FOR 5347 – PREDATOR ECOLOGY AND CONSERVATION

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Office Hours F 8:00-9:00 am or by appointment

MEETING DETAILS
Lectures on Tuesdays: 3:30 – 6:00 pm, FORL 103

COURSE DESCRIPTION
Overview of predator ecology and current research topics and issues related to predator conservation and management. Emphasis is on predation as an ecological and evolutionary process and as a behavior as well. One of the most widespread and important biological interaction outcomes is when one organism catches, kills, and feeds on another organism, i.e., predation. This interaction is widespread in diverse taxonomic groups, including animals and plants, which, in turn, can be predators and/or prey. Throughout predation, mass and energy will flow from one trophic level to another. Thus, predation is an important source of transformation in diverse ecosystems worldwide. Because of all of that, predation is very often mentioned as one of the most powerful forces shaping biodiversity worldwide.

COURSE GOALS
Using lectures, readings, and class discussions students will be able to immerse in the theoretical background related to predation, a key biological interaction in many ecosystems that occur in all spatial and temporal scales. Also, predation will be addressed in the light of human-wildlife conflicts and how to face them in the real world. Students will expand their understanding of the principles of predation and how to apply them. It is expected that from the training during the semester, students will be able to have a holistic view of the impact of predation on the functioning of ecosystems.

STUDENT LEARNING OUTCOMES
Upon completion of the course, students will:

a. Foundational knowledge
   - have a clear understanding of the fundamental and current issues in predation theory and predator ecology,
   - have a clear understanding of important concepts related to predator ecology, conservation, and management.
b. Application
- be able to find information on and analyze current predator ecology and conservation issues,
- be able to identify current knowledge gaps and needs in predator ecology and conservation/management research.
c. Integration
- identify the interactions between predation theory and other realms of knowledge such as conservation biology, ecology, economics, and policy design.
d. Human dimension
- be able to identify ways in which one’s or someone else’s personal life could affect or be affected by addressing issues related to the conservation and management of predators.
e. Future learning
- be familiar with several popular ecology journals and other sources of knowledge about animal behavior and community ecology,
- have some specific ideas about what other knowledge would be desirable to have about predator behavior, conservation, and management.

TEXTBOOK AND READINGS
There is no required textbook. All reading material will be provided by the instructor weekly or according to the necessities, to facilitate student learning.

GRADES

<table>
<thead>
<tr>
<th>Final project</th>
<th>200 points</th>
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<tbody>
<tr>
<td>Class Presentations (40 points each)</td>
<td>80 points</td>
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<tr>
<td>Discussion Participation</td>
<td>50 points</td>
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<tr>
<td>Assignments</td>
<td>20 points</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>350 points</strong></td>
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GRADING
A final grade of students (A–F) will be calculated out of 350 total points. There will be no curve and no individual extra credit. Final grades will be assigned based on the grading scale as follows:

100% > A ≥ 90%
90% > B ≥ 80%
80% > C ≥ 70%
70% > D ≥ 60%
60% > F ≥ 0%

ASSIGNMENT DETAILS
General course requirements: Knowing and understanding the material presented and discussed in lectures is the keystone for successfully completing this course; then, it is critical being up to date with the reading assignments. Considering that the class meets once a week, I expect all students to have perfect attendance (please see Attendance policy subsection, within Class policies section) and be well prepared for class.
**Exams:** There is no exam for graduate students.

**Final project:** Master students will structure a review paper using the same format as a paper that can be submitted to a peer-reviewed journal. M.S. students will conceptualize the idea and write the basic sections of the paper (Introduction, Material and Methods, Results, Discussion, and References). The subject can be chosen by the student and needs to be discussed with the instructor (a topic related with their thesis is preferred). It’s expected that the master student advances independently with the manuscript, but the instructor will provide feedback/review on the fourth, eighth, and twelfth weeks of this course, i.e., deadlines to send the drafts to the email of the instructor. Master students will present their manuscripts on the fourteenth week of the course and the final version of the manuscript must be sent to the instructor by 11:59 pm on 12/05.

**Participation & Discussion participation:** Students are expected to participate in weekly discussions on the assigned readings; readings are not optional. Each student will do, at least, two questions and will provide one answer for some question each class. The grade will be determined based on the frequency of their participation as well as the thoughtfulness/utility of their contributions to class discussion. The dynamic of article discussions can be structured using different tools and approaches in order to improve the quality of the interchange of knowledge among all students and the instructor.

