Syllabus

Course Information

Forestry Ecology and Management

Semester & Year: Spring 2024

Course ID & Section #: FNR-5-E6178

Instructor's name: Valerie Elder

Day/Time of required meetings: Lecture- Thursdays 10:05AM - 11:10AM, Lab: Thursdays 11:40AM - 02:50PM, plus online component

Location: AT 127

Number of proctored exams:0

Course units: 3

Instructor Contact Information

Office location: AT 134 or *Online: ZOOM*

Office hours: Tuesday/Thursday mornings 9-10 AM

valerie-elder@redwoods.edu **(mailto:Valerie-elder@redwoods.edu)** or message in pronto.

Pronto is usually the fastest way to get ahold of me, but I strive to respond in 24 hours M-F.

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Catalog Description

An introduction to the basic theories of forest ecology and best management practices. This course focuses on disturbance, competition, and regeneration ecology of forests and how these relate to environmental factors such as climate, soils, and biota. Laboratory exercises provide collaborative and experiential learning opportunities in the field where the linkages between theory and application are explored.

Course Student Learning Outcomes

1. Discuss the use of ecological knowledge in forest management.
2. Analyze the application of silvicultural techniques in achieving different forest outcomes.
3. Describe the life cycle of trees and the interaction of trees and the environment.
4. Lab Specific Outcome: Measure and analyze ecological characteristics of the forest.

Prerequisites / Co-requisites / Recommended Preparation

Students will be required to have access to adequate computer and internet access and familiarity with basic computer skills. Examples of this include:

▪ navigate a class in Canvas

▪ receive, respond and regularly check) messages sent to your CR email account

▪ receive, respond and regularly check) announcements sent in Canvas

▪ download and upload files in Canvas assignments

▪ use a phone or digital camera (or webcam) to upload "selfies" to your online lab notebook

▪ use a word processor program (such as Microsoft Word or Google Docs)

▪ use a webcam or a phone to record and upload videos in Canvas

▪ use Zoom, email and canvas discussion boards to communicate with peers and instructor

Educational Accessibility & Support

College of the Redwoods is committed to providing reasonable accommodations for qualified students who could benefit from additional educational support and services. You may qualify if you have a physical, mental, sensory, or intellectual condition which causes you to struggle academically, including but not limited to:

- Mental health conditions such as depression, anxiety, PTSD, bipolar disorder, and ADHD
- Common ailments such as arthritis, asthma, diabetes, autoimmune disorders, and diseases
- Temporary impairments such as a broken bone, recovery from significant surgery, or a pregnancy-related disability
- A learning disability (e.g., dyslexia, reading comprehension), intellectual disability, autism, or acquired brain injury
- Vision, hearing, or mobility conditions

Available services include extended test time, quiet testing environments, academic assistance and tutoring through the **LIGHT Center** ⬀ **(https://www.redwoods.edu/dsps/DSPS-Home/LIGHT-Center)** , counseling and advising, alternate formats of course materials (e.g., audio books, braille, E-texts), assistive technology, learning disability assessments, approval for personal attendants and service animals, interpreters, priority registration, on-campus transportation, adaptive physical education and living skills courses, and more. If you believe you might benefit from disability- or health-related services and accommodations, please contact **Disability Services and Programs for Students (DSPS)** ⬀ **(https://www.redwoods.edu/dsps/)** . If you are unsure whether you qualify, please contact DSPS for a consultation: **dsps@redwoods.edu. (mailto:dsps@redwoods.edu)**

Eureka: 707-476-4280, Student Services Building, first floor
Del Norte: 707-465-2324, Main Building, near the library
Klamath-Trinity: 707-476-4280

Student Support Services

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.

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

- **CR-Online** **(https://www.redwoods.edu/online)** (Comprehensive information for online students)
- **Library Articles & Databases** **(https://redwoods.libguides.com/az.php)**
- **Canvas help and tutorials** **(https://webapps.redwoods.edu/tutorial/)**
- **Online Student Handbook** **(https://www.redwoods.edu/Portals/72/Documents/Students/CR-OnlineStudentHandbook.pdf)**
- **Online Tutoring ResourcesLinks to an external site.** **(https://nam12.safelinks.protection.outlook.com/? url=https%3A%2F%2Fredwoods.libguides.com%2FTutoring%2FOnline&data=05%7C01% 7CAmber-Atkins%40Redwoods.edu%7Cbcfe068f8aca4941dde408daee9eaea9%7C8c90edff0a7243a 795683eb28b3c8f82%7C0%7C0%7C638084662554822741%7CUnknown%7CTWFpbGZsb3 d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C30 00%7C%7C%7C&sdata=lPQnFsRsujkzGkSNl2eqR4ofcCFQuSN6PcfuoYRnp5s%3D&reser ved=0)**

To learn more about the resources available to you, click on a title bar below, or click the down arrow to expand them all.

