Life and Physical Sciences
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: 680

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:
   - [ ] Yes
   - [x] 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.

12. Submitted by: [Signature]
    Date: April 15, 2013

Approval:
[Signature] April 26, 2013

13. Course Instructor

14. Department Head

15. College Dean/Designee

Date: April 29, 2013

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

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 Quantitative 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 access that of each of the other team members. Final points award 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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Department of Entomology
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(979) 845-5855
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Entomology 322 – Insects in Human Society (Sec. 500)
Room 101, Hep 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.
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<thead>
<tr>
<th>Day</th>
<th>Date</th>
<th>Lec. #</th>
<th>topic</th>
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<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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<td>Fri</td>
<td>3</td>
<td>Classification of Insects &amp; Other Arthropods</td>
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<td>Mon</td>
<td>4</td>
<td>Martin Luther King Holiday-no class</td>
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<td>Wed</td>
<td>5</td>
<td>Putting Order Into the Insect World</td>
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<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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<td>Wed</td>
<td>8</td>
<td>Insect Structure &amp; Function (Morphology 1)</td>
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<td>Fri</td>
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<td>Morphology 2 (cont'd)</td>
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<td>Mon</td>
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<td>Insect Structure &amp; Function-Internal (Physiology 1)</td>
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<td>Physiology 2 (cont'd)</td>
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<td>Fri</td>
<td>12</td>
<td>Insect Metamorphosis &amp; Growth</td>
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<td>Mon</td>
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<td>Insect Metamorphosis &amp; Growth (cont'd)</td>
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<tr>
<td>Wed</td>
<td>14</td>
<td>optional review for exam 1, Heep 101 5:30p-6:30p</td>
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<td>Fri</td>
<td>15</td>
<td>1st MAJOR EXAM (1-12) 100 PTS*</td>
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<td>Mon</td>
<td>16</td>
<td>Insects in Music, Literature &amp; Poetry</td>
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<td>Wed</td>
<td>17</td>
<td>Insect Reproduction &amp; Behavior cont'd (TEAM assignments made)</td>
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<tr>
<td>Fri</td>
<td>18</td>
<td>Insect Reproduction &amp; Behavior</td>
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<td>Mon</td>
<td>19</td>
<td>Insect Communications (Demonstration)</td>
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<td>Wed</td>
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<td>Insects as Models for Survival</td>
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<td>Fri</td>
<td>21</td>
<td>Insect Movement and Dispersal (Poems/songs due)</td>
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<td>Mon</td>
<td>22</td>
<td>Insects That are Beneficial to Humans</td>
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<td>Wed</td>
<td>23</td>
<td>Insects That are Beneficial to Humans (2)</td>
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<td>Fri</td>
<td>24</td>
<td>Insects as Food (Entomaphagy) (Poem performance opportunity)</td>
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<td>Mon</td>
<td>25</td>
<td>Insects in Art, Cartoons &amp; Movies (Poem performance opportunity)</td>
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<tr>
<td>Wed</td>
<td>26</td>
<td>Spring break</td>
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<td>Fri</td>
<td>27</td>
<td>Spring break</td>
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<td>Mon</td>
<td>28</td>
<td>optional daytime collecting trip, Lick Creek 5:00-7:00pm</td>
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<td>Wed</td>
<td>29</td>
<td>optional night collecting trip, Brazos Ctr, 7:00-9:00pm</td>
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<td>Fri</td>
<td>30</td>
<td>Entomophobia, Delusory Periaetiosis &amp; Allergie</td>
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<tr>
<td>Mon</td>
<td>31</td>
<td>Relationships of Insects to Human Disease (1) (Taxonomic Puzzle due)</td>
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<td>Wed</td>
<td>32</td>
<td>optional review for exam 2, Heep 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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<td>Fri</td>
<td>34</td>
<td>optional night collecting trip, Brazos Ctr, 7:00-9:00pm</td>
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<td>Mon</td>
<td>35</td>
<td>reading day no class</td>
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<td>Wed</td>
<td>36</td>
<td>Relationships of Insects to Human Disease (2) (Team Projects Due)</td>
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<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>Control of Insect Populations</td>
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<td>Wed</td>
<td>36</td>
<td>Integrated Pest Management</td>
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<td>Wed</td>
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<td><strong>optional pinning session, Urban Ctr, 5:00-7:00pm</strong></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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<td>Wed</td>
<td>39</td>
<td>Insects in a green society (SEMESTER PROJECTS DUE*)</td>
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<td>Fri</td>
<td>40</td>
<td>Economic Impact &amp; Future of PC</td>
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<td>Mon</td>
<td>41</td>
<td>Forensic Entomology (pick up graded projects)</td>
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<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>
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<td><strong>optional review for exam 3, Heep 101, 5:30-6:30pm</strong></td>
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<td>Fri</td>
<td>43</td>
<td>3rd MAJOR EXAM (31-42) 100 pts*</td>
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<td>Mon</td>
<td>44</td>
<td>review for optional final—last class</td>
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<td>Tue</td>
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<td>OPTIONAL COMPREHENSIVE FINAL 100 pts**</td>
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<td>** 8:00-10:00AM, 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 \( \frac{3}{8} \) 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 X 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:**
- Atelecera (Insects, Millipedes, Centipedes) (Alcohol, Pinned, and Pointed)
- Chelicerata (Spiders, Scorpions, Ticks) (Alcohol)
- Crustacea (Pill Bugs, Sow Bugs, Rolly Pollies, 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)
- Collembola (Springtails) (Alcohol)
- Decapoda (Shrimp, Lobsters, Crabs) (Alcohol)
- Dermaptera (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 Pollies) (Alcohol)
- Isoptera (Termites) (Alcohol)
- Lepidoptera (Butterflies, Moths) (Immatures in Alcohol, Adults Pinned or Pointed)
- Mantodea (Praying Mantis) (Immatures in Alcohol, Adults Pinned or Pointed)
- Mecoptera (Scorpionflies) (Adults pinned, immatures in Alcohol)
- Neuroptera (Dobsonflies, Lacewings, Ant lions, 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)
- Plectoptera (Stoneflies) (Alcohol)
- Psocoptera (Book Lice, Bark Lice) (Alcohol)
- Siphonaptera (Fleas) (Alcohol)
- Thysanoptera (Thrips) (Alcohol)
- Thysanura (Silverfish) (Alcohol)
- Trichoptera (Caddisflies/Rockrollers) (Alcohol)

