



# Syllabus for FNR 54 Intro to Natural Resource Inventory Techniques

## Course Information

Semester & Year: Spring 2021

Course ID & Section #: FNR-54-E0818

Instructor's name: Dr. Tim Baker

[if synchronous] Day/Time of required meetings: M/W 11:40-12:45 and M/W 1:15-4:25

[if in-person] Location: Zoom and in-person on CR campus

[if needed] Number of proctored exams: 0

Course units: 4

## Instructor Contact Information

Office location or \*Online: AT 111 and Online

Office hours: W and TH 10:30-11:30 or by appointment

Phone number: 476-4348 (Office)

Email address: Tim-Baker@redwoods.edu

## Catalog Description

An introduction to various techniques used in the measurement and inventory of natural resources. Topics include map reading and drawing, land navigation, tree measurement, sampling methods, and data analysis. Students will work with a variety of biometric devices in field settings and gain practical experience in their application and use.

## Course Student Learning Outcomes *(from course outline of record)*

1. Explain the principles of land descriptions and develop and use functional maps of forest stands that include those land descriptions.
2. Explain common measurement techniques used in natural resource inventories and their strengths and limitations.
3. Use critical thinking to derive appropriate solutions to natural resource inventory problems both in and out of class.
4. Lab specific outcome: Conduct field inventories, analyze field data, and develop useful reports.

## Prerequisites/co-requisites/ recommended preparation

None

## Accessibility

College of the Redwoods is 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, 1<sup>st</sup> floor

- Del Norte: 707-465-2324, main building near library
- Klamath-Trinity: 530-625-4821 Ext 103

During COVID19—DSPS will email approved accommodations for distance education classes to your instructor. In the case of face-to-face instruction, please present your written accommodation request to your instructor at least one week before the needed accommodation so that necessary arrangements can be made. Last minute arrangements or post-test adjustments usually cannot be accommodated.

## Student Support

Good information and clear communication about your needs will help you be successful. Please let your instructor know about any specific challenges or technology limitations that might affect your participation in class. College of the Redwoods wants every student to be successful.

## Evaluation & Grading Policy

Grades for this semester will be based on the following assignment categories:

Module quizzes	20%
Problem sets	20%
Lab assignments	35%
Final field project	15%
Final Exam	10%

Late assignments (problem sets and lab assignments) are penalized 10% for every class session they are late. Module quizzes will have hard deadlines after which they cannot be taken.

Each student **must** do their own original work unless specifically told otherwise. While studying in groups is encouraged any assignment or essay quiz question that has identical answers with another student or with any internet source will get a 0 on that assignments or question.

## Admissions deadlines & enrollment policies

Spring 2021 Dates

- *Classes begin: 1/16/21*
- *MLK Jr. Birthday (all campuses closed): 1/18/21*
- *Last day to add a class: 1/22/21*
- *Last day to drop without a W and receive a refund: 1/29/21*
- *Census date: 2/01/21 or 20% into class duration*
- *Last day to petition to file P/NP option: 2/12/21*
- *Lincoln's Birthday (all campuses closed): 2/12/21*
- *President's Day (all campuses closed): 2/15/21*
- *Last day to petition to graduate or apply for certificate: 3/04/21*
- *Spring Break (no classes): 3/15/21 – 3/20/21*
- *Last day for student-initiated W (no refund): 4/02/21*
- *Last day for faculty-initiated W (no refund): 4/02/21*
- *Final examinations: 5/08/21 – 5/14/21*
- *Semester ends: 5/14/21*
- *Grades available for transcript release: approximately 5/31/21*

## 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.

## 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. This 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](mailto: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](mailto: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](mailto: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

Do not leave campus, unless it has been deemed safe by the campus authorities.

### Del Norte Campus Emergency Procedures

Please review the [Crescent City campus emergency map](#) for campus evacuation sites, including the closest site to this classroom (posted by the exit of each room). For more information, see the [Redwoods Public Safety Page](#).

### Eureka Campus Emergency Procedures

Please review the [campus emergency map](#) for evacuation sites, including the closest site to this classroom (posted by the exit of each room). For more information on Public Safety go to the [Redwoods Public Safety Page](#). It is the responsibility of College of the Redwoods to protect life and property from the effects of emergencies within its own jurisdiction.

In the event of an emergency:

1. Evaluate the impact the emergency has on your activity/operation and take appropriate action.
2. Dial 911, to notify local agency support such as law enforcement or fire services.
3. Notify Public Safety 707-476-4111 and inform them of the situation, with as much relevant information as possible.
4. Public Safety shall relay threat information, warnings, and alerts through the Everbridge emergency alert system, Public address system, and when possible, updates on the college website, to ensure the school community is notified.