Klamath-Trinity students can contact the CR KT Office for specific information about student support services at 530-625-4821

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Community College Student Health and Wellness ▲

If you are in distress or are with someone at risk right now, call the National Suicide Prevention Lifeline at 1-800-273-TALK (8255) or TEXT 741-741

Timely Care

When you're feeling under the weather physically or distressed mentally, you can find the help you're looking for in just a few quick taps. Students can schedule an appointment anytime via phone, video, and chat. Visit **TimelyCARE** ⯈ **(https://www.timelycare.com/redwoods)** .

Mental Health Counseling

Students should text, email, or fax Shawna Bell directly for scheduling and/or services.

Contact info

Text: 707-496-2856

Email: **shawnabmft@gmail.com** **(mailto:shawnabmft@gmail.com)**

Fax: 707-237-2318 (voicemail can be left via fax)

Wellness Central

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 **Wellness Central** ⮡ **(https://cvc.edu/wellness/)** .

Counseling ▲

Counseling & Advising ⮡ **(https://www.redwoods.edu/counseling/)** can assist students in need of academic advising and professional counseling services. Visit the Welcome Center in the lower level of the student services building Monday –Friday 9am – 4pm (during the semester, summer hours may vary).

Basic Needs Center ▲

The Basic Needs Center ⮡ **(https://www.redwoods.edu/student-services/Home/Basic-Needs)** provides for the health and safety of students by providing access to healthy food, financial resources, and referrals to safe and secure housing. Students can also **submit a request for services and information** ⮡ **(https://cm.maxient.com/reportingform.php?Redwoods&layout_id=7)** online.

Contact info

Phone: 707-476-4153

Email: the-grove@redwoods.edu

Learning Resource Center ▲

Learning Resource Center includes the following resources for students:

- **Library Services (https://www.redwoods.edu/library)** to promote information literacy and provide organized information resources.
- **Multicultural & Diversity Center (https://www.redwoods.edu/student-services/Home/Multicultural-and-Diversity-Center)**

- **Academic Support Center** (https://nam12.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.redwoods.edu%2Fasc%2F&data=05%7C01%7CAmber-Atkins%40Redwoods.edu%7Cbcfe068f8aca4941dde408daee9eaea9%7C8c90edff0a7243a795683eb28b3c8f82%7C0%7C0%7C638084662554822741%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTil6Ilk1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=Riz9ZxeBWEWFm69aT5OdldMsHyFsoonUcvZJLf5yQ1I%3D&reserved=0) – offers tutoring and test proctoring for CR students.
- **Student Tech Help** (https://nam12.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.redwoods.edu%2Fsts&data=05%7C01%7CAmber-Atkins%40Redwoods.edu%7Cbcfe068f8aca4941dde408daee9eaea9%7C8c90edff0a7243a795683eb28b3c8f82%7C0%7C0%7C638084662554822741%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTil6Ilk1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=%2FJ23kPg%2FGw0UgR98LB1fPf7Glk7JzRZUBESsb1Vzf%2BQ%3D&reserved=0) – provides students with assistance around a variety of tech problems.

Extended Opportunity Programs & Services (EOPS) ▲

Extended Opportunity Programs & Services (EOPS) ⤷ (https://www.redwoods.edu/student-services/Home/EOPS) provides services to eligible income disadvantaged students including: textbook awards, grants, career academic and personal counseling, transportation assistance, tutoring, laptop, calculator and textbook loans, priority registration, graduation cap and gown, workshops, and more!

TRiO Student Success Program ▲

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** (https://www.redwoods.edu/trio/eureka) or in **Del Norte** (https://www.redwoods.edu/delnorte/TRiO) .

Veterans Resource Center ▲

The **Veteran's Resource Center** (https://www.redwoods.edu/student-services/Home/Vets) 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.

CalWORKS	▲

CalWORKs ⤴ **(https://www.redwoods.edu/calworks)** – California Work Opportunity & Responsibility to Kids (CalWORKs). Provides supportive services to student parents with children under the age of 18, who are receiving cash assistance (TANF benefits), to become self-sufficient. Services include: transportation assistance, basic student supplies, tutoring, priority registration, laptop and calculator loans, career, academic, and personal counseling, and more!

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Evaluation & Grading Policy

CR Grading Scale: 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

Assignments are listed in Canvas modules and are **subject to change**. Changes will be announced in class, and posted in Canvas – due dates in Canvas should be considered the most current. Additional assignment due dates will be announced when the assignments are given. Most assignments will be turned in via canvas. You are responsible for knowing when your work is due.