**Suborder:**
- Anoplura (Sucking Lice) (Alcohol)
- Mallophaga (Chewing Lice) (Alcohol)
- Authurina (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>
</tr>
</thead>
<tbody>
<tr>
<td>Examinations (3)</td>
<td>300 (48%)</td>
</tr>
<tr>
<td>Collection</td>
<td>100 (16%)</td>
</tr>
<tr>
<td>Team Projects</td>
<td>100 (16%)</td>
</tr>
<tr>
<td>Presentation (poem)</td>
<td>25 (4%)</td>
</tr>
<tr>
<td>Writing assignment</td>
<td>50 (8%)</td>
</tr>
<tr>
<td>Taxonomic Puzzle</td>
<td>50 (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 Cover Sheet

Initial Request for a course to be considered for the Fall 2014 Core Curriculum

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

2. Course prefix and number: FIVS 123

3. Texas Common Course Number: Click here to enter text.

4. Complete course title: Forensic Investigations

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

   [x] CURRENT COURSE: No

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

8. How frequently will the class be offered? Fall/Spring/Summer Semesters

9. Number of class sections per semester: One

10. Number of students per semester: Limited by only the size of the classroom. Anticipate enrollment cap of 200 students per semester.

11. Historic annual enrollment for the last three years: 0 (New Course) 0 (New Course) 0 (New Course)

   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.

12. Submitted by:
    
    [Signature] Kevin M. Heine
    
    Date: 29 March 2013

13. Approvers:
    
    [Signature] David Rapnule
    
    Date: 13 May 2013

14. Department Head
    
    [Signature] Kim Dooley
    
    Date: May 16, 2013

15. 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?

