

BIOL810P: Fire Ecology & Management in Grasslands

Department of Biology, University of Nebraska-Kearney

Course Credits: 1
Course Online -
Delivery: Asynchronous

Course Overview

Familiarizes students with the role of fire as a major ecosystem process in grasslands and its use as a management tool. Per the [UNK Graduate Course Catalog](#).

Course Learning Objectives

At the completion of this course, you will be able to:

1. Recognize oxygen, fuel, and heat as requirements for initiating and maintaining fire.
2. Use common wildland fire terminology to describe key characteristics of fuels, weather, and topography contributing to fire behavior in wildland environments, with particular emphasis on grasslands.
3. Recognize adaptations of plant and animal species driving grassland community and ecosystem responses to fire.
4. Identify characteristics of fire as a key disturbance in grasslands.
5. Recognize prescribed fire as a management tool to maintain and restore grasslands.

Instructor

Dr. Jayne Jonas, UNK Department of Biology – BHS318, jonasj@unk.edu, office: 308.865.8224

Office hours

Mondays 12 – 1 PM CDT and Wednesdays 12 – 2 PM CDT

I will be available in [Zoom](#) (Meeting ID: 918 0596 2963, Passcode: 248059) during these times. Please feel free to check-in or ask any questions you might have during these times. If there are 2 or more in a Zoom session, I will rotate through you in the order in which you joined. We use breakout sessions to discuss grades or any private matters, or to accommodate office-hour visits by on-campus students.

If these times do not work for you, please reach out so we can schedule an appointment at a different time.

Important University Dates

- First day of the session: August 26, 2024
- Labor Day (no classes): September 2, 2024
- Last day to withdraw: October 4, 2024
- Last day of the session: October 20, 2024
- See the [UNK Academic Calendar](#) for other important University dates

Required Texts and Materials

- There is no required textbook for this course.
- Some required and optional materials may be provided via the Library Reserves or require accessing via Library citation finder (requires signing in with UNK student credentials).
- Any other course materials (required or optional) will be posted or linked in Canvas.

Required Technology

- As an online course completed in 8 weeks, access to an **up-to-date computer** and frequently checking [Canvas](#) is required – at least several times per week though checking in daily is encouraged. Use of an obsolete computer operating system may hinder functionality of both Canvas.
 - All quizzes should be completed from a computer browser. Issues may arise if using the Canvas mobile app or browser on a mobile device to complete quizzes.
- Ability to use search engines (for example, [Google Scholar](#) or [the Calvin Library search engine](#)) to locate scholarly works is expected of graduate students. If you are not already comfortable with this, I encourage you to reach out to me or the [Natural Sciences Librarian](#) at Calvin Library for assistance.
- You may need to use a word processing software, such as Microsoft Word or [Google Docs](#).
 - [Microsoft 365](#) software is available to UNK students for free download.
 - Familiarity with spreadsheet programs such as Microsoft Excel or Google Sheets may be helpful.
- For issues with Canvas or other technologies associated with your university account, please contact the [University technology help desk](#).

Course Organization

There are 8 content modules assigned over 8 weeks. As a 1-credit course completed in 8 instructional weeks, it is expected that an average student achieving an average grade will spend [at least 6 - 8 hours per week on this course](#).

Each module consists of module learning objectives, short lecture(s), assigned readings, and any other assigned learning materials, as well as assessments. One module will be covered each week (Monday 12:01 am CDT to Sunday 11:59 pm CDT). Specific assignments and due dates are listed separately in the Course Schedule. All materials will be listed, posted, or linked in Canvas and due dates/times are in Central Daylight Time.

Participation

Engagement in the course is key to achieving course learning outcomes. I encourage you to spend at least a little time each day with course material or activities though I recognize this is not always possible. I am here as a resource for you, contact me or stop in for virtual office hours whenever you would like – even if for informal discussions.

Communication

Please check the Course Announcements in Canvas and your UNK email frequently. These are the primary ways I will communicate with you about any changes, updates, and reminders.

Please feel free to reach out to me at any time. I am available via Canvas messages (preferred), email, or office phone. I will respond by email or through Canvas as quickly as possible, usually within 24-48 hours depending on the type of question and depth of response required. If sending an email or leaving a voicemail, please be sure to include the BIOL810 in the subject (email) or message (voicemail) so I can prioritize responding to it.

