Life and Physical Sciences
(UPPER)
Texas A&M University
Core Curriculum Cover Sheet
Initial Request for a course to be considered for the Fall 2014 Core Curriculum

1. This request is submitted by (department name): Department of Entomology

2. Course prefix and number: Ento 322.500

3. Texas Common Course Number: E4580-

4. Complete course title: Insects in Human Society

5. Semester credit hours: 3

6. This request is for consideration in the following Foundational Component Area:
   - [ ] Communication
   - [ ] Mathematics
   - [x] Life and Physical Sciences
   - [ ] Language, Philosophy and Culture
   - [ ] Creative Arts
   - [ ] American History
   - [ ] Government/Political Science
   - [ ] Social and Behavioral Sciences

   [current core - yes]
   [current ICD - no]

7. This course should also be considered for International and Cultural Diversity (ICD) designation:
   - [x] Yes
   - [ ] No

8. How frequently will the class be offered? Every semester including summer

9. Number of class sections per semester: 1

10. Number of students per semester: 195

11. Historic annual enrollment for the last three years: 2012=395, 2011=396, 2010=375

   This completed form must be attached to a course syllabus that sufficiently and specifically details the appropriate core objectives through multiple lectures, outside activities, assignments, etc. Representative from department submitting request should be in attendance when considered by the Core Curriculum Council.

13. Submitted by:

   [Signature]

   Date: April 15, 2013

   Course Instructor

14. Department Head:

   [Signature]

   Date: April 29, 2013

   College Dean/Designee

   [Signature]

   Date:

For additional information regarding core curriculum, visit the Texas Higher Education Coordinating Board website at www.thecb.state.tx.us/corecurriculum2014

See form instructions for submission/approval process.
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Initial Request for a Course Addition to the Fall 2014 Core Curriculum

Foundational Component Area: Life and Physical Sciences

In the box below, describe how this course meets the Foundational Component Area description for Life and Physical Sciences. Courses in this category focus on describing, explaining, and predicting natural phenomena using the scientific method. Courses involve the understanding of interactions among natural phenomena and the implications of scientific principles on the physical world and on human experiences.

The proposed course must contain all elements of the Foundational Component Area. How does the proposed course specifically address the Foundational Component Area definition above?

This is an introductory course on insects and related arthropods for non-entomology majors. Throughout the course, student will be introduced to examples of ways that arthropods are used to describe, explain, and predict natural phenomena which involves the use of the scientific method. The course deals with insects as resources for both food and space, and also as competitors with humans and other animals. Insects are the most abundant and diverse multi-cellular life forms on earth, and their role in nature is essential for human existence. Insects have affected the development of human civilizations and cultures through impacts ranging from health, sanitation, food production and storage, to music, art and architecture. Arthropods are part of the human experience on planet Earth, and this course offers an overview of the historic, present day, and future roles of insects and other arthropods in affecting the culture of all countries and societies.

Core Objectives

Describe how the proposed course develops the required core objectives below by indicating how each learning objective will be addressed, what specific strategies will be used for each objective and how student learning of each objective will be evaluated.

The proposed course is required to contain each element of the Core Objective.

Critical Thinking (to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information):

1. Critical Thinking: Through lectures, demonstrations, eLearning exercises, optional laboratory pinning sessions, optional field trips, and exchanges with the instructor and others, students are presented with an introduction to the use of the scientific method as it relates to insect populations associated with humans in all aspects of their lives including wellness, art, music, literature, and the history and global diversity of societies. Specifically, students are required to participate in at least three formal examinations (300 points) which tests their abilities to not only retain information, but to also synthesize concepts in addressing complex choices. Points will be assigned to each of the three major examinations and the optional, comprehensive final. Students will be introduced to the scientific method and then will demonstrate their ability to recognize, interpret, and evaluate three aspects of assigned scientific papers including the hypothesis, scope of research, and results of the work. They will then demonstrate their comprehension by composing an abstract, or summary, of the research. These written assignments will be graded and points earned based upon factual content, comprehension of concepts, and logical presentation (50 points). The impact of arthropods on human and animal health will be emphasized in discussions about insects' role in disease agent transmission and direct human-insect interactions. Students will be asked to demonstrate understanding of these concepts on examination questions. In another unit of
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study, students will be given the opportunity to participate in active and passive entomophagy, during which they will make informed choices and decisions about the foods that they choose to eat based on the federal regulation defining Food Defect Action Levels (DALs) for insects or insect parts. An interactive discussion will then be conducted with the students to help them to compare and contrast the value of having the DALs on labels for fresh and processed foods at the point of sale as well as the merits of organic versus traditional production methodologies involving pesticide use. The results of the discussion and conclusions drawn will be supported and emphasized with examination questions and an assigned topic explained in the “team project” section.

Communication (to include effective development, interpretation and expression of ideas through written, oral and visual communication):

II. Communications: Students are required to write a song or poem about an arthropod group using information presented in class and from other sources provided on eLearning (10 points). They then summarize and demonstrate their comprehension of the concepts of taxonomic classification by including their ideas in this assignment. They are then given the opportunity to perform their poem/song during class. Extra credit will be given to those students who work and perform this assignment as a team (10 points), which necessitates that they communicate, coordinate, and then perform before the class. This assignment is graded and points are awarded for the originality of their work, complying with the stipulations in the syllabus, submitting on time, and performance in class. In addition, students will be frequently called upon to actively participate in demonstrations, dramatizations, and discussions during the lecture periods. The concepts covered will be on examinations. Students will interact with their classmates during arthropod collecting trips and pinning sessions overseen by the instructor and teaching assistants, wherein small group discussions are held as they compare and contrast the morphological characteristics of their specimens in determining the proper classification, the method of preservation, and presentation in the semester project. The assessment of these activities and discussions is ultimately determined by the number of points earned by the students on their individual semester projects (100 points).

Empirical and Qualitative Skills (to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions):

III. Empirical and Qualitative Skills: Students will demonstrate their abilities to distinguish between various taxonomic possibilities through a virtual assignment presented on eLearning as the “Taxonomic Puzzle”. This assignment requires the student to observe, classify, categorize and discern between different possible levels of classification which reinforces the concept that any organism can be classified several ways from the most general (Domain) down to, and including, Suborders of Arthropoda (Entomology 322). Students will have to formulate and present their answers to fit into a crossword puzzle format requiring them to deduce which of 47 different possible answers, based on correct identification, will meet the criteria of the specific area of puzzle (across or down). This assignment is graded and points assigned (25 points). The semester project requires that students collect, identify, preserve, label, and organize 30 specimens using specific taxonomic criteria presented in the syllabus. The students are then required to justify their decision in assigning specific taxa to each specimen that they then submit for grading. This project is graded based on correct identification, selected method of preservation, organized display, and ability to follow the directions in the syllabus. Information to assist the students in completing the above two assignments will be presented in class through the “Orders of the Day”, and will then be reinforced through the use of videos which have been posted on-line at eLearning, as well as optional field trips and pinning sessions. Comprehension and synthesis of correct concepts of taxonomy are evaluated on examinations and through specific assignments including the taxonomic puzzle (25 points) and semester project (100 points).
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Teamwork (to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal):

IV. Teamwork: All students enrolled in this class will participate in the team assignment called the “Virtual Collecting Jar”, which is posted on eLearning, and requires and facilitates online/personal interactions. Students will be assigned to five-member teams that share in the task of viewing a set of 50 randomly assigned images of arthropods, and then, as a group, discuss and arrive at a consensus on the correct identification of the specimen. This then leads to the formulation of the correct answer based on the taxonomic level posed in the question. The group will select a Team Leader, who will then submit the group’s answers via eLearning. All team members will share in the points earned, based on both the number of correct answers (50 points), and the individual student’s level of participation in the process as determined via a survey document. Each student, in order to receive credit for participation (10 points), must judge their own effort, and assign that of each of the other team members. Final points awarded are based on number of correct responses, and the measure of participation of each student. There are also five assigned open ended questions (10 points each) presented to each team during the semester. These questions will be presented at different times during the semester to relate to specific concepts presented in lectures. Each team will consider and evaluate each question, compare and contrast various answers, and then submit their answer as a unified group. A single report, not to exceed 200 words will be organized, justified, and submitted by the team leader via eLearning for each of the five questions. These five reports will be graded on originality, completeness, and conclusions reached (10 points each for a total of 50 points).