Forensic Science and its many applications rely upon collection, processing, analysis and interpretation of physical and biological evidence to explain natural phenomena and the case specific contexts in which debate is posed. The foundation is development and testing of sound hypotheses, experimental design, data collection, analysis, and interpretation in an iterative process of the scientific method. Forensic topics and case studies provide a venue to examine the fundamental processes of science, assess how scientific discoveries explain natural phenomena and observe how findings are adapted for use in explaining occurrences in the physical and human worlds.

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):

Utilizing a series of activities including review of scientific articles, analyses of crime scene scenarios, examination of evidentiary samples, and case file crime scene reports, students will reconstruct incident scenes/scenarios and establish cause and effect relationships. Students will be required to synthesize facts known from scientific testing and crime scene information to critically analyze and interpret results, and create convincing arguments or logical subsequent inquiries, lines of investigation, or bases for disputing and questioning evidence. Students learning will be evaluated by assessing student abilities to cull qualitative information and quantitative data through examination of an incident scene or scenario, reason logically and analyze the data, and articulate their findings using verbal, written, or illustrative means of communication for which they will receive a grade.

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

Students will write crime scene reports to include type of evidence taken, data records, and observations on standard crime scene report forms for multiple case examinations, write a scientific paper on glass reconstruction using the scientific method (a 5 part document), perform and record numerous calculations for review (e.g. light wave lengths, blood alcohol content, blood stain geometry), write team reports, and produce power point presentations summarizing probative evidence from crime scene cases. Student learning will be evaluated by assessing student abilities to analyze and interpret data; make determinations based on their analyses, and communicate those determinations using verbal, written, or illustrative presentations and discussion within the context of graded group projects.

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

Core Curriculum

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

Students will use mathematical equations and spatial measurements to assess light wavelengths, fingerprint analyses, radial fracture analyses, blood alcohol content analyses, and blood splatter analyses. Each case requires data analysis and interpretation with respect to known and observed facts. Student learning will be evaluated through graded exercises that require students to make investigative determinations based on their abilities to properly assess data using cognitive-instrumental reasoning, mathematical calculations, and elementary statistical analyses.

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

There are 4 team assignments (see Core Objective Mapping Attachment) that will require students to take different roles and thus critically assess information and analyses from different points of view. For example, analysis of a crime scene with the team consisting of a Forensic Investigator, Forensic Scientist, and Forensic Reviewer requires each member view the case and the work of other team members with different perspectives and expectations. Conflicts in interpretations are expected in these assignments and the use of peer review and resolution of disagreements is included as part of written and oral products produced by teams in each assignment. Student learning will be evaluated through graded projects where success relies on the team concept of interdependent roles and effective small group communication and debate.

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: FIVS 123 Forensics
Term (e.g., Fall 200X): Fall 2014
Meeting times and location: MWF
Credit Hours: 3.0

Course Description and Prerequisites

An overview of Forensics that begins at an incident scene and ends with a courtroom verdict. Course topics address the principles, concepts, tools, and methodologies used in the science and practice of forensics. Lectures and exercises include examination of various forensic fields inclusive of the nature and types of evidence collected at incident scenes, the analysis of this evidence and generation of evidence-based conclusions, and the presentation of these findings to a diverse audience (of jurors, judges, etc.)

Prerequisites: none.

Learning Outcomes or Course Objectives

Upon completion of this course, students will be able to:

- Articulate the foundational principles to the forensic sciences and appropriately apply them to an array of field situations,
- Name and comprehend specific methodologies and appropriately apply them to problem solving,
- Collect, organize, and analyze evidence to generate informed conclusions,
- Challenge concepts, dispute evidence, and question conclusions within the context of reaching a group consensus,
- Formulate and present convincing arguments comprehensible by diverse audiences,

Instructor Information

Name: Kevin M. Heinz
Telephone number: 979-862-3407
Email address: kmheinz@tamu.edu
Office hours: TBD
Office location: BCC 108