Course Assessments

All work is assigned individually to all students and due by 11:59 PM CDT on the date listed in Canvas and on the Course Schedule, unless otherwise indicated. If there is a discrepancy between the course schedule and Canvas, dates in the course schedule take precedence.

You are responsible for all material covered, even for assignments that are missed or for which the score will be dropped. Adjustments to assessments and point values may be made if deemed necessary by the instructor; students will be notified as soon as possible of any changes.

Discussion

Weekly discussions in the first part of the semester will provide you an opportunity to critically examine concepts and reflect on your understanding of them. They are also a great opportunity for you to aid one another in learning. My hope is that these discussions will allow you to directly engage with your classmates and enrich your learning experience. We will uphold [UNK Values](#) (Learning Matters, Learning Environment Matters, People Matter, Responsible Stewardship Matters) and any other principles of community identified by the class to establish the discussion board as a supportive and inclusive learning space.

You are expected to compose at least **two posts** for each discussion (more are encouraged!): one in direct response to a discussion prompt on or before **11:59 PM CDT Thursday** and a response to another student on or before **11:59 PM CDT Sunday** of the assigned week. Participation in each discussion is worth 9 points. The grading rubric and expectations are available in Canvas. There will be 5 discussions, all discussion will count toward the course grade.

I will follow discussions throughout each module. However, being cognizant that students will be posting at different times and to avoid steering discussion too much, I will generally limit my contributions to questions specifically directed to me or areas in need of immediate attention. I may share additional thoughts at the end of the discussion.

Literature Review project

Throughout the semester, you will research the ecology and management of fire in a grassland system based primarily on published scientific literature leading to completion of a short literature review paper. The grading rubric and expectations for each component is available in Canvas. All project-related components will be due by **11:59 PM CDT on Sunday** of the assigned week.

Assignments: There will be three during the first four weeks of the course. Instructor feedback on these assignments should be used to aid in preparing your literature review paper. These assignments are worth 10 points each.

Peer review: You will be assigned a classmate's literature review by the beginning of Module 7. You will read and provide your classmate with constructive feedback by the end of Module 7. The peer review is worth 10 points.

Literature review paper: The completed paper is due by the end of Module 6 (50 points). After receiving instructor and peer feedback by the end of Module 7, students will have the opportunity to submit a revision (50 points) due Friday of week 8. Both submissions will be graded using the same expectations. If a revision is not submitted, the percent score from the Module 6 submission will be assigned as the revision score. The literature review paper takes the place of a comprehensive final exam.

Concept Check Quizzes

There will be a 15-point quiz related to the learning objectives of each module. Quizzes are to be completed by each student independently (*i.e.*, no collaboration with others). Quizzes may require reference to tables in the text or other course materials and may include simple calculations requiring a calculator or spreadsheet.

Quizzes are due by 11:59 PM CT each **Sunday**. Quizzes are open book/note (not proctored) with **30 minutes** to complete each attempt. You will be unable to pause the quiz once started. **Two attempts** are available for each quiz; the highest score will be recorded. The one lowest recorded score across the eight quizzes will be dropped on a rolling basis. **Important note:** A computer is recommended for completing quizzes. Issues may arise when using the Canvas mobile app.

Basis for final grade

<i>Assessments and point distribution*</i>	Points	%
Discussions (5 @ 9 points each)	45	15%
Quizzes (8 @ 15 points each, 1 dropped)	105	35%
Literature Review project	150	50%
Assignments (4 @ 10 points each)	40	
Peer-review (1)	10	
Paper submission	50	
Paper revision	50	
Total	300	100%

*Adjustments may be made as deemed necessary by the instructor.

Final letter grades will be assigned based on total earned points as a percentage of the total possible points as follows:

A:	90 - 100%	B:	80 - < 90%	C:	70 - < 80%
D:	60 - < 70%	F:	< 60%		

Course Policies

Grading Policy

It is important to me that this course provides you an intellectually challenging and rewarding experience. As your instructor, I am committed to you and to providing support needed to help you achieve the goals you've set for yourself in this course. I will respond individually to the work you submit with the goal of aiding you on your journey of building understanding of and proficiency with course material. I also pledge to return your work promptly. I will make every effort to return your work within one week. If grading will take longer than this, I will keep you informed of my progress. Please know that I will return your work as soon as I can.

If you think there was a grading error or do not understand feedback you receive, please contact me as soon as possible. If you would like me to regrade an assessment, requests should be made within three days after the graded work has been returned to you. Regrade requests may result in a lower grade.