Late Work: Assignments in canvas has a **due date**- when you are expected to turn it in and a **turn-in date** the last possible date you can submit an assignment. If you cannot turn in an assignment by the due date and want to submit by the turn-in date you must email me before the assignment is due and outline your plan for submitting the assignment by the turn-in date. Otherwise, 10% per day will be deducted from your assignment grade. After using two turn-in date grace periods late assignments will be deducted 10% per day.

Assignments will be graded typically within one week of submission, depending on instructor workload. You will be able to track your grade throughout the course via the Grades section in Canvas.

Drop Policy: You may be dropped from the class if you miss 3 or more weeks of class participation, discussion, assignments or labs prior to the end of week 10. If you stop participating in class after week 10 you will be graded for participation and may receive an F.

Fake Student Policy

Fraudulent enrollments are on the rise. To ensure that real students can get seats in the class, no shows will be dropped in the middle of the first week of classes. Also, if you are suspected of being a bot, you will be dropped from the class. If you have been dropped but are a real student, please contact your instructor right away to be reinstated in the class.

Spring 2024 Dates

January 12	Last day to register for classes (day before the first class meeting)
January 13	Classes begin
January 15	Martin Luther King, Jr.'s Birthday Holiday (District-wide closure)
January 19	Last day to add a class
January 26	Last day to drop without a "W" and receive a refund
January 29	Census Date (20% of class)
February 16	Lincoln's Birthday Holiday (District-wide closure)
February 19	President's Day Holiday (District-wide closure)
March 7	Last day to petition to graduate
March 29	Last day for student initiated withdrawal (62.5% of class)
March 29	Last day for faculty initiated withdrawal (62.5% of class)
March 11-16	Spring break (no classes)

April 1	District-wide closure (Cesar Chavez Day) .
May 4-10	Final Examinations
May 10	Last day to file for P/NP Option
May 10	Semester Ends
May 17	Grades due
May 24	Grades available

⚖️ 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** ⤴ **(https://go.boarddocs.com/ca/redwoods/Board.nsf/Public?open&id=policies)**) 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** ⤴ **(https://www.redwoods.edu/catalog)** and on the **College of the Redwoods website** ⤴ **(https://www.redwoods.edu/)** .

🤖 AI Use Class Policy

Recent advancements in generative artificial intelligence (AI) have made large language models such as ChatGPT and Google's Bard widely available. However, overuse of these tools in this class can undermine your learning and curtail the development of your critical and creative thinking skills. In addition, AI outputs are often unreliable and frequently subject to bias. For these reasons, the policy of this class is that **AI cannot be used at any point in the completion of class assignments**, including discussion posts. Any or all of your assignment submissions and discussion posts may be screened by AI detection software, but the real

penalty for AI misuse is that you will miss out on an opportunity to learn. In Forestry and Natural Resources, we so often reference on the ground conditions to ensure environmental protections- so critical thinking is essential!

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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** ⤷ **(https://go.boarddocs.com/ca/redwoods/Board.nsf/Public?open&id=policies)**) 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** ⤷ **(https://www.redwoods.edu/catalog)** and on the **College of the Redwoods website** ⤷ **(https://www.redwoods.edu/)** .

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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.

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Canvas

Canvas Information

Log into Canvas at **My CR Portal** ⤷ **(http://www.redwoods.edu/sso)**
For help logging in to Canvas, visit **My CR Portal.** ⤷ **(http://www.redwoods.edu/sso)**
For help with Canvas once you're logged in, click on the Help icon on the left menu.
For tech help, email **its@redwoods.edu (mailto:its@redwoods.edu)** or call 707-476-4160

Canvas online orientation workshop: **Canvas Student Orientation Course (instructure.com) (https://redwoods.instructure.com/courses/6781)**

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** ⤷ **(https://www.redwoods.edu/admissions/Forms)** 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** ⤷ **(https://www.redwoods.edu/Portals/28/A.R.Forms.Docs/Miscellaneous/Student%20Information%20Update.pdf)** .

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** ⤷ **(https://www.redwoods.edu/publicsafety)** .

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.

To learn more about campus-specific Emergency Procedures, click on a title bar below, or click the down arrow to expand them all.

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Del Norte Campus Emergency Procedures ▲

Please review the **Crescent City campus emergency map** ▢→ **(https://www.redwoods.edu/Portals/70/pdfs/DN%20CampusSafetyMap_010819-2.pdf)** 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 ▢→ **(https://www.redwoods.edu/publicsafety)** .