Textbook and/or Resource Material


Grading Policies

<table>
<thead>
<tr>
<th>Activities and assignments (9 @ 20 points each)</th>
<th>Total Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examination 1</td>
<td>100 pts</td>
</tr>
<tr>
<td>Examination 2</td>
<td>100 pts</td>
</tr>
<tr>
<td>Examination 3</td>
<td>100 pts</td>
</tr>
<tr>
<td>Group Project Part 1</td>
<td>70 pts</td>
</tr>
<tr>
<td>Group Project Part 2</td>
<td>30 pts</td>
</tr>
<tr>
<td><strong>Total Points</strong></td>
<td><strong>580</strong></td>
</tr>
</tbody>
</table>
Final grades will be based on the percentage of total points earned:

A=90–100%; B=80–89%; C=70–79%; D=60–69%; F=<60%

Course Topics, Calendar of Activities, Major Assignment Dates (Based on Fall 2013 Calendar)

Week 1 (Week of August 25):

Classroom Tasks
- Discuss the field of Forensic Science, the professionals working in the various fields, and the agencies that employ such professionals
- Discuss the Scientific Method and its application in Forensic Science
- Individual Classroom Exercise: Read the case provided, evaluate the information and data, calculate the wavelength used in the examinations, determine the nature of the light used, and conclude the type of evidence examined.

Writing Assignment (Due Week 2)
- Evaluate a scientific journal article and write a paper that includes: (1) a summary of the article, (2) how the Scientific Method is represented in the article, and (3) how the article could be expanded in scope or be of greater value to the forensic community.

Outside Reading Assignment
- Chapter 1: Introduction to Forensic Science
- Chapter 5: Light and Matter

Week 2 (Week of September 1):

Classroom Tasks
- Collect Writing Assignment from week 1
- Discuss separation methods used in laboratories for the analysis of evidence
- Discuss how specific types of microscopes are employed to identify different types of evidence
- Examine the classification system of evidence
- Discuss class and individualizing characteristics

Group Assignment
- The class will be divided into groups; each group will break down into subgroups of Investigators, Forensic Scientists, and Reviewers. Tasks are as follows:
  - Investigators are to read a provided scene scenario and complete an Evidence Submission form for the Crime Laboratory that contains items submitted for analysis.
  - Forensic Scientists are to analyze the submission form and indicate for each item listed: (1) whether the item has class or individualizing characteristics and (2) which forensic tool will be used for analysis.
  - After submission and analysis, Reviewers will evaluate both the scene scenario and the submission form to conclude: (1) whether all evidentiary items were submitted and (2) whether items were properly classified and examined.

Outside Reading Assignment
- Chapter 4: Separating Complex Mixtures
- Chapter 6: Microscopy
- Chapter 3: The Nature of Evidence
Week 3 (Week of September 8):

Classroom Tasks
- Discuss the goal of crime scene investigation
- Examine modes of scene documentation
- Discuss legal aspects of searching and seizing evidence

Outside Reading Assignment
- Chapter 2: Crime Scene Investigation

Week 4 (Week of September 15):

Classroom Tasks
- Examine types of search methods
- Discuss collection and preservation of evidence
- Examine evidence processing methods
- Examination 1

Week 5 (Week of September 22):

Classroom Tasks
- Discuss the development of friction ridge skin
- Examine the methodology used in latent print examination
- Examine documentation and collection methods for impression evidence

Group Assignment
- The class will be divided into groups; each group will break down into subgroups of Latent Print Examiner (LPE) Case Agents and Validation Latent Print Examiners (LPEs). Tasks are as follows:
  - LPE Case Agents will examine and compare unknown and known fingerprints using the ACE-V methodology to determine identifications. Findings will be documented on an LPE Examination form.
  - Validation LPEs will conduct blind, independent examinations on the same unknown and known fingerprints and document findings on an LPE Validation form.
  - After all examinations are complete, each group of LPE Case Agents and Validation LPEs will (1) review all findings, (2) discuss conflicting findings, and (3) resolve conflict to arrive at an agreed upon finding.