Course grade: Accommodations for cases in which an end of semester grade percentage is <0.50% of the next highest letter grade must be requested by the student by 8 AM CT on the day after final course grades are posted in Canvas. I will take participation and engagement throughout the course into consideration in deciding whether to make a final grade accommodation. When granted, course letter grade accommodations will result in a half-letter increase (for example, an 89.51% would be an A- for an accommodated student). Accommodations will not be considered for grade percentages $\geq 0.50\%$ from the next letter grade.

Plagiarism: It is of utmost importance in this course to understand and avoid plagiarism (including the use of artificial intelligence). Writing discussion posts and the literature review paper are core features of this course. TurnItIn may be used for assignments submitted in Canvas. For more information and tips, please visit the TurnItIn's webpage "[Preventing Plagiarism when Writing](#)" or reach out to me for guidance. If you plagiarize in your submitted work, you could lose credit for the plagiarized work, fail the assignment, or fail the course. Each instance of plagiarism, classroom cheating, and other types of academic dishonesty will be addressed on a case-by-case basis and in accordance with the [UNK Academic Integrity policy](#).

Late Work Policy

As a student enrolled in this course, one of your responsibilities is to submit course work on time. I also recognize there may be times when you are unable to complete or submit these tasks by their due dates, so two discussion participation and two quiz scores will be dropped. Canvas

automatically adjusts your course grade throughout the semester (*i.e.*, on a rolling basis) to reflect dropping the lowest value at that time.

I encourage you to submit assignments for up to 5 days after they are due for partial credit. These assignments will receive a one letter grade deduction (10% of points possible) for each day late unless prior arrangements have been made or if there are documented professional or extenuating circumstances (e.g., family emergency, participation in University-sanctioned activities, religious observation, etc.). Please contact me as soon as possible with questions. Grading late work may take longer than the times described in the Grading Policy. If you have submitted work late and it has not been returned within two weeks, please let me know to make sure I am aware it was submitted.

Extra Credit Policy

Extra credit opportunities may be provided at the discretion of the instructor.

University Policies and Resources

All students at the University of Nebraska at Kearney should be aware of the following university-wide course policies and resources.

Final Exam Policy

Finals at UNK will be scheduled Monday through Thursday during the last week of the semester.

Final examinations for full semester classes are to be given at the regularly scheduled examination time only as published on the Office of the University Registrar website policy ([Final Exam Schedule](#)).

During the week prior to Finals Week, the only examinations that may be given are laboratory practical examinations, make-up or repeat examinations, and self-paced examinations.

If a student is scheduled to take three or more final exams in one day during the finals week, the student has the following options take all final exams as scheduled; take the exam during the allotted day and time that is open for make-up examination or resolution of conflict, which is Thursday at 3:30 pm; or take the exam during Finals Week at an agreed-upon time worked out between the student and the instructor. Students seeking accommodation are responsible for notifying their instructor at least one week before the final exam period and providing documentation proving eligibility for accommodation.

Projects, papers, performances, and speeches scheduled for completion during the last week of classes must have been assigned in writing by the end of the eighth week of the semester. This refers to the project and its scope, not the topic.

Complaints about failure to follow the above outlined procedures should be made immediately to the faculty member. If the faculty member is not responsive to the student's concerns, the appropriate department chair should be notified. If necessary, appeals can be filed with the dean of the college offering the course.

Any course not having an examination during Finals Week will meet under the direction of its instructor during the scheduled Finals Week time period for a continuation of regular class work.

The dean may grant exceptions to this policy on the basis of good and sufficient reasons submitted to the dean in writing.

Faculty should include a Finals Week Policy statement indicating that “The final exam will be administered in the time period scheduled during finals week in accordance with University policy ([Final Exam Schedule](#)).”

Academic Honesty Policy

Academic honesty is essential to the existence and integrity of an institution of higher education. The responsibility for maintaining that integrity is shared by all members of the academic community. To further serve this end, the University of Nebraska at Kearney has a policy relating to academic integrity.

[Undergraduate Academic Integrity Policy](#)

[Graduate Academic Integrity Policy](#)

Attendance Policy

Your instructor may have indicated on their syllabus an attendance policy specific to their class. If so, that is the policy with which you must comply. If no other policy is stated, the University-wide attendance policy will apply.

[Undergraduate Student Attendance Policy](#)

[Graduate Student Attendance Policy](#)

Mental Wellness

The UNK Counseling Center provides mental health services to support the academic success of students. The Counseling Center provides a full range of short-term professional mental health services.