**Class presentation:** Each student will give two 12–15-minute presentations during the semester of a peer-reviewed publication related to that week’s lecture topic. The presentation should focus and discuss the purpose of the article (theoretical background of the study), methodology (briefly), results and major findings, and discussion/conclusions. The presentation should focus on primary research studies (original articles) and not review papers. The articles will be previously provided by the instructor, at least, one week prior to the presentation. If some student wants to change the paper designated by the instructor, she/he will need to contact the instructor proposing a new paper. Importantly, students must have their research papers approved by the instructor before they begin to work on their presentation. The paper proposed by the student should be focused on week’s lecture topic, published within the last 20 years (2003-2023) in some of the following journals: Nature and all Nature portfolio journals, e.g., Scientific Reports and Nature Communications, Science, Trends in Ecology and Evolution, PNAS, Global Change Biology, Current Biology, Ecology Letters, Science of the Total Environment, Conservation Biology, Journal of Applied Ecology, Elementa - Science of the Anthropocene, Ecography, Biological Conservation, Functional Ecology, Ecology, Journal of Animal Ecology, Ecological Indicators, Perspectives in Ecology and Conservation, Ecological Applications, Ecosystems, American Naturalist, Oikos, Biology Letters, NeoBiota, Biodiversity and Conservation, Basic and Applied Ecology, Restoration Ecology, Global Ecology and Conservation, Zoological Journal of Linnean Society, Oecologia, Biological Invasions, Urban Ecosystems, PeerJ, Behavioral Ecology and Sociobiology, BMC Ecology, Ecology and Evolution, Ecological Processes, Animal Behavior, Behavioral Ecology, Biotropica, Ecological Entomology, Journal of Zoology, Biological Journal of Linnean Society, Austral Ecology, Ecological Research, The Science of Nature, Acta Oecologica, Insectes Sociaux, Aquatic Ecology, Web Ecology, Neotropical Entomology, Journal of

Assignments: Some small assignments will be proposed during the course, and they will be graded. It can include, but not limited to, readings, searches, questions, tasks, and others.

Tentative Lecture Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Day</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1</td>
<td>08/29</td>
<td>Introduction to predation. Basic concepts of ecology and evolution</td>
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<tr>
<td>2</td>
<td>09/05</td>
<td>Predation theory</td>
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<tr>
<td>3</td>
<td>09/12</td>
<td>Studying/detecting predation on past and present</td>
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<tr>
<td>4</td>
<td>09/19</td>
<td>Predator morphology, physiology, behavior, and function</td>
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<td>5</td>
<td>09/26</td>
<td>Antipredator adaptations</td>
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<td>6</td>
<td>10/03</td>
<td>Predator-prey interactions I. Solitary predators</td>
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<tr>
<td>7</td>
<td>10/10</td>
<td>Predator-prey interactions II. Social predators</td>
</tr>
<tr>
<td>8</td>
<td>10/17</td>
<td>Exam I (no class for graduate students)</td>
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<tr>
<td>9</td>
<td>10/24</td>
<td>Population dynamics</td>
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<tr>
<td>10</td>
<td>10/31</td>
<td>Predators and community ecology</td>
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<tr>
<td>11</td>
<td>11/07</td>
<td>Trophic cascades and ecosystem’s consequences</td>
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<tr>
<td>12</td>
<td>11/14</td>
<td>Impacts of introduced predators</td>
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<tr>
<td>13</td>
<td>11/21</td>
<td>Thanksgiving</td>
</tr>
<tr>
<td>14</td>
<td>11/28</td>
<td>Influence of environmental/habitat conditions on predation</td>
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<tr>
<td>15</td>
<td>12/05</td>
<td>Exam I (no class for graduate students)</td>
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§ Required readings (e.g., research articles and book chapters) will be assigned each week throughout the semester.

Class Policies

Notes: Although lecture slides will be provided, students are highly recommended to take their own notes at each lecture. Much information is complemented by the instructor beyond slides, and this will be very helpful to students, in order to obtain maximum learning. The students must occupy the front rows of the classroom.

Attendance policy: Punctually attendance at all lectures is a requirement for this course. Justified absences will be accepted with the proper documentation (e.g., documented medical excuse). Each unexcused absence from a lecture will result in a reduction of 10% in the total number of points accumulated during the entire course. Note that absence from class also results in the inability to follow the course content. In the case of excused
absences, the student must contact the instructor and/or other students to accomplish the lost activities.

**Communicating to your professor:** Email will be the primary means of communication for the course, so please do not use D2L - Bright space to communicate with the instructor. The student must check the email often in order to keep up to date with the class instructions and announcements. Grades cannot be discussed via e-mail at any time due to federal law. The instructor will speak to the student in person instead of during office hours (please see above). DO NOT involve a third party who is not affiliated in any official capacity with SFASU (e.g., friend, roommate) in any matters pertaining to your enrollment in this course. Your instructor is legally prohibited from discussing most course/grade-related issues with third parties according to the Family Educational Rights and Privacy Act (FERPA) (20 U.S.C. § 1232g; 34 CFR Part 99).

**Completing assignments:** It is the responsibility of students to complete assignments independently and in a timely manner. Deadlines must be accomplished as a premise of the assignments. Any doubt/disagreement/discordance must be talked about with the instructor with appropriate anticipation in order to avoid delays or misunderstandings of any nature.

**Forestry Style Manual:** The Forestry Style Manual should be used to guide the students in how to communicate with the instructor and to complete assignments.

