Fisheries Ecology BIOL 887, 3 credits Summer 2023 Department of Biology
College of Natural and Social Sciences
University of Nebraska at Kearney

## **CLASS LOCATION AND MEETING TIME:**

This course is delivered entirely in an online format; consequently, there will not be any on-campus meetings. Also, there are no formal online meeting requirements for this course though regular check-ins throughout the week are highly recommended. Deadlines for all assessments are provided in Canvas in several locations (e.g., on the assignment directions, in the announcements, etc.).

#### **INSTRUCTOR'S CONTACT INFORMATION:**

Dr. Melissa R. Wuellner, Associate Professor

Office: BHS 345

Office hours: Happy to provide upon any request!

Office phone: 308-865-8006

Email: wuellnermr@unk.edu or through Canvas

COURSE WEBSITE: See Canvas course page (http://canvas.unk.edu)

\*\*You can also install the Mobile App for Apple or Android.

### **COURSE DESCRIPTION:**

This course was developed to provide a thorough examination of both theoretical and applied aspects of fisheries ecology. Major themes of the course will include individual ecology (feeding, growth, and reproduction), population ecology, and community ecology (predation and competition). Students will explore examples of research and current knowledge in each of these topic areas using instructor-assigned and student-selected readings, discussions, and a review on a selected species. Finally, this course is directed at improving student communication (written and electronic information/technology based) and critical thinking skills.

## STUDENT LEARNING OUTCOMES:

By the end of this course, students should be able to:

- 1) Describe the differences between fisheries ecology, fisheries science, and fisheries management and how these three terms fit together.
- 2) Describe the ecology of any given fish species and how various factors contribute to the success or loss of that species.
- 3) Describe the interaction of fish within their communities, namely through the lenses of predation and competition.

### PREREQUISITES:

There are no formal prerequisites for this course but this course is only open to those who are enrolled at UNK as graduate students.

#### **INSTRUCTIONAL METHOD:**

This course is presented entirely online; therefore, good time management and self-study skills are critical to your success! Extra effort is often required in an online course compared to the classroom-based version because most of the work rests on your shoulders. You will be required to read or view the assigned materials (including the short lecture videos) each week. Most weeks include multiple readings and discussions. Weekly course updates and reminders will be provided via the "Announcements" feature in Canvas. Communication with the instructor can be by phone, e-mail, or in person. You are encouraged to use all three as frequently as needed.

You will be evaluated on your ability to critically evaluate, reflect on, integrate, and apply course information through various assessments, including (but not limited to) regular discussions and a paper on a fish species of your choice. I believe these assessments are more fitting for the kind of things I am hoping that you'll gain from a graduate course rather than using quizzes or exams. Embrace the deep dive into various topics through our discussions and relate what you've learned about individual, population, and community ecology of fish as you work on your final paper!

#### COURSE REQUIREMENTS:

Students are required to complete all assigned readings, view all presentations, and contribute to all discussions as scheduled. Discussion posts and other assignments must be submitted by the assigned due dates. Students should make the effort to log into the class throughout the week rather than just one or two days, even if it is just a "quick check" of the discussions or announcements.

## MISSED ASSIGNMENTS/QUIZZES/EXAMS AND MAKE-UP POLICY:

Any and all discussions and assignments in this class MUST be submitted by the designated deadline (see course calendar below) unless you and I have discussed otherwise. If you do not have an approved absence, you will receive a zero on that assignment. Please note that computer emergencies (e.g., hard drive crashed, etc.) are NOT considered an excuse. You should always have an alternative means of accessing or submitting electronic information and course work. If you have an emergency (e.g., illness, death in the family, etc.), please contact me no later than *36 hours* after the missed deadline to make new arrangements.

#### **REQUIRED MATERIALS:**

All required readings will be provided on Canvas. There is no single textbook to purchase as I will be drawing from many textbooks, journal articles, and potentially other readings to illustrate the concepts of this course. Students will be selecting peer-reviewed articles to present and discuss as well. If you are interested in purchasing any of the textbooks referenced in class for the future, please let me know and I can provide more information.

For research resources, please be sure to use your local university library as well as online search engines (e.g., Google Scholar) as you will likely need to access older articles that may or may not be available online. Remember that the UNK Library has a ton of great resources that are accessible to distance students through electronic access to journals or Interlibrary Loan! Visit <a href="https://library.unk.edu/">https://library.unk.edu/</a> for more information.

**GRADING POLICY:** Below is a roughly estimated breakdown of the assignments and points for this course. Please note that these points may be subject to change but that those changes will be communicated with you in a timely fashion. Grades will be entered in Canvas on an ongoing basis, so you should be aware of where you stand throughout the next 8 weeks.