V. Personal Responsibilities: Each student has the opportunity to do well on examinations, complete and submit assignments on time, participate in a team assignment, enhance their writing skills, and perform their song or poem before the entire class. Both attendance and participation in class are expected and rewarded, but it is ultimately the students who have to make these choices. During office hours, and normal business hours, the instructor will be available to students who might have questions or concerns about the class, or assignments, and they are given every opportunity to avail themselves of this help and encouragement; but ultimately it is expected that each student must show initiative, demonstrate their willingness to read and interpret the syllabus, follow directions and organize and present their work during the semester. Their grade is determined by how well they do on each assignment, examination, and project.

VI. Social Responsibilities: Because of the large class size for Entom. 322 (200 students), there are numerous opportunities for students to experience multicultural situations as part of the team projects, field trips, laboratory pinning sessions, and presentations. The students have the opportunity to meet and learn about each other as they make their presentations to the class, and participate in group activities. A representative of various student organizations is invited to make presentations to the class during the semester, including the Ambassadors and Mentors (travel abroad programs), and COALS internship programs. Every student is required to adhere to the Aggie Honor Code, and questions over this topic are included on the major examinations and require introspection and application of the principle of global and personal responsibilities to avoid dishonesty and plagiarism. To emphasize the importance of social responsibilities, every assignment contains a statement of the Aggie Honor Code that each student is required to sign that they understand, and agree to obey. Any violations of the code will be discussed immediately with the student, their explanations considered, and actions outlined if violations are deemed to be intentional.
Entomology 322
Insects in Human Society

CRN 11312
Section 500
Dr. Roger E. Gold, Professor & Endowed Chair
Teaching Assistants: TBD

Urban and Structural Entomology
Department of Entomology
Texas A&M University
College Station, TX 77843
979-845-5855
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College Station, Texas 77843-2143
(979) 845-5855
FAX (979) 845-5926

Entomology 322 – Insects in Human Society (Sec. 500)
Room 101, Heep Center; 10:20a-11:10a

Official Syllabus
(CRN 11312)
Dr. Roger E. Gold, Professor & Endowed Chair
E-mail: r-gold@tamu.edu;
Room 100, Build 1051
Office hours: 11:10-12:30p, M-W-F, &/or by appointment

Introduction to the Course
This is an introductory course on insects and related arthropods for non-entomology majors. Throughout the course, student will be introduced to examples of ways that arthropods are used to describe, explain, and predict natural phenomena which involves the use of the scientific method. The course deals with insects as resources for both food and space, and also as competitors with humans and other animals. Insects are the most abundant and diverse multi-cellular life forms on earth, and their role in nature is essential for human existence. Insects have affected the development of human civilizations and cultures through impacts ranging from health, sanitation, food production and storage, to music, art and architecture. Arthropods are part of the human experience on planet Earth, and this course offers an overview of the historic, present day, and future roles of insects and other arthropods in affecting the culture of all countries and societies.
## ENTOMOLOGY 322-INSECTS IN HUMAN SOCIETY (Sec. 500)

### Schedule of Lectures (Example)
(CRN 11312)

<table>
<thead>
<tr>
<th>Day</th>
<th>Date</th>
<th>Lec. #</th>
<th>topic</th>
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</thead>
<tbody>
<tr>
<td>Mon</td>
<td>1</td>
<td>Course overview-syllabus review</td>
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<tr>
<td>Wed</td>
<td>2</td>
<td>Intro. To Course &amp; to Insects</td>
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<tr>
<td>Fri</td>
<td>3</td>
<td>Classification of Insects &amp; Other Arthropods</td>
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<tr>
<td>Mon</td>
<td>4</td>
<td>Martin Luther King Holiday-no class</td>
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<tr>
<td>Wed</td>
<td>5</td>
<td>Putting Order Into the Insect World</td>
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<tr>
<td>Fri</td>
<td>6</td>
<td>Insect Museums and Collections</td>
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<td>Mon</td>
<td>7</td>
<td>Entomologist's Paraphernalia</td>
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<tr>
<td>Wed</td>
<td>8</td>
<td>Insect Structure &amp; Function (Morphology 1)</td>
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<tr>
<td>Fri</td>
<td>9</td>
<td>Morphology 2 (cont'd)</td>
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<tr>
<td>Mon</td>
<td>10</td>
<td>Physiology 2 (cont'd)</td>
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<tr>
<td>Wed</td>
<td>11</td>
<td>Insect Metamorphosis &amp; Growth</td>
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<tr>
<td>Fri</td>
<td>12</td>
<td>Insect Metamorphosis &amp; Growth (cont'd)</td>
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<tr>
<td>Mon</td>
<td>13</td>
<td>optional review for exam 1, Hep 101 5:30p-6:30p</td>
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<tr>
<td>Wed</td>
<td>14</td>
<td>1st MAJOR EXAM (1-12) 100 PTS*</td>
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<tr>
<td>Fri</td>
<td>15</td>
<td>Insects in Music, Literature &amp; Poetry</td>
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<tr>
<td>Mon</td>
<td>16</td>
<td>Insect Reproduction &amp; Behavior cont'd (TEAM assignments made)</td>
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<tr>
<td>Wed</td>
<td>17</td>
<td>Insect Reproduction &amp; Behavior</td>
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<tr>
<td>Fri</td>
<td>18</td>
<td>Insect Communications (Demonstration)</td>
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<td>Mon</td>
<td>19</td>
<td>Insects as Models for Survival</td>
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<td>Wed</td>
<td>20</td>
<td>Insect Movement and Dispersal (Poems/songs due)</td>
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<tr>
<td>Fri</td>
<td>21</td>
<td>Insects that are Beneficial to Humans</td>
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<tr>
<td>Mon</td>
<td>22</td>
<td>Insects that are Beneficial to Humans (2)</td>
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<tr>
<td>Wed</td>
<td>23</td>
<td>Insects as Food (Entomaphagy) (Poem performance opportunity)</td>
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<tr>
<td>Fri</td>
<td>24</td>
<td>Insects in Art, Cartoons &amp; Movies (Poem performance opportunity)</td>
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<tr>
<td>Mon</td>
<td>25</td>
<td>Spring break</td>
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<tr>
<td>Wed</td>
<td>26</td>
<td>Spring break</td>
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<tr>
<td>Mon</td>
<td>27</td>
<td>Insect/Plant/Animal Interaction</td>
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<tr>
<td>Wed</td>
<td>28</td>
<td>Insect/Plant/Animal Interaction (cont'd)</td>
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<tr>
<td>Wed</td>
<td>29</td>
<td>optional daytime collecting trip, Lick Creek 5:00-7:00pm</td>
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<tr>
<td>Fri</td>
<td>30</td>
<td>Entomophobia, Delusory Parasisis &amp; Allergies</td>
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<tr>
<td>Mon</td>
<td>31</td>
<td>Relationships of Insects to Human Disease (1) (Taxonemic Puzzle due)</td>
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<tr>
<td>Wed</td>
<td>32</td>
<td>optional review for exam 2, Hep 101, 5:30-6:30pm</td>
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<tr>
<td>Wed</td>
<td>33</td>
<td>2nd MAJOR EXAM (13-30) 100 PTS*</td>
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<tr>
<td>Wed</td>
<td>34</td>
<td>optional night collecting trip, Brazos Ctr, 7:00-9:00pm</td>
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<tr>
<td>Fri</td>
<td>35</td>
<td>reading day no class</td>
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<tr>
<td>Mon</td>
<td>36</td>
<td>Relationships of Insects to Human Disease (2) (Team Projects Due)</td>
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<tr>
<td>Wed</td>
<td>37</td>
<td>Relationships of Insects to Human Disease (3)</td>
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<td>Fri</td>
<td>38</td>
<td>Insect Population Dynamics</td>
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<td>Mon</td>
<td>35</td>
<td>Control of Insect Populations</td>
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<tr>
<td>Wed</td>
<td>36</td>
<td>Integrated Pest Management</td>
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<td>Wed</td>
<td></td>
<td>Optional pinning session, Urban Ctr, 5:00-7:00pm</td>
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<td>Fri</td>
<td>37</td>
<td>Integrated Pest Management (cont'd)</td>
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<td>Mon</td>
<td>38</td>
<td>Insects as Endangered Species</td>
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<tr>
<td>Wed</td>
<td>39</td>
<td>Insects in a green society (SEMESTER PROJECTS DUE)</td>
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<tr>
<td>Fri</td>
<td>40</td>
<td>Economic Impact &amp; Future of PC</td>
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<tr>
<td>Mon</td>
<td>41</td>
<td>Forensic Entomology (pick up graded projects)</td>
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<tr>
<td>Wed</td>
<td>42</td>
<td>Using Insects for Teaching &amp; IPM in the Classroom</td>
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<tr>
<td>Wed</td>
<td></td>
<td>Optional review for exam 3, Heep 101, 5:30-6:30pm</td>
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<tr>
<td>Fri</td>
<td>43</td>
<td>3rd MAJOR EXAM (31-42) 100 pts*</td>
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<tr>
<td>Mon</td>
<td>44</td>
<td>Review for optional final--last class</td>
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<tr>
<td>Tue</td>
<td>45</td>
<td>OPTIONAL COMPREHENSIVE FINAL 100 pts**</td>
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<td>*** 8:00-10:00 AM, Heep, Room 101</td>
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**Learning Outcomes**