**Academic integrity:** The Code of Student Conduct and Academic Integrity outlines the prohibited conduct by any student enrolled in a course at SFA. It is the responsibility of all members of all faculty, staff, and students to adhere to and uphold this policy. Articles IV, VI, and VII of the new Code of Student Conduct and Academic Integrity outline the violations and procedures concerning academic conduct, including cheating, plagiarism, collusion, and misrepresentation. Cheating includes, but is not limited to: (1) Copying from the test paper (or other assignment) of another student, (2) Possession and/or use during a test of materials that are not authorized by the person giving the test, (3) Using, obtaining, or attempting to obtain by any means the whole or any part of a non-administered test, test key, homework solution, or computer program, or using a test that has been administered in prior classes or semesters without permission of the Faculty member, (4) Substituting for another person, or permitting another person to substitute for one’s self, to take a test, (5) Falsifying research data, laboratory reports, and/or other records or academic work offered for credit, (6) Using any sort of unauthorized resources or technology in completion of educational activities. Plagiarism is the appropriation of material that is attributable in whole or in part to another source or the use of one’s own previous work in another context without citing that it was used previously, without any indication of the original source, including words, ideas, illustrations, structure, computer code, and other expression or media, and presenting that material as one’s own academic work being offered for credit or in conjunction with a program course or degree requirements. Collusion is the unauthorized collaboration with another person in preparing academic assignments offered for credit or collaboration with another person to commit a violation
of any provision of the rules on academic dishonesty, including disclosing and/or distributing the contents of an exam. Misrepresentation is providing false grades or résumés; providing false or misleading information in an effort to receive a postponement or an extension on a test, quiz, or other assignment for the purpose of obtaining an academic or financial benefit for oneself or another individual or to injure another student academically or financially.

Extra credit: There will be NO PERSONAL extra credit or bonus point opportunities under any circumstance or for any reason. However, the instructor reserves the right to assign class bonus points at any time.

Acceptable Student Behavior: Classroom behavior should not interfere with the instructor’s ability to conduct the class or the ability of other students to learn from the instructional program (see the Student Conduct Code, policy D-34.1). Unacceptable or disruptive behavior will not be tolerated. Students who disrupt the learning environment may be asked to leave class and may be subject to judicial, academic, or other penalties. Offenses may be penalized with a reduction of 10% of the student’s final grade. Examples of disruptive behavior are, but not limited to, entering class late, misuse of cellphone and other gadgets, taking pictures or recording videos and audio, debauchery, noises, etc. This prohibition applies to all instructional forums, including electronic, classroom, labs, discussion groups, field trips, etc. The instructor shall have full discretion over what behavior is appropriate/inappropriate in the classroom. Students who do not attend class regularly or who perform poorly on class projects/exams may be referred to the Early Alert Program. This program provides students with recommendations for resources or other assistance that is available to help SFA students succeed.

Responsible Use of Technology: It is expected that all students will only use cell phones, PDAs, laptop computers, MP3 players, and other technology outside of class time or when appropriate in class. Answering a cell phone, texting, listening to music, or using a laptop computer for matters unrelated to the course may be grounds for dismissal from class or other penalties.

Withheld Grades Semester Grades Policy (A-54): Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the coursework because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course to compute the grade point average. For additional information, go to https://www.sfasu.edu/policies/course-grades-5.5.pdf.

Students with Disabilities: To obtain disability-related accommodations, alternate formats, and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004
(TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services promptly may delay your accommodations. For additional information, go to http://www.sfasu.edu/disabilityservices/.

Firearms and the concealed carry policy: University Policy 13.9 deals with firearms and the concealed carry policy. Students with concealed carry licenses that choose to carry on campus are required to follow all Texas laws and University policies and it is their responsibility to understand and comply accordingly. See: http://www.sfasu.edu/policies/13.9-Firearms-Explosives-and-Ammunition.pdf

Student Wellness and Well-Being
SFA values students’ overall well-being, mental health, and the role it plays in academic and overall student success. Students may experience stressors that can impact both their academic experience and their personal well-being. These may include academic pressure and challenges associated with relationships, emotional well-being, alcohol and other drugs, identities, finances, etc.
If you are experiencing concerns, seeking help, SFA provides a variety of resources to support students’ mental health and wellness. Many of these resources are free, and all of them are confidential.

On-campus Resources:
The Dean of Students Office (Rusk Building, 3rd floor lobby)
www.sfasu.edu/deanofstudents
936.468.7249
dos@sfasu.edu

SFA Human Services Counseling Clinic Human Services, Room 202
www.sfasu.edu/humanservices/139.asp
936.468.1041

The Health and Wellness Hub “The Hub”
Location: corner of E. College and Raguet St.

To support the health and well-being of every Lumberjack, the Health and Wellness Hub offers comprehensive services that treat the whole person – mind, body and spirit. Services include:
• Health Services
• Counseling Services
• Student Outreach and Support
• Food Pantry
• Wellness Coaching
• Alcohol and Other Drug Education
www.sfasu.edu/thehub
936.468.4008
thehub@sfasu.edu
Crisis Resources:
• Burke 24-hour crisis line: 1.800.392.8343
• National Suicide Crisis Prevention: 9-8-8
• Suicide Prevention Lifeline: 1.800.273.TALK (8255)
• johCrisis Text Line: Text HELLO to 741-741