

BIOL 6101-029

Seminar: Plant physiological acclimation to
global change
Fall 2022

Course Description

Students in this course will read and discuss classical and recent literature on plant physiological acclimation to global change. Specific articles and topics will be chosen based on student interests.

Class Time and Location

Day and time: TBD

Experimental Sciences Building II (ESB II) Room 409 or otherwise agreed upon.

Instructor

Dr. Nick Smith

ESB II Room 402D

806-834-7363

nick.smith@ttu.edu

Meetings by appointment

Recommended Texts

Plant Physiological Ecology (2nd Edition; 2008) by Lambers, Chapin, and Pons

The book can be accessed from Springer here: <https://www.springer.com/us/book/9780387783406>. Click on "Access this title on SpringerLink." It can also be accessed through the TTU library.

Plant Physiology and Development (6th Edition) by Taiz, Ziegler, Moller, and Murphy

Mode of Instruction

All instruction will be done face-to-face unless the university directs classes be taught online (see next section).

Contingency Statement

This course is being taught primarily in the face-to-face learning mode. The University will continue to monitor CDC, State, and TTU System guidelines in continuing to manage the campus implications of COVID-19. Any changes affecting class policies or delivery modality will be in accordance with those guidelines and announced as soon as possible. If Texas Tech University campus operations are required to change because of health concerns related to the COVID-19 pandemic, it is possible that this course will move to a fully online delivery format. Should that be necessary, students will need to have access to the Internet, a webcam, and microphone for remote delivery of the class.

Course Materials

All course materials, including lecture slides, readings, activities, and code will be posted to a GitHub repository for the course. The primary repository address is https://github.com/SmithEcophysLab/biol6101_fall2022.

Learning Objective

This course will broadly focus on understanding plant physiological acclimation responses to changes in environmental conditions, with a focus on global changes that are expected due to ongoing anthropogenic activities. Class activities will be based on discussion and dissemination of ideas, including classic and recent scientific literature. Topics will be flexible and modified to match student interests where possible.

Attendance Policy

Attendance is strongly recommended. The course assessments will be done during class (see below).

Course Assessment

Participation and Engagement

Being an active and engaged participant in the class will benefit your understanding of material as well as your peers'. Examples include asking questions, providing feedback, and facilitating discussion. Participation and engagement of each student will be monitored during each class period and will constitute the only assessment.

Grading

Participation and Engagement: 100%

Grading Scale

A: $\geq 90\%$

B: 80 – 90%

C: 70 – 80%

D: 60 – 70%

F: $\leq 59.9\%$

Missing In-class Activities

Students will be required to be in class to receive participation and engagement points. Please read below if class is to be missed due to an officially approved trip, illness, or special circumstance:

Officially Approved Trips

The person responsible for a student representing the University on officially approved trips should notify the instructor of the departure and return schedules in advance. For other University-approved curricular and extracurricular activities, the instructor must be presented with verifiable documentation prior to the first absence. The student will not be penalized for the absence but is responsible for the material missed.

Illness Based Absence Policy

If at any time during this semester you feel ill, in the interest of your own health and safety as well as the health and safety of your instructors and classmates, you are encouraged not to attend face-to-face class meetings or events. Please notify your instructors as soon as possible to ensure your absence for illness will be excused. You are strongly encouraged to visit with either Student Health Services at (806) 743-2848 or your health care provider. A “return to school” note from your provider will be required to return to class. You will still be responsible to complete within a week of returning to class any assignments, quizzes, or exams you miss because of illness.

Special Circumstance Absence

There may be special circumstances that render missing class unavoidable. If this arises, please let Dr. Smith know of the situation as soon as possible, so that the loss of point due to the absence can be discussed.

TTU COVID-19 Policy Reminders

- Although COVID-19 vaccinations are not mandated, Texas Tech strongly recommends that all students be vaccinated and receive a booster when eligible. The vaccines are safe and effective.
- Please visit the university’s coronavirus (COVID-19) page for additional information about on-campus vaccination and testing schedules, reporting a positive test result, and submitting vaccination records: <https://www.depts.ttu.edu/communications/emergency/coronavirus/>.
- Face masks are strongly encouraged in classrooms and other public indoor settings on campus, including the Student Wellness Center.
- If you are sick or not feeling well, you should stay at your place of residence and wear a mask when around others. Do not attend class, work, or social

functions. If you brought a COVID-19 home test kit, please use it to determine whether you are positive for the virus.

- For students living in an on-campus residence, a limited number of tests are available from Community Advisors in residence halls. Please reach out to yours virtually to request one.
- Students can also be tested at an on-campus site.
- Students who meet the qualifications can contact Student Health Services to schedule an appointment to be tested. All students in university housing should develop an action plan in the event they are required to self-isolate due to a positive COVID-19 diagnosis. This plan should include a location to complete the self-isolation, access to groceries/meal delivery, access to necessary medications, numbers of emergency contacts, and contact information for their preferred healthcare provider.
- All students (both vaccinated and unvaccinated) who have been identified as having a known exposure to a COVID-19 positive person should follow CDC guidance (<https://www.cdc.gov/coronavirus/2019-ncov/your-health/quarantine-isolation.html>), which says:
 - If you are exposed but not vaccinated or up to date on vaccinations and boosters:
 - * Quarantine for at least five days.
 - * Wear a well-fitting (preferably N95 or KN95) mask if you must be around others.
 - * Do not travel.
 - * Get tested at least five days after exposure.
 - If you are exposed and are up to date on vaccinations and boosters:
 - * No quarantine is necessary unless you develop symptoms.
 - * Get tested at least five days after exposure.
 - If you exposed and have had confirmed COVID-19 within the past 90 days:
 - * No quarantine is necessary unless you develop symptoms.
- Self-isolation for five days is required for all students (vaccinated or unvaccinated) who test positive for COVID-19. After the five-day isolation period, if the student is asymptomatic or their symptoms are resolving (fever free without the use of fever reducing medication for 24 hours), they may return to class/activities but should wear a face mask for an additional five days.

