

BOTANY 3473 - Plant Geography

Lecture: T, TH, 9-10:15, Room: Virtual

Instructor: Dr. Jim Cohen
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Course Objectives: Plants are distributed across the planet, and they follow particular patterns in their geographic distribution. The manner in which plant communities are assembled, the characteristics of these plant communities, and the way in which researchers understand the origin, growth, and human modifications of these communities are important topics for botanists to explore as there are a myriad of patterns that cross communities, are restricted to particular communities, and have arisen independently in multiple regions. To this end, Plant Geography will be an investigation of our current biomes, patterns of plant distributions, and experience with methods botanists use to examine the geography of plant taxa.

According to Socrates, "Education is the kindling of a flame, not the filling of a vessel." By gathering and discussing botanical knowledge throughout this course, you will have the opportunity to stoke your intellectual flame. If you do so, your flame will burn brighter, and your ability to create, analyze, and synthesize information will grow. If not, the kindling will sit idle, not helping build the fire of your botanical intellect.

Learning Objectives: Upon successful completion of this course, you will understand:

- Understand how the relationships between earth and sun affect the nature of distribution of Earth's climates and how these climates affect the distribution of soils and vegetation.
- Understand the relationships between plate tectonics and plant distributions
- Learn basic principles of plant evolution
- Understand the biology and mechanics of plant migration and distribution
- Learn how to define and characterize Earth's major biomes
- Study problems of plant geography using models from the Galapagos Islands, the islands of the Great Salt Lake, and other areas of interest in the western United States
- Learn simple mathematical tools used to quantify similarities and differences between plant communities

Text: *Biogeography, 5th edition* by Mark Lomolino, Brett Riddle, and Robert Whittaker, ISBN: 1605354724; Additional readings will be provided.

Grading:

Exam 1	100 points
Exam 2	100 points
Figure and lightning presentations	50 points
Plant distribution assignment	100 points
Participation	100 points
Final Exam (Cumulative)	150 points
Total	600 points

Course Schedule

Date	Topic	Readings
Aug. 25	Introduction	BG Chapter 1
Aug. 27	Introduction to plant geography	EWV Chapter 1
Sept. 1	Tropical forests (V for asynchronous virtual class)	EWV Chapter 2
Sept. 3	Tropical savannas	EWV Chapter 3
Sept. 8	Arid biomes (V)	EWV Chapter 4
Sept. 10	Mediterranean ecosystems	EWV Chapter 5
Sept. 15	Temperate forests (V)	EWV Chapter 6
Sept. 17	Transects	
Sept. 22	Temperate grasslands (V)	EWV Chapter 7
Sept. 24	Coniferous forests	EWV Chapter 8
Sept. 29	Tundras (V)	EWV Chapter 9
Oct. 1	Figure presentation and discussion	BG Chapter 3
Oct. 6	Wetlands et al. (V)	EWV Chapter 10
Oct. 8	Battle of the Biomes!	
Oct. 13	Exam 1	
Oct. 15	Historical biogeography history and discussion	BG Chapters 2
Oct. 20	Ancient floras (V)	BG Chapters 8 and 9
Oct. 22	Relationships of floras 1	BG Chapter 10
Oct. 27	Relationships of floras 2 (V)	
Oct. 29	Island biogeography	BG Chapter 13
Nov. 3	Phylogenetics, biogeographic areas, and biogeographic models (V)	BG Chapter 11
Nov. 5	BioGeoBEARS	
Nov. 10	Land bridges (V)	
Nov. 12	Lightning Biogeography!	
Nov. 17	Island-like biogeography (V)	
Nov. 19	Geography of plants for Thanksgiving	
Nov. 24	Exam 2	
Nov. 26	No class - Thanksgiving	
Dec. 1	Phylogeography (V)	BG Chapter 12
Dec. 3	Presentation on plant distribution of interest	

The instructor reserves the right to make any changes necessary to the course and will inform the students as changes occur.

Class Behavior: Be respectful of your classmates, and do not disturb them by talking in class, arriving late, or participating in other disruptive behavior. Furthermore, you are not permitted in class to use cellular phones, pagers, two-ways, or other similar types of devices. If you use your cellular phone or other device in class, you may be asked to leave class due to the disruptive nature of your activity. Remember to act as you wish others would act.

Email Policy: I will respond to emails within 48 hours of receiving them, but only if the email includes all of the following: subject, salutation, body, and signature. Correct spelling and grammar are expected.