5. Follow established procedures for the specific emergency as outlined in the College of the Redwoods Emergency Procedure Booklet, (evacuation to a safe zone, shelter in place, lockdown, assist others if possible, cooperate with First Responders, etc.).
6. If safe to do so, notify key administrators, departments, and personnel.
7. Do not leave campus, unless it is necessary to preserve life and/or has been deemed safe by the person in command.

## **Klamath Trinity Campus Emergency Procedures**

Please review the responsibilities of, and procedures used by, the College of the Redwoods, Klamath-Trinity Instructional Site (KTIS) to communicate to faculty, staff, students and the general public during an emergency. It is the responsibility of College of the Redwoods, Klamath-Trinity Instructional Site (KTIS) to protect life and property from the effects of emergency situations within its own jurisdiction.

1. In the event of an emergency, communication shall be the responsibility of the district employees on scene.
  - a. Dial 911, to notify local agency support such as law enforcement or fire services.
  - b. If safe to do so, notify key administrators, departments, and personnel.
  - c. If safe to do so, personnel shall relay threat information, warnings, to ensure the school community is notified.
  - d. Contact Jolene Gates 530-625-4821 to notify of situation.
  - e. Contact Hoopa Tribal Education Administration office 530-625-4413
  - f. Notify Public Safety 707-476-4111.
2. In the event of an emergency, the responsible district employee on scene will:
  - a. Follow established procedures for the specific emergency as outlined in the College of the Redwoods Emergency Procedure Booklet.
  - b. Lock all doors and turn off lights if in lockdown due to an active shooter or similar emergency.
  - c. Close all window curtains.
  - d. Get all inside to safe location Kitchen area is best internal location.
  - e. If a police officer or higher official arrives, they will assume command.
  - f. Wait until notice of all is clear before unlocking doors.
  - g. If safe to do so, move to the nearest evacuation point outside building (Pooky's Park), directly behind the Hoopa Tribal Education Building.
  - h. Do not leave site, unless it has been deemed safe by the person in command. Student Support Services (required for online classes)

## **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 services to eligible income disadvantaged students including: textbook award, career academic and personal counseling, school supplies, transportation assistance, tutoring, laptop, calculator and textbook loans, priority registration, graduation cap and gown, workshops, and more!
- 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

## General Course Information

**Course structure:** This course for Spring 2021 is built around online lectures and discussions with In-Person labs along with some Virtual labs. The lectures will be on Zoom using the ConferZoom link in Canvas and will be recorded and available for asynchronous review. The In-Person labs will be held mostly on campus though a few off-campus field trips may be included depending on circumstances. Masks are required and Covid-19 screening will be done before each lab.

**Drop Policy:** You may be dropped from the class if you miss 3 or more labs or fail to complete 2 or more Modules before the Friday of the 10th week of the semester.

**Field Equipment: *Masks must be worn during labs!*** You will also need appropriate field clothing and traction footwear (closed-toe). Hard hats will be required as well although the College will supply them this semester for each student if you do not have your own. Additional equipment (e.g. cruising vest, ranger compass, etc.) that will be useful this semester will be covered in the first lab.

**Text:** *Forest Measurements* 6th Edition by Burkhart, Avery, and Bullock (ISBN 978-1-4786-3618-2)

## Course Objectives:

We will learn how to measure trees, estimate biomass, and how to analyze the data to come up with meaningful estimates of natural resources. This will include using spreadsheets and basic statistics. Preliminary coursework in mathematics (statistics) will be helpful but we'll go over the basic math involved. We will also learn field navigation techniques, map reading, sampling

strategies and point location and timber cruising. And we'll discuss how to apply these inventory techniques to other kinds of natural resources (i.e. birds, herbaceous plants, etc.).

Topics include:

- Land navigation, boundary descriptions, distance, direction and elevation
- Map sketching, reading, and interpretation
- Area measurements and GPS
- Tree measurements and Log Scaling
- Basic statistics of field data
- Fixed-area plots
- Point sampling
- Cover estimation
- Stand descriptions

**Final Field Project:** During the last 3-4 weeks of the semester each student will participate in conducting an inventory of an assigned stand from planning to analysis and reporting. This entails working a small group (2-3) in the field on campus and starts with a sketch map of the assigned stand, area calculations, pre-cruise plots, sample design, plot measurements, data analysis and finally report writing. This assignment is 15% of the overall grade.