1. Students will be able to comprehend and evaluate the unique roles that insects have on planet Earth, and to define and comprehend the roles of this diverse life form, particularly as they relate to humans and their companion animals. Students will observe and evaluate unique teaching techniques and demonstrations that will enable them to synthesize and integrate the principles of entomology, to hold their interest, and to clarify the most pertinent information needed to perform well on assignments and examinations. They will learn the scientific methods used in Entomology, understand the steps involved, and demonstrate their abilities to differentiate between hypotheses, theories, and laws.

2. Students will be able to comprehend the taxonomic processes used to collect, identify and organize at least 24 insect orders and Suborders commonly found in Texas. They will synthesize this information and properly label and preserve these specimens as a reference collection.

3. Students will be able to demonstrate their abilities to comprehend and appreciate the influence that insects have had in defining the history of the world, and the role they have had in art, music and literature. Students will be able to synthesize this information and have the opportunity to increase their communication skills by writing and performing original songs and poems about insects in class as individuals or in small groups.

4. Students will be able to recognize and define terms, phrases and concepts relating to the morphology, physiology and biology of various insect groups by matching characteristics taught in class with choices on examination and oral reviews. Through comparing and contrasting, they will be able to evaluate insect structures as compared to human anatomy and behavior. Role playing and demonstrations will be done by students and the instructor, wherein they will apply the information learned and demonstrate insect movement, communication and control practices. Students will experience, and comprehend the concept of entomophagy by eating insects in prepared foods, and by discerning and categorizing different insect types and numbers found in common food items.
They will be able to evaluate the importance of insects in human diets and evaluate food choices based on Defect Action Levels.

5. Students will comprehend, appreciate and demonstrate their knowledge of insects, and comprehend their role as vectors of pathogens of humans and livestock, and synthesize and discuss methods used to protect themselves from insect attack and invasion.

6. Students will discuss and synthesize ideas for the “integrated management” of insect populations, and compare and contrast historical chemical controls with current “best management practices”.

7. Students will learn to work in teams to solve common challenges and demonstrate their abilities to provide an objective evaluation of their own, and other team members’ participation on that team.

8. Students will learn and demonstrate their interests in improving academic performance by following directions, attending classes, participating in group discussions, completing assignments on time, and by setting goals and time schedules for special assignments, extra credit opportunities, required examinations and the semester project. The examinations will require the use of both empirical and quantitative skills, as will the semester and team projects.

**Course Format**

The course utilizes a lecture format, online resources, and projects. Demonstrations and guest lecturers will augment the lecture and reading materials. The students are expected to check e-learning for supplemental information about each topic covered in lectures.

**Prerequisites: None**

**Requirements of the Course**

**Attendance**

The student is expected to be punctual and attend and participate in the entire class period, and in all phases of this course as per TAMU Student Rule 7.1.

**Notice about All Assignments**

All assignments must be turned in on time! “On time” means by the end of the day (5 pm) the project is due.
Writing Assignments (Required: 50 points)

This assignment is to understand the “scientific method”, as it applies to science
1. Read an abstract and identify the hypothesis (10 points)
2. Read an abstract and answer 5 questions (10 points)
3. Read an assigned paper and write an abstract of 300 words (30 points)

Critical reading assignments will expose the student to primary literature on insects from current research articles published in major journals. The student will have a minimum of 3 weeks to complete each assignment. Students will be required to read the article associated with each assignment and answer a series of short answer questions about what has been read. All writing assignments will be available from the start of the semester. Writing Project will challenge students to use what has been learned about scientific writing and Entomology to write a summary/abstract of a current research article. The student will have most of the semester to complete this project.

Suggested Text

Texts that are useful to students, but not required, are: A Field Guide To The Insects by Borror and White and A Field Guide to Common Texas Insects by B.M. Drees and J.A. Jackman. The current version of the notepacket, which is prepared specifically for this semester’s class, can be purchased at the MSC bookstore. All information may not be in the packet, so students must take notes during class.

Guest Lecturers

There will be guest lecturers from time to time during the semester. The student will be responsible for the information presented during these classes. There will also be a number of demonstrations, and the student will also be responsible for this information. The instructor is interested in ways to make this class more interesting, so suggestions and comments are always encouraged. If assistance is needed from a person other than the instructor, Dr. Pete Teel is the Associate Department Head for Teaching in the Department of Entomology. Dr. Teel can be reached at 845-3253.
Semester Project (Required*: 100 points)

Requirements for SEMESTER PROJECT: Arthropod Collection (REQUIRED)
The following instructions must be followed EXACTLY to make a PASSING grade on this project.