Outside Reading Assignment
- Chapter 7: Fingerprints and Other Impressions

Week 6 (Week of September 29):

Classroom Tasks
- Discuss types of questioned documents examinations
- Examine different types of firearms evidence
- Discuss the examination and comparison process of firearms evidence

Outside Reading Assignment
- Chapter 9: Firearms and Toolmarks
Week 7 (Week of October 8):

Classroom Tasks
- Examine the nature of polymer evidence
- Discuss the forensic value of glass
- Individual Classroom Exercise: Read the case provided and reconstruct the glass pieces of a glass pane using an alternate light source. Examine the stress marks of the appropriate radial fracture to conclude the direction of force. (Notes concerning the examination process should be taken to be incorporated into the writing assignment.)

Writing Assignment (Due Week 8)
- Write a paper based on the individual classroom exercise that includes: (1) synopsis of the case, (2) the issue/question being addressed, (3) the materials/tools used in the examination, (4) steps/process applied in the examination, and (5) a conclusion.

Outside Reading Assignment
- Chapter 18: Fibers, Paints, and Other Polymers

Week 8 (Week of October 13):

Classroom Tasks
- Collect Writing Assignment from week 7
- Discuss the application of toxicology in forensics
- Examine the relationship between blood alcohol content (BAC), impaired behavior, and drunk driving laws
- Individual Classroom Exercise: Read the case provided, evaluate the information and data, and calculate the BAC for each person to determine who was legally intoxicated.

Outside Reading Assignment
- Chapter 17: Forensic Toxicology

Week 9 (Week of October 20):

Classroom Tasks
- Discuss the forensic value of hair
- Discuss the modes of hair analysis
- Discuss the forensic value of biological fluids

Outside Reading Assignment
- Chapter 15: Hair
- Chapter 13: Serology

Week 10 (Week of October 27):

Classroom Tasks
- Discuss blood analysis
- Examine and discuss Bloodstain Pattern Analysis
- Individual Classroom Exercise: Read the case provided and the investigative statement. Use the data provided to calculate (1) the angle of impact of the bloodstains and (2) the area of origin. (Notes concerning the examination process/calculations should be taken to be incorporated into the writing assignment.)
Writing Assignment (Due Week 11)

- Write a paper based on the individual classroom exercise that includes: (1) synopsis of the case, (2) the issue/question being addressed (investigative statement), (3) the data/tools used in the analysis, (4) steps/process applied in the analysis, and (5) the conclusion (whether the investigative question is supported or not supported and why).

Week 11 (Week of November 3):

Classroom Tasks

- Collect Writing Assignment from week 10
- Discuss DNA as forensic evidence
- Discuss death investigation and examine characteristics related to postmortem interval
- Discuss and examine Event Analysis

Group Project Part 1 (Due Week 13)

- The class will be divided into groups. Each group will receive an investigative case file containing: a scene report, supplemental reports, photographs, sketches, medical examiner report, and laboratory reports. Based on the case file information, answer the investigative question by conducting Event Analysis and creating a flow chart reflecting the sequence of the action of the episode. Prepare a case review for submission and class presentation that includes the following: (1) case synopsis, (2) flow chart, and (3) evidence-supported statement answering the investigative question.

Outside Reading Assignment

- Chapter 14: DNA Typing
- Chapter 10: Forensic Pathology

Week 12 (Week of November 10):

Classroom Tasks

- Discuss identification methods used in forensic anthropology and forensic odontology
- Discuss factors affecting the entomological post mortem interval
- Discuss forensic science as it relates to the law and the courtroom

Outside Reading Assignment

- Chapter 11: Anthropology and Odontology
- Chapter 12: Forensic Entomology
- Chapter 21: Forensic Science and the Law

Week 13 (Week of November 17):

Classroom Tasks

- Collect Group Project Part 1 from week 11
- Group presentation of their Group Project Part 1
- Examination 3

Group Project Part 2 (Due Week 16)

- The class will remain in the groups created in Group Project Part 1. Each group will receive a case review file produced by another group as well as the investigative case file used to generate it. Peer review will be conducted on the case review file and a review document generated that evaluates the case review file for the following:
  - Completeness: inclusion of case synopsis, flow chart, response to investigative question
  - Professionalism: neatness, proper grammar and spelling
  - Sound reasoning: conclusion based on information/data provided in the investigative case file
Week 14 (Week of November 24): Thanksgiving Holiday 27 Nov.- No Class Fri 28 Nov.