Getting help is a smart and courageous thing to do. Contact the UNK Counseling Center at 308-865-8248 or visit their website for more information: https://www.unk.edu/offices/counseling_healthcare/counseling_care/index.php

Military and Veteran Services

Military and Veteran Services assist veterans, service members, and their dependents with education benefits and academic and supporting resources. They serve as a liaison between students and the Veterans Administration and branches of the military. Contact the UNK Military and Veteran Services office at 308-865-8677 or visit their website for more information: https://www.unk.edu/offices/financial_aid/veterans_services/index.php

Reporting Student Sexual Harassment, Sexual Violence or Sexual Assault

Reporting allegations of rape, domestic violence, dating violence, sexual assault, sexual harassment, and stalking enables the University to promptly provide support to the impacted student(s), to take appropriate action to prevent a recurrence of such sexual misconduct, and to protect the campus community. Confidentiality will be respected to the greatest degree possible. Any student who believes they may be the victim of sexual misconduct is encouraged to report to one or more of the following resources:

Local Domestic Violence, Sexual Assault Advocacy Agency 308-237-2599

Campus Police (or Security) 308-865-8911

Title IX Coordinator 308-865-8655

Retaliation against the student making the report, whether by students or University employees, will not be tolerated.

Students with Disabilities

It is the policy of the University of Nebraska at Kearney to provide flexible and individualized reasonable accommodation to students with documented disabilities. To receive accommodation services for a disability, students must be registered with the UNK Disabilities Services for Students (DSS) office, 175 Memorial Student Affairs Building, 308-865-8214 or by email unkdso@unk.edu

Students Who are Pregnant

It is the policy of the University of Nebraska at Kearney to provide flexible and individualized reasonable accommodation to students who are pregnant. To receive accommodation services due to pregnancy, students must contact the Student Health office at 308.865.8218. The following links provide information for students and faculty regarding pregnancy rights. <https://thepregnantscholar.org/title-ix-basics/>

<https://nwlc.org/resource/faq-pregnant-and-parenting-college-graduate-students-rights/>

UNK Policy for Inclusive Excellence

At UNK, inclusive excellence is rooted in our values.

- **People matter.** The diversity of our students, faculty and staff is essential to our educational mission. Our backgrounds, identities, and lived experiences enrich our learning community.
- **The learning environment matters.** We are committed to an inclusive and equitable student-centered learning environment. In our classrooms we exchange ideas and opinions with respect for one another.
- **Learning matters.** Preparing students to value critical thinking, mutual respect, and open communication is essential for lifelong learning. We are building a community that protects and fosters intellectual inquiry and embraces diverse perspectives.

The following link provides information for students regarding UNK's commitment to inclusive excellence and procedures for improving classroom experience with inclusion and belonging: <https://www.unk.edu/about/dei/inclusive-excellence-in-the-classroom.php>.

Tentative Course Schedule

If changes are made, you will be notified as soon as possible.

All assignments are due by 11:59PM CDT on Sunday of the week unless otherwise indicated.

Week	Topic	Assignment(s)
1 8/26-9/1	Introduction to Grasslands and Fire	<ul style="list-style-type: none"> • Concept Check quiz • Begin Project Assign. A (due Week 2) • Discussion 1
2 9/2-9/8	Grassland plant adaptations to fire	<ul style="list-style-type: none"> • Concept Check quiz • Project Assign. A • Discussion 2
3 9/9-9/15	Effects of fire on grassland community dynamics	<ul style="list-style-type: none"> • Concept Check quiz • Project Assign. B • Discussion 3
4 9/16-9/22	Grassland wildlife adaptations to fire	<ul style="list-style-type: none"> • Concept Check quiz • Project Assign. C • Discussion 4
5 9/23-9/29	Fire-grazing synergism in grasslands	<ul style="list-style-type: none"> • Concept Check quiz • Project Assign. D • Discussion 5
6 9/30-10/6	Effects of fire on grassland ecosystem processes	<ul style="list-style-type: none"> • Concept Check quiz • Project Paper
7 10/7-10/13	Prescribed fire as a grassland management and restoration tool	<ul style="list-style-type: none"> • Concept Check quiz • Project Peer-Review
8 10/13-10/20	The changing role of fire in grasslands into the future	<ul style="list-style-type: none"> • Concept Check quiz • Project Revision