- The student must collect, preserve, and submit a minimum of 25 individually labeled arthropod specimens. No credit will be issued for projects with fewer than 25 specimens. A completed project must be submitted in order to pass this class!
- "Used" arthropods from another class, or someone else's collection cannot be used—these must be "fresh" collections, made during this semester.
- Insect pins and vials will be provided (sewing pins are not acceptable for this project). The student must supply 70% alcohol, a display container with a lid, and a Styrofoam bottom into which the specimens are secured.
- Collection nets are available for check out. They MUST be returned or the student will receive an Incomplete (I) as their final grade. If the net is lost or stolen, the student must provide a comparable net as a replacement.
- Hard bodied arthropods go on an arthropod pin while, soft bodied specimens go in a vial with 70% alcohol. Consult e-learning.tamu.edu for specific instruction on preservation.
- Two labels will be required per specimen. The first label includes location of where the arthropod was collected, the date the arthropod was collected, and the collector. The second label is the identification of the specimen (where credit is sought, i.e. Order: Orthoptera).
- Labels should be placed on the pin in the following order: Insect (closest to the head of the pin), location label, classification label. Labels must be NO larger than ½" X 1". The labels must be on the arthropod pin for hard bodied arthropods. Pinned specimens must be arranged in an orderly manner and in an upright position, with the labels separated by a gap of ¼ inch.
- Specimens placed in alcohol must be in a sealed vial with two labels in each vial. The labels must be placed back to back, printed side out, and must be written in pencil or printed on a laser printer.
- Small, adult specimens may have to be "pointed". See the syllabus for instructions.
- "Pointed" specimens should be placed on a 1/8" X 1/4" cardstock paper point. Specimens must be adhered using standard white glue.
- Vials must be secured into holes cut in the Styrofoam, bottom end down. DO NOT glue vials to the display container. Only 1 specimen will be graded per vial, so do not put multiple specimens in the same vial.
- Students are expected to perform their own identifications. The student should consult http://e-learning.tamu.edu, field guides, the internet, and lecture notes for assistance. Be sure to use a Subphylum, Class, Order, or Suborder that was covered in class. Other classifications found on the internet will NOT count.
- Neatness is considered in grading. Please take care in preparing the specimens and labels.
- Students should make every attempt possible to attend the pinning sessions when they are offered. Help on an individual basis may be limited or not available outside of designated times.
- Projects must be HAND-Carried to the staff in Building 1051, Agronomy Road (The Urban Center) by 5:00 pm on or before the date projects are due. Make sure your project is individually "logged in" when presented.

Grading of the Arthropod Collection

- Three points may be awarded for each properly labeled and presented specimen, up to 90 total possible points.
- An additional 10 points will be awarded based on neatness, and the student's ability to follow instructions.
- Each of the Subphyla, Classes, Orders, and Suborders may have a MAXIMUM of two representatives for each classification. However, the two specimens must be different species.
- You do NOT need specimens from all 32 orders discussed in class to receive full credit.
- Do not submit the work of others, even with permission. There is a 10-point per day late penalty.
- If the student has a disability or valid reason preventing him/her from fulfilling this requirement, see the professor within the first week of class. Optional projects are available, and will be granted on an individual basis, with justification and instructor's approval.
THE SEMESTER PROJECT MUST BE COMPLETED TO PASS ENTOMOLOGY 322*

List of Possible Classifications (For the Required Project)

Subphylum:
Atelocerata (Insects, Millipedes, Centipedes) (Alcohol, Pinned, and Pointed)
Chelicera (Spiders, Scorpions, Ticks) (Alcohol)
Crustacea (Pill Bugs/Sow Bugs/Rolly Polly, Shrimp, Lobsters, Crabs) (Alcohol)

Class:
Arachnida (Spiders, Scorpions, Ticks) (Alcohol)
Chilopoda (Centipedes) (Alcohol)
Diplopoda (Millipedes) (Alcohol)
Hexapoda (Insects) (Alcohol Pinned and Pointed)
Malacostraca (Pill/Sow Bugs, Shrimp, Lobsters, Crabs) (Alcohol)

Order:
Blattodea (Cockroaches) (Immatures in Alcohol, Adults Pinned or Pointed)
Coleoptera (Beetles) (Immatures in Alcohol, Adults Pinned or Pointed)
Collembo (Springtails) (Alcohol)
Decapoda (Shrimp, Lobsters, Crabs) (Alcohol)
Dermoptera (Earwigs) (Alcohol)
Diptera (Flies, Gnats, Mosquitoes) (Immatures in Alcohol, Adults Pinned or Pointed)
Embiidina (Web-spinners) (Alcohol)
Ephemeroptera (Mayflies) (Alcohol)
Hemiptera (True Bugs) (Immatures in Alcohol, Adults Pinned or Pointed)
Hymenoptera (Ants, Bees, Wasps, Sawflies) (Immatures in Alcohol, Adults Pinned or Pointed)
Isopoda (Pill/Sow Bugs/Rolly Polly) (Alcohol)
Isoptera (Termites) (Alcohol)
Lepidoptera (Butterflies, Moths) (Immatures in Alcohol, Adults Pinned or Pointed)
Mantodea (Praying Mantises) (Immatures in Alcohol, Adults Pinned or Pointed)
Mecoptera (Scorpionflies) (Adults pinned, immatures in Alcohol)
Neuroptera (Dobsonflies, Lacewings, Antlions, Owlflies) (Immatures in Alcohol, Adults Pinned)
Odonata (Dragonflies, Damselflies) (Immatures in Alcohol, Adults Pinned or Pointed)
Orthoptera (Grasshoppers, Crickets, Katydid) (Immatures in Alcohol, Adults Pinned or Pointed)
Phasmatodea (Walkingsticks) (Immatures in Alcohol, Adults Pinned or Pointed)
Phthiraptera (Lice) (Alcohol)
Plecoptera (Stoneflies) (Alcohol)
Psocoptera (Book Lice, Bark Lice) (Alcohol)
Siphonaptera (Fleas) (Alcohol)
Thysanoptera (Thrips) (Alcohol)
Thysanura (Silverfish) (Alcohol)
Trichoptera (Caddisflies/Rock Rollers) (Alcohol)

Suborder:
Anoplura (Sucking Lice) (Alcohol)
Mallophaga (Chewing Lice) (Alcohol)
Auchenorrhyncha (Cicadas, Leafhoppers) (Immatures in Alcohol, Adults Pinned or Pointed)
Heteroptera (True Bugs) (Immatures in Alcohol, Adults Pinned or Pointed)
Sternorrhyncha (Aphids, Scales, White Flies) (Use alcohol, or pin the leaf with Scale attached)
Taxonomic Puzzle (Required: 50 Points Possible)

This assignment is designed to supplement the lectures on the classification of insects and other arthropods, and to encourage the student to stay current in learning the "orders of the day", which will be covered on the first two major examinations. This information will also be critical to the students when completing other assignments including: Virtual Collection Jar (team project), Semester Project (Arthropod Collection) and Poem or Song. This assignment is based on the format of a cross word puzzle wherein pictures (across and down) will be given which pertain to the taxa that are assigned to the specific arthropods for identification and communications among scientists and students. The assignment is to match the possible taxa (Domain, Kingdom, Phylum and the other designation listed on page 9 of the syllabus). The responsibilities are for the student to consider the pictures, and fill in the cross word puzzle making sure the spelling is correct and the number of letters in the answer fit the puzzle matrix. The student will receive an individual puzzle on e-learning, and will submit the answers through e-learning using the format at that site. Each picture has one of 42 possible answers, so the pictures must be considered carefully before submitting the work. Late work will be penalized at 10 points per day, so the submission should be timely. Again, you must use either Firefox or Google Chrome web browser.