Week 15 (Week of December 1): Class meets Redefined Day-Monday 1 Dec.; Reading Days 3-4 Dec., No class.

Week 16 (December 8): Group Project Part 2 Due on Final Exam Date/Time to be announced.

Other Pertinent Course Information

Attendance:
The university views class attendance as an individual student responsibility. You are expected to attend class and to complete all assignments. Weekly activities and due dates for individual presentations and written essays are outlined in the syllabus. Your timely completion of all assignments and your participation in weekly class meetings are a key element of the course. Your contributions are important for your own growth as well as that of your classmates. If you request an excused absence you must comply with student attendance rules (see http://student-rules.tamu.edu/rule07) and you are expected to uphold the Aggie Honor Code and Student Conduct Code (see http://student-rules.tamu.edu/rule24). No participation points will be awarded for missed classes, but there no penalty will.

Oral Presentations:
Oral presentation scores will be based on organization, length, grammar, diction and stature, and effectiveness of each presentation. Students should review information provided by the University Writing Center (see http://writingcenter.tamu.edu/how-to/communication/) for elements associated with effective speaking.

Written Assignments:
Written assignments will be scored on organization, format, sentence structure, grammar, spelling, and content. Students should review information provided by the University Writing Center (see http://writingcenter.tamu.edu/how-to/) for elements associated with effective writing. Except for days covered by excused absences, a penalty of 10% of the maximum points will be assessed for each day an assignment is turned in late.

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 Disability Services, in Cain Hall, Room B118, or call 845-1637. For additional information visit http://disability.tamu.edu

Academic Integrity
For additional information please visit: http://aggiehonor.tamu.edu

"An Aggie does not lie, cheat, or steal, or tolerate those who do."
Texas A&M University
Departmental Request for a New Course
Undergraduate ♦ Graduate ♦ Professional
• Submit original form and attach a course syllabus.

Form Instructions

1. Request submitted by (Department or Program Name): Entomology

2. Course prefix, number and complete title of course: FIVS 123 Forensic Investigations

3. Catalog course description (not to exceed 50 words): Overview of Forensics from incident scene to courtroom verdict; principles, concepts, tools, and methodologies used in the science and practice of forensics; examination of various forensic fields; evidence recognition, analysis, interpretation, and presentation to diverse audiences.

4. Prerequisite(s): None

Cross-listed with: None

Stacked with: None

5. Is this a variable credit course? □ Yes □ No

If yes, from _______ to _______

6. Is this a repeatable course? □ Yes □ No

If yes, this course may be taken ______ times.

Will this course be repeated within the same semester? □ Yes □ No

7. This course will be:
   a. required for students enrolled in the following degree program(s) (e.g., B.A. in history)
      None
   b. an elective for students enrolled in the following degree program(s) (e.g., M.S., Ph.D. in geography)
      Undergraduates in any degree program across all colleges may find this course of interest and application to their academic program.

8. If other departments are teaching or are responsible for related subject matter, the course must be coordinated with these departments. Attach approval letters.

9. Prefix Course Title (excluding pronunciation)

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Approval recommended by:

Dr. David Ragland, Head, Entomology
Department Head or Program Chair (Type Name & Sign) Date

Chair, College Review Committee

Dean of College

Department Head or Program Chair (Type Name & Sign) Date (if cross-listed course)

Submitted to Coordinating Board by:

Chair, GC or UCC Date

Associate Director, Curricular Services

Date Effective-To Date

Questions regarding this form should be directed to Sandra Williams at 845-8201 or sandra.williams@tamu.edu

Curricular Services — 3/10