Grade Item	Points
Introductory Video	10
Species Review Paper (proposed topic, outline, and final paper)	150
Leading Discussion as a Group	50
Discussions (7 discussions x 25 points each)	175
"What if?" Scenario	50
Peer Group Evaluation	25
Final Reflection	25
TOTAL	485

Grades in this class will be assigned according to the standard scoring system described below. Only by attaining these percentages can you be assured of receiving a desired grade.

A+	97 – 100%	Α	94 – 96 %	A-	90 – 93%
B+	87 – 89%	В	84 – 86%	B-	80 – 83%
C+	77 – 79%	С	74 – 76%	C-	70 – 73%
D+	67 – 69 %	D	66 – 64%	D-	60 – 63%
		F	< 60%		

Please note: If your final grade is within 0.5% of the next highest grade, your grade will be rounded up (e.g., an 89.50% will be considered an "A-"). This is the definitive cutoff for rounding grades. There will be <u>no exceptions</u> to this policy.

**COURSE CALENDAR:** This is a *tentative* course schedule. I say "tentative" because, well, stuff can happen (as we learned in 2020!). If changes are made to the schedule, the class will be notified. Check the assignment directions, the Canvas calendar, and the "Announcements" page for due dates for discussions, assignments, and exams. Note that your assigned readings and the lecture materials can be found in the page for that week's topic in Canvas.

Week	Dates	Unit(s)	Topic	Discussions	Assignments			
1	6/5 – 6/11	Course Introduction	Introduction to Fisheries Ecology, Fisheries Science, and Fisheries Management	None	Watch "Course Orientation Video" and first lecture video Complete reading Introduction Video (10 points) Survey for Setting Groups			
2	6/12 – 6/18	Individual Ecology	Feeding, Growth, and Activity	Instructor-led discussion (1)	Watch lecture video and complete reading(s) Submit topic for Species Review paper (10 points)			
3	6/19 – 6/25	Individual Ecology	Reproduction	Group-led discussion (1)	Watch lecture video and complete reading(s) Continue working on Species Review paper			
4	6/26 – 7/2	Population Ecology	Evolutionary Selection	Group-led discussion (1)	Watch lecture video and complete reading(s) Species Review Paper Outline (40 points)			
5	7/3 – 7/9	Population Ecology	Stock-Recruitment Relationships	Group-led discussions (2)	Watch lecture video and complete reading(s) Continue working on Species Review paper			
6	7/10 – 7/16	Community Ecology	Food Webs, Competition, and Symbiosis	Group-led discussion (1)	Watch lecture video and complete reading(s) Species Review paper due (100 points)			
7	7/17 – 7/23	Community Ecology	Invasive Species	Group-led discussion (1)	Watch lecture video and complete reading(s) Scenario: What if? (50 points)			
8	FINAL REFLECTION (25 points) and Group Evaluation (25 points) – Due by 11:59 pm on Friday, July 28							

#### PLAGIARISM:

Plagiarism is defined as using more than four consecutive words from a source without a citation. You may not use another's words directly without putting them within quotations. It is also plagiarism when either an author's ideas or organization of concepts are used without giving a citation. We expect you to use references for assignments given in this course, and we expect you to cite your sources. Students caught plagiarizing will receive a failing grade for the assignment and will face additional punishments up to expulsion as outlined by University policy. I invite you to visit the online resource <a href="http://www.plagiarism.org/">http://www.plagiarism.org/</a> to make sure you understand what plagiarism is and how to avoid it. Please note also that you have a Citation Guide for this course that provides examples of rewording statements from published papers and how to properly cite those statements.

#### 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: https://catalog.unk.edu/undergraduate/academics/academic-regulations/student-attendance-policy-statement/
- Graduate Student Attendance Policy: <a href="https://catalog.unk.edu/graduate/academics/academ

#### **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: https://catalog.unk.edu/undergraduate/academics/academic-regulations/academic-integrity-policy/
- Graduate Academic Integrity Policy: <a href="https://catalog.unk.edu/graduate/academics/academ

## 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), and to take appropriate action to prevent a recurrence of such sexual misconduct and 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

# 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 <a href="university 1.5">university 2.5</a>.

## 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 STATEMENT OF DIVERSITY & INCLUSION:**

UNK stands in solidarity and unity with our students of color, our Latinx and international students, our LGBTQIA+ students and students from other marginalized groups in opposition to racism and prejudice in any form, wherever it may exist. It is the job of institutions of higher education, indeed their duty, to provide a haven for the safe and meaningful exchange of ideas and to support peaceful disagreement and discussion. In our classes, we strive to maintain a positive learning environment based upon open communication and mutual respect. UNK does not discriminate on the basis of race, color, national origin, age, religion, sex, gender, sexual orientation, disability or political affiliation. Respect for the diversity of our backgrounds and varied life experiences is essential to learning from our similarities as well as our differences. The following link provides resources and other information regarding D&I: <a href="https://www.unk.edu/about/equity-access-diversity.php.">https://www.unk.edu/about/equity-access-diversity.php.</a>

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