TEAM PROJECT: Virtual “Collecting Jar” (Required: 50 total possible points)
See Course Schedule for Due Dates

The instructor will divide the class into five (5) member teams, with one member being elected (by the group) as the “Team Leader”. The Team Leader will be responsible for submitting the groups answers via eLearning. All team members will share in the points earned based on the number of correct answers, and their level of participation in the processes involved in completing the assignment.

From digital files, each team will be given 50 images of various arthropods which they will classify into the appropriate taxa, as indicated with the image. The answers to the questions concerning classification will then be submitted BY THE TEAM LEADER to the instructor via the assignment tab on e-Learning. All of the answers must be spelled correctly to receive full credit (check the syllabus). There will be a 10 point-per-day penalty for late work.

The students will be required to use the discussion forums located in e-Learning for their group. Each student must participate and there must be clear evidence of communication, otherwise the non-participating student will receive a “0” (zero) for the assignment. A survey document will be used by the student to evaluate both their and other team member’s participation on this assignment. The results of this evaluation will be used to assign points for this project. Students will lose points for failing to complete the peer survey. A total of 40 points will be awarded based on correct answers.
submitted by the group leader. An additional 10 points may be awarded based on participation. If a group member does not participate, no points will be awarded.

There are also five assigned open ended questions (10 points each) presented to each team during the semester. These questions will be presented at different times during the semester to relate to specific concepts presented in lectures. Each team will consider and evaluate each question, compare and contrast various answers, and then submit their answer as a unified group. A single report, not to exceed 200 words will be organized, justified, and submitted by the team leader via eLearning for each of the five questions. These five reports will be graded on originality, completeness, and conclusions reached (10 points each for a total of 50 points).

**Student Classroom Presentation (Required: 10 points)**

Each student is required to submit a song or a poem. The work must be submitted in writing, through e-learning. **Poem/song must be typed and not handwritten.** The song or a poem must be about an arthropod. The Order/Class of the subject must be indicated. This work may be of any reasonable length (minimum of 6 lines per student). If the student chooses to work on this with another student(s), each student must contribute a minimum 6 lines. Each student must submit a copy of the work with their portion clearly delineated. Be creative but sensitive to your fellow students! Refrain from using offensive language and themes. Guidelines (see page 5) should be followed for submission of the work on e-learning. Check the schedule for the due date. Be sure that a confirmation message is received from the instructor that the work has been received on time. Work turned in after the due date receives “0” (zero) credit.

The poem/song may be performed in class for extra credit (5 points individual/10 points group). During the specified class periods, the poem/song must be performed or read to the class in order to earn the 5/10 extra credit points. Individual submissions and performances will earn 5 points of extra credit. Group projects will earn 10 points of extra credit for each team member who participates and performs the assignment. The poem must be submitted through eLearning. It may also be presented to the class either as individuals, or with a group (2 or more). The student will not get credit if the poem or song is not submitted on time.
Required Examinations: 300 Possible Points (Minimum of Three Examinations)  
See Schedule of Lectures for Dates

There will be three REQUIRED major examinations during the semester. Each major examination is worth 100 points and will cover the lectures (including Insect Orders) presented since the last examination (see schedule for details), and information from the syllabus. If an order is mentioned in a lecture, it can be included in the next examination.

Note: There will be assignments to find, view, consider, and understand references, or link to a specific website, article or video presentations which will supplement lecture topics. That information will be used as questions in any of the exams.

The optional, comprehensive examination is available for students who have missed an exam or achieved a poor score on one of the major examinations. This comprehensive exam is worth 100 points, and must be taken at the time and place of the final examination for the semester. The score from this examination will be substituted for a missing examination, or for the lowest exam score during the semester. NOTE: the comprehensive final does NOT take the place of the required semester project, team project, or student classroom presentation.

The following statement will be printed on each exam, and all students will be required to sign it: “On my honor, as an Aggie, I have neither given nor received unauthorized aid on this academic work.” All students must present their official TAMU ID when turning in the test. If a student is caught cheating on a test they will receive a score of “F”, in the course and will be reported to Aggie Honor System Office for academic dishonesty.

Each student is required to SIGN, DATE, MARK CORRECT TEST FORM (A, B, or C), and indicate which exam is being taken on their scantron. Test forms are assigned to students by individual seat number. It is the student’s responsibility to make sure that they are using the correctly assigned test and scantron. Failure to follow instructions may result in a grade of 0 for the test grade.

Make-up examinations will ONLY be given if the student presents an official University excuse.

Course Web Page
The website is located through the Howdy Portal at: http://e-learning.tamu.edu
This page will give updates on what is happening in the class, recommendations for assignments, current grade reports, and links to interesting entomology pages, as well as copies of the syllabus, the lecture schedule, and reading assignments. The student is required, and expected, to check the e-learning site at least weekly for updates and assignments, review sheets, and further suggestions. Students must use Firefox as their internet browser.
Grading

In order to earn a passing grade in this course, **All** required assignments and examinations must be completed and submitted to the instructor. Late work will be penalized. See the “Notice about All Assignments” section for guidelines. Final grades will be calculated based on the total points earned during the semester. The instructor reserves the right to scale the grades based on class performance, absences, and extra credit assignments. A summary of the points available is as follows:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examinations (3)</td>
<td>300</td>
<td>48%</td>
</tr>
<tr>
<td>Collection</td>
<td>100</td>
<td>16%</td>
</tr>
<tr>
<td>Team Projects</td>
<td>100</td>
<td>16%</td>
</tr>
<tr>
<td>Presentation (poem)</td>
<td>25</td>
<td>4%</td>
</tr>
<tr>
<td>Writing assignments</td>
<td>50</td>
<td>8%</td>
</tr>
<tr>
<td>Taxonomic Puzzle</td>
<td>50</td>
<td>8%</td>
</tr>
</tbody>
</table>

**Total** 625

**Grading Scale (Percentage of 625 points possible):**

- 90-100=A
- 80-89=B
- 70-79=C
- 60-69=D
- 0-59=F (not passing)

**Academic Integrity Statement**

An Aggie does not lie, cheat or steal, or tolerate those who do. This policy will be enforced on all assignments and examinations.

**American Disability Act**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If the student believes he or she has a disability requiring an accommodation, it is their responsibility to contact the Department of Disabilities Services, Cain Hall or call 979-845-1637 (email disability@tamu.edu). If the student needs these services, let the instructor know **two weeks before the first exam**.
NOTE TO STUDENTS*:
The handouts used in this course are copyrighted. By “handouts”, it is meant all materials generated for this class, which include, but are not limited to, the syllabus, quizzes, examinations, in-class materials, review sheets, problem sets, and video clips. Because these materials are copyrighted, no student has the right to copy the handouts, unless the instructor expressly grants permission. The instructor has authorized NO CLASS NOTES other than those made available through this class.
As commonly defined, plagiarism consists of passing off as one's own the ideas, words, writings, etc., which belong to another. In accordance with this definition, THE STUDENT IS COMMITTING PLAGIARISM IF THE WORK OF ANOTHER PERSON IS COPIED AND TURNED IN AS HIS OWN, EVEN IF PERMISSION FROM THAT PERSON HAS BEEN GIVEN. Plagiarism is one of the worst academic sins, for the plagiarist destroys the trust among colleagues without which research cannot be safely communicated. Plagiarism will not be tolerated in this course. Offenders of this policy will be punished according to University policies, which may include being expelled from the Institution. In addition, there will be no cheating of any type tolerated in this course. All examinations will be proctored, and all excused absences will be checked.
If the student has any questions regarding plagiarism, he or she should consult the latest issue of the Texas A&M University Student Rules, under the section “Scholastic Dishonesty”