- Students who are positive should report the result. This generates a letter that you can provide to your professors and instructors, notifying them of your positive diagnosis.

Special Considerations

Accommodations for Disabilities

Any student who, because of a disability, may require special arrangements to meet the course requirements should contact the instructor as soon as possible to make any necessary arrangements. Students should present appropriate verification from Student Disability Services during the instructor's office hours. Please note that instructors are not allowed to provide classroom accommodations to a student until appropriate verification from Student Disability Services has been provided. For additional information, please contact the Student Disability Services office in 130 Weeks Hall or call 806-742-2405.

Religious Holy Days

“Religious holy day” means a holy day observed by a religion whose places of worship are exempt from property taxation under Texas Tax Code §11.20. A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. A student who is absent from classes for the observance of a religious holy day shall be allowed to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence. A student who is excused may not be penalized for the absence; however, the instructor may respond appropriately if the student fails to complete the assignment satisfactorily.

Academic Integrity

As stated in the Texas Tech University catalog, “The attempt of any students to present as their own work that they have not honestly performed is regarded by the faculty and administration as a serious offense and renders the offenses liable to serious consequences, possibly suspension.” This statement applies to cheating in whatever manner, including plagiarism.

TTU Resources for Discrimination, Harassment, and Sexual Violence

Texas Tech University is committed to providing and strengthening an educational, working, and living environment where students, faculty, staff, and visitors are free from gender and/or sex discrimination of any kind. Sexual assault, discrimination, harassment, and other Title IX violations are not tolerated by the University. Report any incidents to the Office for Student Rights & Resolution, (806)-742-SAFE (7233), or file a report online at <https://www.depts.ttu.edu/titleix/>. Faculty and staff members at TTU are committed to connecting you to resources on campus. Some of these available resources are: TTU Student Counseling Center, 806-742-3674, <https://www.depts.ttu.edu/scc/> (provides confidential support on campus). TTU Student Counseling Center 24-hour Helpline, 806-742-5555, (assists students who are experiencing a mental health or interpersonal violence crisis; if you call the helpline, you will speak with a mental health counselor). Voice of Hope Lubbock Rape Crisis Center, 806-763-7273, voiceofhopelubbock.org (24-hour hotline that provides support for survivors of sexual violence). The Risk, Intervention, Safety and Education (RISE) Office, 806-742-2110, <https://www.depts.ttu.edu/rise/> (provides a range of resources and support options focused on prevention education and student wellness). Texas Tech Police Department, 806-742-3931, <http://www.depts.ttu.edu/tttd/> (to report criminal activity that occurs on or near Texas Tech campus).

LGBTQIA

Please contact the Office of LGBTQIA, Student Union Building Room 201, 806-742-5433, www.lgbtqia.ttu.edu. Within the Center for Campus Life, the Office serves the Texas Tech community through facilitation and leadership of programming and advocacy efforts. This work is aimed at strengthening the lesbian, gay, bisexual, transgender, queer, intersex, and asexual (LGBTQIA) community and sustaining an inclusive campus that welcomes people of all sexual orientations, gender identities, and gender expressions.

Classroom Civility

Texas Tech University is a community of faculty, students, and staff that enjoys an expectation of cooperation, professionalism, and civility during the conduct of all forms of university business, including the conduct of student–student and student–faculty interactions in and out of the classroom. Further, the classroom is a setting in which an exchange of ideas and creative thinking should be encouraged and where intellectual growth and development are fostered. Students who disrupt this classroom mission by rude, sarcastic, threatening, abusive or obscene

language and/or behavior will be subject to appropriate sanctions according to university policy. Likewise, faculty members are expected to maintain the highest standards of professionalism in all interactions with all constituents of the university (www.depts.ttu.edu/ethics/matadorchallenge/ethicalprinciples.php).

Academic Integrity

Academic integrity is taking responsibility for one's own class and/or course work, being individually accountable, and demonstrating intellectual honesty and ethical behavior. Academic integrity is a personal choice to abide by the standards of intellectual honesty and responsibility. Because education is a shared effort to achieve learning through the exchange of ideas, students, faculty, and staff have the collective responsibility to build mutual trust and respect. Ethical behavior and independent thought are essential for the highest level of academic achievement, which then must be measured. Academic achievement includes scholarship, teaching, and learning, all of which are shared endeavors. Grades are a device used to quantify the successful accumulation of knowledge through learning. Adhering to the standards of academic integrity ensures grades are earned honestly. Academic integrity is the foundation upon which students, faculty, and staff build their educational and professional careers. [Reference: Texas Tech University Quality Enhancement Plan, Academic Integrity Task Force, 2010].

Schedule of Topics by Week

29/08/22 – Introductions, semester planning, and goals

05/09/22 – Physiology and ecology basics (as needed)

12/09/22 – Acclimation TBD

19/09/22 – Acclimation TBD

26/09/22 – Acclimation TBD

03/10/22 – Acclimation TBD

10/10/22 – Acclimation TBD

17/10/22 – Acclimation TBD

24/10/22 – Acclimation TBD

31/10/22 – Acclimation TBD

07/11/22 – Acclimation TBD

14/11/22 – Acclimation TBD

21/11/22 – Acclimation TBD

28/11/22 – Acclimation TBD