

Office of Undergraduate Education

TCORE 122F

Introduction to Science

*50 Shades of Green: Exploring the diverse ecosystems and natural resources of Washington state*

Instructor: Carly Gelarden

|  |  |  |
| --- | --- | --- |
| Class Times | Tuesday 10:15am – 12:20pm in JOY 001  Thursdays 10:15am – 12:20pm in JOY 001 | |
| Office Hours  (also by appointment) | Tuesdays 12:30 – 1:30pm | |
| Contact | gelarc@uw.edu | Cell: 206.799.0190  Office: 253.692.4995 |

Course Description: This class serves as an introduction to the natural history of Washington state.  Each week we will explore a new ecosystem found in Washington, from mountains to sea.  We will learn about the climate, geology, ecology and wildlife that make each of these ecosystems unique.  This class will use scientific inquiry-based activities in both the classroom and the field to help us observe and explain patterns found in nature.

Core

The Core program consists of a coordinated series of courses that represent the various disciplines in the university. This course, along with the others in your cohort, fulfills one of the university’s general education requirements in each of the areas of knowledge plus composition. The courses are designed to both support and challenge you to develop the critical thinking, writing, research, and analytical skills you’ll need at UWT while introducing you to relevant topics in the social sciences, humanities, and sciences.

Learning Objectives

* Recognize and identify important ecological, climatological, hydrological, and geological patterns.
* Identify many organisms found in various Pacific Northwest environments.
* Observe diverse organisms and deduce what structural and behavioral traits help them survive.
* Articulate the basic ecological, climatological, hydrological, and geological principles that operate in the Pacific Northwest.
* Develop observation skills sufficient to enter an unfamiliar area in the Pacific Northwest and determine what processes have shaped it.
* Recognize anthropogenic (human-caused) impacts and describe effects of those impacts on organisms, populations, communities, and ecosystems.

Required Texts and Equipment

**Text:**

Kruckeberg, Arthur R. 1991.*The Natural History of Puget Sound* Univ. Washington Press, Seattle, WA

Other assigned readings will be made available on the course Canvas site or distributed in class.

**Equipment:** A sturdy notebook with waterproof cover ([Rite-in-the-Rain](http://www.rainwriter.com/) makes a great waterproof notebook). A pack suitable for carrying clothing, equipment, and water during field trips.

Grading

<http://www.tacoma.uw.edu/enrollment-services/grading-policies>

Grades will be based on a field journal, weekly quizzes (trivia style), 4 field trip participation assignments, one field exam, a virtual field trip presentation, and participation in presentation proposals and peer reviews. Each item will have a due date and time except the field exam and virtual field trip presentation which will occur during class.

Assignments, weights, and due dates are listed below:

**Assignment Due Date % of Grade**

Field Journal Weekly, on Thursdays 20

Weekly quizzes Weekly, on Thursdays (except

on field trip days ) 10

Virtual Field Trip proposal April 23 (complete in class) 5

Natural History Report/ April 21, first draft for

Peer Review peer review, 4/28 final draft 20

Field Exam May 5 (in class) 20

Virtual Field Trip Presentation June 2 & 4 (in class) 25

**Course Schedule**

|  |  |  |
| --- | --- | --- |
| **DATE** | **TOPIC** | **READINGS** |
| 3/31 | Course Introduction/ Intro to observation and journaling |  |
| 4/2 | Geological history; climatic gradients (**Quiz 1)** | Chapter 1& 2: Climate and Weather |
| 4/7 | Interpreting forest patterns (**Quiz 2)** | Chapter 5: Life on Land |
| 4/9 | **FIELD TRIP:** Swan Creek Natural Area | Chapter 5 continued |
| 4/14 | River and riparian process and restoration: Elwha River | [Acker et al. 2008](http://www.bioone.org/doi/abs/10.3955/0029-344X-82.S.I.210)  [Elwha Dam Removal Brochure](http://www.nps.gov/olym/learn/nature/upload/Elwha-River-Restoration-Brochure-2013_Final.pdf) |
| 4/16 | Riparian systems continued (**Quiz 3)** | [Acker et al. 2008](http://www.bioone.org/doi/abs/10.3955/0029-344X-82.S.I.210)  [Restoration Planning](http://www.ser.org/resources/resources-detail-view/ser-international-primer-on-ecological-restoration#9) |
| 4/21 | Peer review/ Final Project planning |  |
| 4/23 | Wetlands **(Quiz 4)** | Pages 276-284[, DOE Wetland Rating System](https://fortress.wa.gov/ecy/publications/publications/0406025.pdf) |
| 4/28 | **FIELD TRIP:** Tacoma Nature Center | Chapter 6: Animal Life in the Lowlands |
| 4/30 | Interpreting signs of animal activity/ Field exam review (**Quiz 5)** | Chapter 6 continued |
| 5/5 | Field Exam |  |
| 5/7 | **FIELD TRIP**: University of Puget Sound Slater Museum of Natural History |  |
| 5/12 | Marine environments | Chapter 4: Marine Life in the Puget Sound |
| 5/14 | Marine environments continued **(Quiz 6)** | Chapter 4: Marine Life in the Puget Sound |
| 5/19 | **FIELD TRIP:** Nearshore marine environments @ Titlow Beach |  |
| 5/21 | Species richness Activity/Montane environments and adaptations (**Quiz 7)** | [Species Richness](http://www.colby.edu/biology/BI131/Lab/Lab07CalcBiodivers.pdf)  Chapter 8: Montane Natural History |
| 5/26 | Montane environments cont./ Shrub Steppe | Chapter 8: Montane Natural History |
| 5/28 | Shrub Steppe environments (**Quiz 8)** | [Shrub Steppe (pages 7-40 only)](http://www.osti.gov/scitech/servlets/purl/888924) |
| 6/2 | Natural History Virtual Field Trips |  |
| 6/4 | Natural History Virtual Field Trips |  |

Teaching and Learning CenterThe TLC provides a wide variety of instructional resources and support for teaching and learning at UW Tacoma. Teaching and learning are ongoing processes that take practice, commitment, and time. We are here to assist you in achieving your goals and provide math/quantitative, writing, science, and other tutoring services.