* Statement from the Texas A&M University Faculty Senate-January 9, 1997
Texas A&M University

Core Curriculum

Initial Request for a lower division course included in the current Core Curriculum
to be considered for the Fall 2014 Core Curriculum

1. This request is submitted by (department name): Ecosystem Science and Mgmt

2. Course prefix and number: ESSM 309

3. Texas Common Course Number: none


5. Semester credit hours: 3

6. This request is for consideration in the following Foundational Component Area:

☐ Communication
☐ Mathematics
☒ Life and Physical Sciences
☐ Language, Philosophy and Culture
☐ Creative Arts
☐ American History
☐ Government/Political Science
☐ Social and Behavioral Sciences

7. This course should also be considered for International and Cultural Diversity (ICD) designation:

☐ Yes  ☒ No

8. How frequently will the class be offered? Fall

9. Number of class sections per semester: 1

10. Number of students per semester: 38-78

11. Historic annual enrollment for the last three years:
    - 2010-11: 48
    - 2011-12: 78
    - 2012-13: 38

This completed form must be attached to a course syllabus that sufficiently and specifically details the appropriate core objectives through multiple lectures, outside activities, assignments, etc. Representative from department submitting request should be in attendance when considered by the Core Curriculum Council.

13. Submitted by: [Signature]  Date: 4/22/13
    Course Instructor

14. Approvals:
    [Signature]  Date: 4/24/2013
    Department Head
    [Signature]  Date: 4/25/2013
    College Dean/Designee

For additional information regarding core curriculum, visit the Texas Higher Education Coordinating Board website at www.thecb.state.tx.us/corecurriculum2014

See form instructions for submission/approval process.
Texas A&M University

Core Curriculum

Initial Request for a Course Addition to the Fall 2014 Core Curriculum

Foundational Component Area: Life and Physical Sciences

In the box below, describe how this course meets the Foundational Component Area description for Life and Physical Sciences. Courses in this category focus on describing, explaining, and predicting natural phenomena using the scientific method. Courses involve the understanding of interactions among natural phenomena and the implications of scientific principles on the physical world and on human experiences.

How does the proposed course specifically address the Foundational Component Area definition above?

Students in ESSM 309 (Forest Ecology) are shown how the scientific method is used by scientists to address the issues facing forest ecosystems throughout the world. In the beginning of the course, we discuss inductive vs. deductive scientific reasoning and how ecology is often relying on an inductive scientific approach to test hypotheses. We discuss how this scientific approach is a natural extension of dealing with open systems. This discussion serves as the basis for future lessons on ecological systems as a manifestation of the interaction between biotic and abiotic components of the ecosystem and how this interaction can be shaped by stochastic events and evolutionary change.

Core Objectives

Describe how the proposed course develops the required core objectives below by indicating how each learning objective will be addressed, what specific strategies will be used for each objective and how student learning of each objective will be evaluated.

Critical Thinking (to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information):

Students are asked to construct a presentation on a particular threat or positive benefit forested ecosystem issue with material derived from the scientific literature. They evaluate this issue (e.g. climate change), make a prediction on how some aspect of the forest's function will change, and then describe the things that will be monitored to test their hypothesis. Students will be evaluated on their presentation and paper.

Communication (to include effective development, interpretation and expression of ideas through written, oral and visual communication):

Students are asked to present their ecosystem or problem during class and then write a 1 paragraph description of their section of the presentation and a 1 paragraph description of how it relates to the sections written by their group members. Students will be evaluated on their presentation and paper.

Empirical and Quantitative Skills (to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions):

Primary literature graphics are needed in their presentation and need to be presented as forming the basis for either the opportunity or problem (or the solution) facing their forested ecosystem. Quantitative work is primarily assessed by exams, but also homework, where the students are expected to estimate residence times and turnover rates of different elements in forested ecosystems.

Teamwork (to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal):
Texas A&M University

Core Curriculum

Initial Request for a Course Addition to the Fall 2014 Core Curriculum

Both the group presentation and the writing assignment are meant to have the students interact with one another and discuss the assignments. In addition, weekly online discussion assignments are used to have the students discuss the material in the book with peers beyond those in their immediate group for the presentation assignment.

Please be aware that instructors should be prepared to submit samples/examples of student work as part of the future course recertification process.
Course title and number  Forest Ecology, ESSM 309
Term  Fall 2012
Meeting times and location  Class: Tuesday, Thursday, 2:20 – 3:35 PM

Instructor Information
Name  Jason G. Vogel
Telephone number  979 445 5580
Email address  jason_vogel@tamu.edu
Office hours  Oper door or by appointment
Office location  Room 209C Animal Sciences

Prerequisites
Introductory courses in ecology and chemistry are recommended but not required.

Instructor
Dr. Jason G. Vogel
Office: 207 Animal Industries
Phone: 845-5580
Email: jason_vogel@tamu.edu
Website: http://essm.tamu.edu/people/vogel/

Course Description
This course will introduce students to ecology with a special focus on forest ecosystems. Students will learn the life history and general characteristics of trees; structure and function of forest ecosystems; fundamental principles of forest tree physiology and ecology applied to an analysis of tree growth in relation to environmental factors and present day forest management; global change and forests.

Course learning objectives
Upon completion of this course you will be able to:
- Describe the key interrelationships among plants, animals, micro-organisms and their environments in forest ecosystems.
- Describe the structure and function of trees and forests and the ecosystem services they provide.
- Evaluate the impacts of environmental change, including climate change and human impacts on forest ecosystems in an earth system context.
- Synthesize, interpret, and communicate science-based information on forest ecosystems and management.

Format
Forest Ecology 309 is a 3-credit lecture course. We will explore basic concepts and current topics in forest ecology through assigned readings, student presentations and writing assignments, classroom discussion, lectures, and in-class activities.
Office hours
I can meet on Tuesday and Thursday after class from 3:45-4:45 PM in HECC. In addition, please feel free to send me emails with questions, comments, or to arrange a meeting in person at my Animal Industries office. I will typically reply to email within 24 hours.

Web-based course materials
A companion website for the course is located in eLearning (Blackboard Vista). As a registered student, you will have access to the website. The website is an essential course tool.

1. You can access elearning through the TAMU Huwdy website or through following URL:
   http://elearning.tamu.edu/
2. Click on the “TAMU” link
3. Login using your official TAMU user name and password. Click on “OK”.
4. Complete your discussion assignments

Textbook
The required textbook is a key course component. You will use the text to complete most reading assignments.

Other recommended books
These texts are an excellent source for further information and perspectives on forest ecology.

Major course activities, assignments, and projects

1) Required readings from the textbook
You will be expected to read assigned material (from the course textbook) before each class period and participate in discussions, lectures, and activities. To excel in this course, your attendance at all class sessions is expected and will help you progress in your study throughout the semester. The lectures and class activities will typically focus on the same topics you have read about, but may address different materials, depending on the importance of the reading, its difficulty, and the information that needs to be covered. In addition to the chapter assignments, supplemental readings may be assigned for some topics. These readings will be posted on the course website.

