Reading and Writing & MATH380 - Elementary Algebra

Accessibility

Students will have access to online course materials that comply with the Americans with Disabilities Act of 1990 (ADA), Section 508 of the Rehabilitation Act of 1973, and College of the Redwoods policies. Students who discover access issues with this class should contact the instructor.

College of the Redwoods is also committed to making reasonable accommodations for qualified students with disabilities. If you have a disability or believe you might benefit from disability-related services and accommodations, please contact your instructor or [Disability Services and Programs for Students \(DSPS\)](#).

Students may make requests for alternative media by contacting DSPS based on their campus location:

- Eureka: 707-476-4280, student services building, 1st floor
- Del Norte: 707-465-2324, main building near library
- Klamath-Trinity: 530-625-4821 Ext 103

During COVID19, approved accommodations for distance education classes will be emailed to the instructor by DSPS. Feel free to reach out to me with feedback on how I can better support your learning environment in this course.

Support for online learners during COVID-19

In response to COVID-19, College of the Redwoods moved the majority of its courses online to protect health and safety. As the faculty and students adjust to this change, clear communication about student needs will help everyone be successful. Please let me know about any specific challenges or technology limitations that might affect your participation in class. I want every student to thrive.

Evaluation & Grading Policy

Grades	Count	Points	Total	Percentage
Weekly Discussions/Assignments	14	5	70	14%
Weekly Quiz	14	5	70	14%
Weekly Labs	13	20	260	52%
Midterm Report	1		25	5%
Final Project	1		50	10%
Final Quiz	1		25	5%
		Total	500	

A: 94-100, A-: 90-<94, B+: 87-<90, B: 84-<87, B-: 80-<84, C+: 77-<80, C: 70-<77, D: 60-<70, F: <60

Late Assignments: Assignments turned in after the deadline will be deducted 10%*, each additional week the assignment is late an additional 10% will be deducted. Late work will not be accepted after December 11th. Please stay in communication with me regarding late work.

*Due to some unpredictable variables related to COVID-19, please discuss late or missing work with me.

Admissions deadlines & enrollment policies

Fall 2020 Dates

- *Classes begin:* 8/22/20
- *Last day to add a class:* 8/28/20
- *Last day to drop without a W and receive a refund:* 9/4/20
- *Labor Day (all-college holiday):* 9/7/20
- *Census date:* 9/8/20 or 20% into class duration
- *Last day to petition to file P/NP option:* 9/18/20
- *Last day to petition to graduate or apply for certificate:* 10/29/20
- *Last day for student-initiated W (no refund):* 10/30/20
- *Last day for faculty-initiated W (no refund):* 10/30/20
- *Veteran's Day (all-college holiday):* 11/11/20
- *Fall break (no classes):* 11/23/20-11/28/20
- *Thanksgiving (all-college holiday):* 11/25/20-11/27/20
- *Final examinations:* 12/12/20-12/18/20
- *Semester ends:* 12/18/20
- *Grades available for transcript release:* approximately 1/8/21

Students who have experienced extenuating circumstances can complete & submit the ***Excused Withdrawal Petition*** to request an Excused Withdrawal (EW) grade instead of the current Withdrawal (W) or non-passing (D, F & NP) grades. The EW Petition is available from the Admissions and Records Forms Webpage. Supporting documentation is required.

Academic dishonesty

In the academic community, the high value placed on truth implies a corresponding intolerance of scholastic dishonesty. In cases involving academic dishonesty, determination of the grade and of the student's status in the course is left primarily to the discretion of the faculty member. In such cases, where the instructor determines that a student has demonstrated academic dishonesty, the student may receive a failing grade for the assignment and/or exam and may be reported to the Chief Student Services Officer or designee. The Student Code of Conduct ([AP 5500](#)) is available on the College of the Redwoods website. Additional information about the rights and responsibilities of students, Board policies, and administrative procedures is located in the [College Catalog](#) and on the [College of the Redwoods website](#).