Make-up Exams and Late Assignments: Turning in assignments after the deadline or scheduling a make-up exam will not be possible unless you discuss the matter with the professor at least 24 hours before the assignment is due or the test is administered. Should there be extenuating circumstances (e.g., severe illness, funeral, accident), contact me as soon as possible in order to reschedule. Should you not follow these guidelines, you will receive a zero for the assignment or exam.

ADA accommodations: Any student requiring accommodations or services due to a disability must contact Disability Services (DS) in room 181 of the Student Services Center or Room 256 at the Davis Campus. Disability Services can also arrange to provide course materials (including this syllabus) in alternative formats upon request."

Academic integrity: The WSU Student Code defines plagiarism as 'the unacknowledged (uncited) use of any other person or group's ideas or work' (Section 6-22, part IV, subsection D, 2, b). Academic dishonesty includes, but is not limited to, cheating, plagiarism, collusion, falsification, accessing unauthorized course or test information, using unauthorized resources, or breaches of copyright laws. None of these will be tolerated in this class. The penalty for academic dishonesty in this course is failure on the assignment and possibly the course, depending on circumstances.

Inclusive (virtual) classroom: Pivotal to Weber State University's mission is the need to embrace and value the diversity of its members. Acknowledging the uniqueness of each individual, we seek to cultivate an environment that encourages freedom of expression. Because the University is a community where inquiry is nurtured and theories are tested, every individual has the right to feel safe to express ideas that differ from those held by other members of the community. However, all persons who aspire to be part of our campus community must accept the responsibility to demonstrate civility and respect for the dignity of others. Recognizing that the proper balance between freedom of expression and respect for others is not always apparent or easy to achieve, we must continually challenge ourselves and each other in an atmosphere of mutual concern, good will and respect. Therefore, expressions or actions that disparage an individual's or group's ethnicity, gender, religion, sexual orientation, marital status, age or disability are contrary to the mission of Weber State University.

Core beliefs: According to the University's Policies and Procedures Manual (PPM 6-22 IV), students are to "[d]etermine before the last day to drop courses without penalty, when course requirements conflict with a student's core beliefs. If there is such a conflict, the student should consider dropping the class. A student who finds this solution impracticable may request a resolution from the instructor. This policy does not oblige the instructor to grant the request, except in those cases when a denial would be arbitrary and capricious or illegal. This request must be made to the instructor in writing and the student must deliver a copy of the request to the office of the department head. The student's request must articulate the burden the requirement would place on the student's beliefs.

University closure: If for any reason the university is forced to close for an extended period of time, we will conduct our class via Canvas, e-mail, or whatever form of communication is most conducive to our class structure for each class.

Course Fees: There is no course fee associated with this class.

Covid-19 Revised Course Delivery Information: Our course this semester will include synchronous (meaning that we will meet together, online, at our regularly scheduled class time) online class sessions and asynchronous class material. You can enhance your success in these synchronous sessions by following the guidelines below:

1. Students will be required to use web conferencing software such as Zoom, Google Meet and Canvas Conferences for both office hours and synchronous class sessions. A webcam and mic are required to participate effectively in web conferencing sessions.
2. Access to video conferencing will be provided via a link in a course announcement. If you are new to Zoom, find easy set up and access information here.
3. Copy and paste the URL (or click on the web link) provided by your instructor at the time specified for the meeting. Launch the app (after initially downloading, installing, and logging in), and you will enter the meeting immediately.
4. You may choose to use your mobile device.
5. Please take note of the following:
 - Make every effort to be logged in to the class session 5 minutes early so we can start on time.
 - Mute your microphone at all times unless you are speaking.
 - When participating in a web conference, it is beneficial for our learning community to see you. Please have your camera on during the event. When presenting or speaking to the class during a web conference, students are highly encouraged to activate their webcam so others receive the full message, including non-verbals. *NOTE: If you are unable to or wish not to use the video feature, please contact me and we can discuss options.*
 - Demonstrate etiquette for online engagement (i.e. pause between speakers so as not to interrupt, use the hand-raising icon to speak, please dress as if you were coming to a face to face class).
 - If you need to take a break, please turn off your video and mute yourself. Do not take your device.
 - Be engaged! This should be an enjoyable experience.
6. I would like you to use a webcam in my class because I want to:
 - know who is in my Zoom lecture for security.
 - get to know my students, especially during these uncertain times.
 - do breakout rooms on Zoom and you need to know who is in your breakout group. I want you to feel comfortable.
 - go around to the breakout room and check in with you. By seeing your name and face, I can see your screen sharing and assess your engagement more effectively.
7. For your security, I request that you use your first name and last initial only on your Zoom profile.