2) Online discussion questions or comments and classroom discussion
For each assigned reading throughout the course, you will have the opportunity to post a question or comment based on the assigned reading for the day or on relevant related topics. These daily questions or comments should be brief (1-3 sentences in length), and posted online on the course website. Postings are due prior to the beginning of class. Late postings (after 2:20 pm on the due date shown) will not receive credit. Feel free to join existing discussion threads, respond to questions or comments posted or start one of your own. You may post more than once. We will address a select sampling of your questions in class discussions as time permits at the beginning of each class session.

Why are the online questions or comments important?
The objectives of these required “daily questions” are to:

- Assist you in organizing and studying the course material
• Enhance your online and classroom experience
• Practice critical thinking and evaluation
• Provide valuable feedback on your level of understanding
• Move classroom focus to issues you find interesting and important
• Create interaction among you and your classmates

In addition, I will post online replies to your questions. Please visit the discussion post area to read the posted discussion questions and responses. This often proves to be a helpful study aid.

What types of questions or comments are you looking for?
A good question indicates some depth of thought. A question could be something specific that you don’t understand (e.g., “what is soil nitrogen mineralization and its role in forest ecosystems?”), or that seems to contradict something else we’ve read or covered in lecture (e.g., “how can we reconcile these results with those of Sarah Smith who found opposite results in Siberia?”). Comments could for instance, indicate what you think is an important policy implication or linkage to other aspects of forest ecology. In addition, you can suggest interesting internet links to your classmates.

How will the online discussion questions be evaluated?
Questions or comments will be evaluated based on clarity, quality, relevance, and mechanics (grammar, spelling). A good question or comment indicates depth of thought and evidence of critical thinking. Questions will be individually graded on a four-point scale [5= excellent, 4=good, 3=average, 2=below average, 1=unacceptable]. Unexcused late submissions will not be accepted. There are a total of 12 posting assignments. For full credit, you are required to complete 10 postings. This means you may elect for any reason not to complete two daily question postings without penalty. If you complete all the daily question postings, the extra points you earn (maximum of 10 points) will be included as extra credit and added to your course total points.

3) Quizzes
Two online quizzes will be made available two class periods before a mid-term exam. These will consist of matching for vocabulary and multiple-choice and are designed to have you review your notes before the midterm. You can do these on your own time and you will have 48 hours to complete the quiz.

4) Midterm exams—GRE SCANTRON SCORE SHEETS ARE NEEDED
There will be two in-class midterm exams. These exams will largely cover the material presented since the last exam; however, this course builds on basic principles that are revisited and so exams are cumulative. The exam format will include vocabulary matching and multiple-choice.

5) Oral Presentation and Writing assignment
Student groups of 2-4 will pick a topic related to forest ecosystem threats, potential change, or previous change and give a presentation on this topic. Possible topics will be provided during class, but students can choose their own with instructors permission. Each presentation will include background on the ecosystem, problem statement, a hypothesis based on the issue at hand, proposed monitoring efforts, and how these methods relate to the hypothesis. Each group member will write a 1-2-page summary of their ecosystem that follows these sections with the last paragraph dedicated to how each student contributed to the project.

6) Final exam—GRE SCANTRON SCORE SHEETS ARE NEEDED
There will be an optional in-class final exam. This exam can only improve your final grade; meaning if it is lower your course score it will not count. The Texas A&M University Registrar has scheduled the final examination on Wednesday, December 12, 2012 from 1 to 3 p.m. The final exam will be weighted towards course content covered subsequent to the second exam. Nonetheless, the final examination is comprehensive and will include questions that cover concepts learned throughout the course.
7) Extra Credit

Extra credit will only be assigned to the entire class (see “Postings” assignment). A onetime 5-point extra credit is also available to everyone who attends an ecology or biology themed seminar on campus and writes a short report. The report is due within 48 hours of the lecture that you attended. Late submissions will not be accepted. These will either be announced by me in class or you can suggest a lecture to me for approval. Individuals will not be assigned extra credit beyond what is available to everyone.

Evaluation and final grade

<table>
<thead>
<tr>
<th>Course assignment</th>
<th>Possible Points</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 Discussion postings</td>
<td>50</td>
<td>10</td>
</tr>
<tr>
<td>Quiz 1</td>
<td>25</td>
<td>5</td>
</tr>
<tr>
<td>Exam 1 - midterm</td>
<td>100</td>
<td>20</td>
</tr>
<tr>
<td>Quiz 2</td>
<td>25</td>
<td>5</td>
</tr>
<tr>
<td>Exam 2 - midterm</td>
<td>100</td>
<td>20</td>
</tr>
<tr>
<td>Quiz 3</td>
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<td>5</td>
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<tr>
<td>Oral presentation</td>
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<td>10</td>
</tr>
<tr>
<td>Writing assignment</td>
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<td>10</td>
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<tr>
<td>Final exam</td>
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<td>20</td>
</tr>
<tr>
<td><strong>Course total</strong></td>
<td><strong>500</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

¹Ten postings must be completed out of 12 possible posting assignments. You may complete two extra postings for a 10-points extra credit. These points will be added to the course total.

Course point totals and letter grade. These are accurate if final exam is left in grade.

<table>
<thead>
<tr>
<th>Total points</th>
<th>Percentage</th>
<th>Course letter grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>450 – 500</td>
<td>≥ 90</td>
<td>A</td>
</tr>
<tr>
<td>400 – 449</td>
<td>≥ 80</td>
<td>B</td>
</tr>
<tr>
<td>350 – 399</td>
<td>≥ 70</td>
<td>C</td>
</tr>
<tr>
<td>300 – 349</td>
<td>≥ 60</td>
<td>D</td>
</tr>
<tr>
<td>&lt; 299</td>
<td>&lt; 60</td>
<td>E</td>
</tr>
</tbody>
</table>

Course policies

Classroom environment. Please silence cell phones, pagers, and other electronic devices before class. Laptops are permitted for taking notes. Please respect your classmates by arriving on time, remaining the entire class period, and refraining from eating, drinking, or sleeping during class. As a courtesy, please let me know prior to the beginning of class if you must leave while class is in session.

Late assignments. No credit is given for late assignments. Late assignments will accepted only for university-authorized excused absences. Please contact your instructor prior, if possible, to the assignment due date. No points will be recorded for online discussion entries posted after 2:20 P.M. on the due date.

Missed quizzes and exams. Make-up exams and quizzes are not permitted except for extenuating circumstances (e.g. illness, injury, or other emergency) that include both prompt written notification (acknowledged e-mail message is acceptable) and proper proof to document the reason for missing the exam. If you are not able to take the exam, please contact your instructor prior to the scheduled exam time. In cases where advance notification is not feasible (e.g., accident, or emergency) you must provide written notification (acknowledged email is acceptable) by the end (5 P.M.) of the second day after the absence (within 48 hours). This notification should include an explanation of why notice could not be sent prior to the class. Late notifications (after 48 hours) are not accepted and a grade of 0 will be recorded. If
needed, the student must provide additional documentation substantiating the reason for the absence that is satisfactory to the instructor, within one week of the last date of the absence.

**Final exam.** The University Registrar has scheduled the final exam for this course on Wednesday, December 12, 20:2 from 1 to 3 p.m. The final exam is optional and can only improve your grade. According to University rules, the final examination must conform to this date, time, and place. Thus, requests for alternative final examination arrangements cannot be accepted. The exam begins at 1:00 pm and will end promptly at 3:00 pm. Late arrival may preclude one from taking the final exam. Anyone arriving after the first student has left the final examination room will not be permitted to take the final exam.