Disruptive behavior

Student behavior or speech that disrupts the instructional setting will not be tolerated. Disruptive conduct may include, but is not limited to: unwarranted interruptions; failure to adhere to instructor's directions; vulgar or obscene language; slurs or other forms of intimidation; and physically or verbally abusive behavior. In such cases where the instructor determines that a student has disrupted the educational process, a disruptive student may be temporarily removed from class. In addition, the student may be reported to the Chief Student Services Officer or designee. The Student Code of Conduct ([AP 5500](#)) is available on the College of the Redwoods website. Additional information about the rights and responsibilities of students, Board policies, and administrative procedures is located in the [College Catalog](#) and on the [College of the Redwoods website](#).

Inclusive Language in the Classroom

College of the Redwoods aspires to create a learning environment in which all people feel comfortable in contributing their perspectives to classroom discussions. It therefore encourages instructors and students to use language that is inclusive and respectful. Please let me know if I make a mistake!

Setting Your Preferred Name in Canvas

Students have the ability to have an alternate first name and pronouns to appear in Canvas. Contact [Admissions & Records](#) to request a change to your preferred first name and pronoun. Your Preferred Name will only be listed in Canvas. It does not change your legal name in our records. See the [Student Information Update form](#).

Canvas Information

If using Canvas, include navigation instructions, tech support information, what Canvas is used for, and your expectation for how regularly students should check Canvas for your class.

Log into Canvas at <https://redwoods.instructure.com>

Password is your 8 digit birth date

For tech help, email its@redwoods.edu or call 707-476-4160

Canvas Help for students: <https://www.redwoods.edu/online/Help-Student>

Canvas online orientation workshop: <https://www.redwoods.edu/online/Home/Student-Resources/Canvas-Resources>

Community College Student Health and Wellness

Resources, tools, and trainings regarding health, mental health, wellness, basic needs and more designed for California community college students, faculty and staff are available on the California Community Colleges [Health & Wellness website](#).

[Wellness Central](#) is a free online health and wellness resource that is available 24/7 in your space at your pace.

Students seeking to request a counseling appointment for academic advising or general counseling can email counseling@redwoods.edu.

Emergency procedures / Everbridge

College of the Redwoods has implemented an emergency alert system called Everbridge. In the event of an emergency on campus you will receive an alert through your personal email and/or phones. Registration is not necessary in order to receive emergency alerts. Check to make sure your contact information is up-to-date by logging into WebAdvisor <https://webadvisor.redwoods.edu> and selecting 'Students' then 'Academic Profile' then 'Current Information Update.'

Please contact Public Safety at 707-476-4112 or security@redwoods.edu if you have any questions. For more information see the [Redwoods Public Safety Page](#).

In an emergency that requires an evacuation of the building anywhere in the District:

- Be aware of all marked exits from your area and building
- Once outside, move to the nearest evacuation point outside your building
- Keep streets and walkways clear for emergency vehicles and personnel

You may want to enroll in these updates regardless of if you are taking on campus courses in order to stay informed in case of an emergency.

Student Support Services

The following online resources are available to support your success as a student:

- [CR-Online](#) (Comprehensive information for online students)

- [Library Articles & Databases](#)
- [Canvas help and tutorials](#)
- [Online Student Handbook](#)

[Counseling](#) offers assistance to students in need of professional counseling services such as crisis counseling.

Learning Resource Center includes the following resources for students

- [Academic Support Center](#) for instructional support, tutoring, learning resources, and proctored exams. Includes the Math Lab & Drop-in Writing Center
- [Library Services](#) to promote information literacy and provide organized information resources.
- [Multicultural & Diversity Center](#)

Special programs are also available for eligible students include

- [Extended Opportunity Programs & Services \(EOPS\)](#) provides financial assistance, support and encouragement for eligible income disadvantaged students at all CR locations.
- The TRiO Student Success Program provides eligible students with a variety of services including trips to 4-year universities, career assessments, and peer mentoring. Students can apply for the program in [Eureka](#) or in [Del Norte](#)
- The [Veteran's Resource Center](#) supports and facilitates academic success for Active Duty Military, Veterans and Dependents attending CR through relational advising, mentorship, transitional assistance, and coordination of military and Veteran-specific resources.
- Klamath-Trinity students can contact the CR KT Office for specific information about student support services at 530-625-4821