Eureka Campus Emergency Procedures ▲

Please review the **campus emergency map** ▢→ **(https://internal.redwoods.edu/Portals/180/Maps%20and%20Phone%20Lists/EurekaMaps_Emergency_F19.pdf?ver=2020-02-18-112433-920&timestamp=1628553718609)** 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 **CR Police Department Public Safety** ▢→ **(https://www.redwoods.edu/publicsafety)** 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, KlamathTrinity 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.

In the event of an emergency, communication shall be the responsibility of the district employees on scene:

1. Dial 911, to notify local agency support such as law enforcement or fire services.
2. If safe to do so, notify key administrators, departments, and personnel.
3. If safe to do so, personnel shall relay threat information, warnings, to ensure the school community is notified.
4. Contact 530-625-4821 to notify of situation.
5. Contact Hoopa Tribal Education Administration office 530-625-4413
6. Notify Public Safety 707-476-4111.

In the even of an emergency, the responsible district employee on the scene will:

1. Follow established procedures for the specific emergency as outlined in the College of the
   Redwoods Emergency Procedure Booklet.
2. Lock all doors and turn off lights if in lockdown due to an active shooter or similar emergency.
3. Close all window curtains.
4. Get all inside to safe location Kitchen area is best internal location.
5. If a police officer or higher official arrives, they will assume command.
6. Wait until notice of all is clear before unlocking doors.
7. If safe to do so, move to the nearest evacuation point outside building (Pooky's Park), directly
   behind the Hoopa Tribal Education Building.
8. Do not leave site, unless it has been deemed safe by the person in command. Student Support
   Services (required for online classes)

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Course Objectives

Course Objective: Forest ecology and management explores the basic processes of a functioning forest and examines how manipulating these processes changes the direction of forest development. In other words, the theory and practice of understanding forest establishment, composition, structure and growth. This is essentially what silviculture is though we explore more of the underlying ecology than in a traditional silviculture course. In addition, the laboratories associated with this course will introduce you to basic forest ecology studies, data handling, simple statistics and field exercises in the application of silvicultural practices (e.g. marking trees for thinning).

Course Outline

The general pattern of topics will likely be:

Scientific Method

Introduction and definitions (Chapter 1)

Regeneration Ecology (Ch. 5)

Light (Ch. 8)

Temperature (Ch. 9)

Climate (Ch. 7)

Major Forest Types of the U.S. (Ch. 22)

Soils (Ch. 11)

Mineral Nutrients

Biogeochemistry (Ch. 19)

Site Quality (Ch. 13)

Disturbance and succession (Ch. 16 and 17)

Fire ecology (Ch. 12)

Forest Health

Ecosystem Management (Ch. 21)

Laboratories

A 3-hour lab each week is an essential part of this course. Most of these labs will be outdoor labs, so come prepared for rough terrain and inclement weather. Various lab reports, field studies, and participation will account for 30% of your total grade. A number of these labs will be *off-campus* field trips to locations like the old-growth redwoods along Bull Creek, the Arcata Community Forest and Horse Mountain. Each student is responsible for their own transportation to the field sites. You must have filled out a field trip waiver form before participating in any off-campus field trip.

Virtual labs - *Some of the labs this semester will not be held physically on campus. Instead you will be given assignments to complete on your own in the field to view, measure, research and analyze.*

Reading: The Modules will have additional reading assignments that are related to the topic covered by the module. These will frequently be peer-reviewed journal articles that will require you to read and summarize key take-away points and unanswered questions you might have.

Textbook: Forest Ecology 5th Edition

by **Daniel M. Kashian** ▷ **(https://www.amazon.com/Daniel-M-Kashian/e/B0BYWD29N2/ref=dp_byline_cont_book_1)** , **Donald R. Zak** ▷ **(https://www.amazon.com/s/ref=dp_byline_sr_book_2?ie=UTF8&field-author=Donald+R.+Zak&text=Donald+R.+Zak&sort=relevancerank&search-alias=books)** , **Burton V. Barnes** ▷ **(https://www.amazon.com/s/ref=dp_byline_sr_book_3?ie=UTF8&field-author=Burton+V.+Barnes&text=Burton+V.+Barnes&sort=relevancerank&search-alias=books)** ,
Stephen H. Spurr
ISBN: 978-1119476085

 Project : A semester long project will be included in this course and will count for 10% of the total grade. The project for this semester will focus on the challenges we face in managing different species in the face of a changing climate. Each student will pick a forest tree species and research the basic ecology and life history of the species, the management and utilization and the possible influence that a **changing climate** might have on the species in the future. Each student will then generate a report that will be in the form of a **web page** outlining the species and its ecology. Any resources should be referenced and cited and proper credit given for any photos or links you use. The web site should specifically have pages/links on:

- life history
- range and distribution
- habitat (environment and ecology including associated wildlife species)

- insects and disease pests
- management (silvicultural techniques)
- utilization
- climate change impacts