**Excused absences.** Students who are requesting an excused absence are expected to uphold the Aggie Honor Code and Student Conduct Code. The student is responsible for providing satisfactory evidence to the instructor to substantiate the reason for an absence that results in a missed exam or assignment. Injury or illness is among the reasons absences are considered excused by University policy. A medical confirmation note must contain the date and time of the illness and medical professional's confirmation of needed absence. An absence for a non-acute medical service does not constitute an excused absence (from Student Rules at http://student-rules.tamu.edu/). If the absence is excused, you will be provided with an opportunity to make up any quiz, exam or other graded activities or be provided a satisfactory alternative to be completed as soon as possible, but no later than 30 calendar days from the last day of the absence.

**Appeals.** Appeals for reevaluation of any assignment or exam will be accepted in writing. You are granted until 5 P.M. on the second full working day following the return of an exam to present your case. Your argument must be a written statement concerning why you think a particular answer was correct or did not receive the credit it deserved.

**Course Incompletes.** The University regulations are: "The instructor shall give this grade only when the deficiency is due to an authorized absence or other cause beyond the control of the student."

**Promoting academic integrity**

"An Aggie does not lie, cheat or steal or tolerate those who do."

Upon accepting admission to Texas A&M University, a student immediately assumes a commitment to uphold the Honor Code, to accept responsibility for learning, and to follow the philosophy and rules of the Honor System. Students will be required to state their commitment on examinations, research papers, and other academic work. Ignorance of the rules does not excuse any member of the TAMU community from the requirements or the processes of the Honor System. For additional information please visit: http://www.tamu.edu/aggiehonor/.

Texas A&M University expects academic integrity and strictly enforces policies against any form of scholastic dishonesty. Please review the Student Rules for more information. The usual penalty for an initial violation shall be an "F" in the course and "Honor Violation Probation". Depending upon the facts of the case and the nature of the honor code violation and whether or not a repeat offender, additional sanctions may be imposed. Sanctions may include suspension and expulsion from the University.

In Forest Ecology 309, cheating or complicity in cheating on an exam, or fraudulent requests for excused absences assignment among other forms of academic dishonesty will result in an "F" in the course and "Honor Violation Probation". If circumstances warrant, a lesser penalty consisting of grade of 0 on the work in question will apply. A grade of 0 on the work in question is the minimum penalty in this course.

The Texas A&M University Student Rules and Honor System define several forms of academic dishonesty, these include, but are not limited to:

1. **Cheating:** Intentionally using or attempting to use unauthorized materials, information, notes, study aids or other devices or materials in any academic exercise. Cheating also includes unauthorized copying or removal of an exam (in whole or in part) from the examination room.
2. Fabrication: Making up data or results, and recording or reporting them; submitting fabricated documents. This also includes material (email, documents) to support an excused absence.

3. Falsification: Manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record. This also includes material (email, documents) to support an excused absence.

4. Multiple Submissions: Submitting substantial portions of the same work (including extra credit reports) or credit more than once without authorization from the instructor of the class for which the student submits the work.

5. Plagiarism: The appropriation of another person's ideas, processes, results, or words without giving appropriate credit.

6. Complicity: Intentionally or knowingly helping, or attempting to help, another to commit an act of academic dishonesty.

Americans with Disabilities Act (ADA)
The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Disability Services, in Cain Hall, Room B118, or call 845-1637. For additional information visit [http://disability.tamu.edu](http://disability.tamu.edu)
ESSM 309 FOREST ECOLOGY  
Fall 2012 Class Schedule  
Tuesday, Thursday, 2:20 – 3:35 PM  
Harrington Education Center Classroom Building, Room 200 (HECC 200)

Schedule of Topics and Assignments

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Lecture or activity</th>
<th>Chapter reading list</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Aug 28</td>
<td>Introduction to forest ecology</td>
<td>Ch. 1</td>
<td>(Discussion posting due before class)</td>
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<tr>
<td></td>
<td>30</td>
<td>Landscape variation in ecosystems</td>
<td>Ch. 2 (posting 1)</td>
<td></td>
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<tr>
<td>2</td>
<td>Sep 4</td>
<td>Forest Types and Climate</td>
<td>Ch. 4 (posting 2)</td>
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<td></td>
<td>6</td>
<td>Film ‘Forests’</td>
<td>Ch. 6 (posting 3)</td>
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<tr>
<td>3</td>
<td>11</td>
<td>Change in Time</td>
<td>Ch. 7 (posting 4)</td>
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<tr>
<td></td>
<td>13</td>
<td>Disturbance in Ecosystems</td>
<td>Ch. 8 (posting 5)</td>
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<tr>
<td>4</td>
<td>18</td>
<td>Disturbance in Ecosystems</td>
<td>Ch. 12</td>
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<td></td>
<td>20</td>
<td>Succession/ Online Quiz Available</td>
<td></td>
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<tr>
<td>5</td>
<td>25</td>
<td>Exam 1 (midterm)</td>
<td>Ch. 13</td>
<td></td>
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<tr>
<td>6</td>
<td>Oct 2</td>
<td>Structure of Local Ecosystems</td>
<td>Ch. 9</td>
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<td></td>
<td>4</td>
<td>Biodiversity</td>
<td>Ch. 10 (posting 6)</td>
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<td>7</td>
<td>9</td>
<td>Biological Web</td>
<td>Ch. 11 (posting 7)</td>
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<td></td>
<td>11</td>
<td>Genetic and Evolutionary Aspects of Species Interaction</td>
<td>Ch. 13</td>
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<tr>
<td>8</td>
<td>Oct 16</td>
<td>Soil/ Online Quiz Available</td>
<td>Ch. 14 (posting 8)</td>
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<td></td>
<td>18</td>
<td>Primary Productivity / Review Session</td>
<td>Ch. 15 (posting 9)</td>
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<tr>
<td>9</td>
<td>23</td>
<td>Exam 2 (midterm)</td>
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<td></td>
<td>25</td>
<td>No Lecture</td>
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<tr>
<td>10</td>
<td>Nov 30</td>
<td>Forest Nutrition</td>
<td>Ch. 16 (posting 10)</td>
<td></td>
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<tr>
<td>11</td>
<td>6</td>
<td>Systems Thinking /Biogeochemical Cycling</td>
<td>Ch. 17</td>
<td></td>
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<tr>
<td>12</td>
<td>8</td>
<td>Student Presentations</td>
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<td>13</td>
<td>15</td>
<td>Student Presentations</td>
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<tr>
<td>14</td>
<td>20</td>
<td>Herbivores in Forest Ecosystems</td>
<td>Ch. 18</td>
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<td></td>
<td>22</td>
<td>Ecosystem Stability</td>
<td>Ch. 20 (posting 12)</td>
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<tr>
<td>15</td>
<td>27</td>
<td>Thanksgiving – no class</td>
<td></td>
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<tr>
<td>16</td>
<td>29</td>
<td>The Future</td>
<td>Ch. 23</td>
<td></td>
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<tr>
<td>Dec 4</td>
<td>Review</td>
<td></td>
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<tr>
<td>12</td>
<td>Exam 4</td>
<td>(final comprehensive, 1 – 3 pm)</td>
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</table>

1Lecture order may vary slightly from the schedule described above.

2Readings and discussion question postings are due prior to lecture on the date shown. The chapter assignments are found in: Perry, D.A., Oren, R., Hart S.C. 2008. Forest Ecosystems. 2nd. edition. The Johns Hopkins University Press, Baltimore, Maryland, 606p. Additional brief supplemental readings may also be assigned for some topics.

3I will be attending professional meetings on these dates.