<http://www.tacoma.washington.edu/tlc/>

Academic Standards/Plagiarism

All student work must be free of plagiarism. Plagiarism is defined in the University catalog and in the Student Handbook. Consult your professor if you have any questions.

A major part of your experience in the class will be reading, synthesizing, and using the knowledge and ideas of others. It is the responsibility of the faculty to help you in this process and to be certain you learn to credit the work of others upon which you draw. To plagiarize is to appropriate and to pass off, as one's own ideas, writing or works of another. Plagiarism is no less of a misconduct violation than vandalism or assault. Ignorance of proper documentation procedures is the usual cause of plagiarism. This ignorance does not excuse the act. Students are responsible for learning how and when to document and attribute resources used in preparing a written or oral presentation.

For more information, please refer to the “Student Academic Responsibility” document prepared by the Committee on Academic Conduct in the College of Arts and Sciences, UW Seattle:

<http://depts.washington.edu/grading/pdf/AcademicResponsibility.pdf>

Library

The UWT Library provides resources and services to support students at all levels of expertise. We guide students through the research process, helping them learn how to develop effective research strategies and find and evaluate appropriate resources. For more information about the Library and its services, see:

<http://www.tacoma.washington.edu/library/>

Electronic Devices

Electronic devices (including, but not limited to, cell phones, pagers, laptops, and personal digital assistants) may only be used in the classroom with the permission of the instructor. Activities that are non-relevant to the course, such as checking/sending email, playing games, and surfing the web, are considered disruptive activities when class is in session.

E-mail Policy

<http://www.tacoma.washington.edu/policies_procedures/E-mail_Policy.pdf>

**Student Health Services**

Student Health Services (SHS) is committed to providing compassionate, convenient, and affordable health care for University of Washington Tacoma students, from care for illness and minor injury to women’s health and preventative medicine, including vaccination services. Insurance is not required. Funded by UW Tacoma student fees, office visits are provided free of charge. Treatment plans may incur costs, such as medications, labs, or vaccines, most of which are offered at discounted rates. For more information, please visit www.tacoma.uw.edu/shs or email at uwtshs@uw.edu. If you have questions or would like to schedule an appointment, please call (253) 692-5811 or stop by SHS at the Laborer’s Hall on Market Street.

Counseling Center (Student Success)

The Counseling Center offers short-term, problem-focused counseling to UW Tacoma students who may feel overwhelmed by the responsibilities of college, work, family, and relationships. Counselors are available to help students cope with stresses and personal issues that may interfere with their ability to perform in school. The service is provided confidentially and without additional charge to currently enrolled undergraduate and graduate students. To schedule an appointment, please call 692-4522 or stop by the Student Counseling Center (SCC), located in MAT 354.

<http://www.tacoma.washington.edu/studentaffairs/SHW/scc_about.cfm/>

Disability Support Services (Student Success)

The University of Washington Tacoma is committed to making physical facilities and instructional programs accessible to students with disabilities. Disability Support Services (DSS) functions as the focal point for coordination of services for students with disabilities. In compliance with Title II of the Americans with Disabilities Act, any enrolled student at UW Tacoma who has an appropriately documented physical, emotional, or mental disability that "substantially limits one or more major life activities [including walking, seeing, hearing, speaking, breathing, learning and working]," is eligible for services from DSS. If you are wondering if you may be eligible for accommodations on our campus, please contact the DSS reception desk at 692-4522.

<http://www.tacoma.washington.edu/studentaffairs/SHW/dss_about.cfm/>

Campus Safety Information

<http://www.tacoma.uw.edu/administrative-services/campus-safety>

Safety Escort Program

For your safety, UW Tacoma encourages students, faculty, staff and visitors to use the Safety Escort Program. Campus Safety Officers are available to walk you to your car or other campus destinations during the following hours: Monday - Thursday — 6 a.m. to 11 p.m.; Friday — 6 a.m. to 10 p.m. The service is free of charge. During busy periods, the Campus Safety Officer may ask you to meet in a common location as to facilitate escorting multiple people. Dial 253-692-4416 to request a Safety Escort.

In case of a fire alarm

Take your valuables and leave the building. Plan to return to class once the alarm has stopped. Do not return until you have received an all clear from somebody "official," the web or email.

In case of an earthquake

DROP, COVER, and HOLD. Once the shaking stops, take your valuables and leave the building. Do not plan to return for the rest of the day. Do not return to the building until you have received an all clear from somebody "official," the web‚ or email.

Inclement Weather

Call (253) 383-INFO to determine whether campus operations have been suspended. If not, but driving conditions remain problematic, call the professor's office number. This number should provide information on whether a particular class will be held or not, and/or the status of pending assignments. If the first two numbers have been contacted and the student is still unable to determine whether a class will be held, or the student has a part-time instructor who does not have an office phone or contact number, call the program office number for updated information.