BESC 48 C Section 934

Spring Semester, 2016  Thursdays, 9:35- 10:25 am
Location 112 LF Peterson

Course Description:
Capstone course for topics in Bioenvironmental Sciences; critical analysis of environmental issues conveyed to others through oral presentations and in writing.

Section theme: Evaluation of environmental mutagens, teratogens, endocrine disrupters and carcinogens

Prerequisites: BESC 201; BESC or related Major

Course Objectives. In this course you will work individually and in small groups to analyze a theme related to the Bioenvironmental Science major and to study the problem through literature searches. You will make an oral presentation of your topic to the class and submit a written paper on the same topic. The theme for this section involves identification of manmade or natural agents in the environment that are putative mutagens, teratogens, endocrine disrupters and/or carcinogens. As well as discussing sources, consequences and prospective ‘remediation’, an emphasis will be placed on the science that provides evidence the agent is indeed harmful. The course will meet weekly, but it is expected that most of your research and preparation will take place outside of the classroom, either individually or in small groups. In using this course format, the intended outcome is to allow you to draw from course material, internship experience (BESC 484), available literature and databases, and current events to analyze and educate your peers on a discrete aspect within the broad area of bioenvironmental sciences. You will be expected to evaluate evidence in the literature concerning proof that a compound is or is not hazardous and to include in your presentation sand paper.

The first meeting will be used to provide an overview of the course structure and seminar theme. Potential environmental agents will be discussed and students will select at least two for initial review, including a written summary to be submitted electronically along with an outline suitable for stimulating group discussion. The remainder of the semester will focus on PowerPoint presentations. Peer-review will be used for each component of the course, with grading and direction provided by the instructor. The intent is to provide an opportunity for you as a BESC/USAL/ENST major to investigate and analyze the validity of evidence for or against detrimental effects of specific environmental agents while gaining experience in public speaking and interaction.

Instructor:
Dr. Clint Magill
Office Hours: Open-door or by appointment
Office: 202H, LF Peterson; Telephone: 979-845-825; e-mail: c-magill@tamu.edu

Course WEB site:

Attendance and Participation

The course will meet weekly. Course schedules and materials will be posted on the class Web site. It is essential that you are prepared for class and participate in the group discussion and peer evaluations.

Absence Policy
Absences will be addressed by Student Rule 7 http://student-rules.tamu.edu/rule07 . Course grades will be lowered for unexcused absences and/or failure to participate in class discussions. Your score will drop 2 points for each long presentation missed unless you have an excused absence.

Learning Outcomes
The goal of this professional experience is to facilitate and improve your ability to:

- Evaluate the types of evidence used to determine if agents are mutagenic, carcinogenic or teratogenic
- Communicate clearly and effectively in written and spoken formats
- Demonstrate competence in usage of English grammar, mechanics, in the language specific to environmental professionals
- Write in a scientifically correct manner, including citations

Grading
All assignments will be due by class time on assigned dates. For written assignments, e-mail submission in a format that can be used with track-changes is preferred unless otherwise indicated.

The presentation grade will include your response to peer-review, your ability to clearly discuss the theme, and answer questions following your talk. As an observer, you are expected to provide a written critique of other presentations using a form that will be made available in class. The intent is to use the discussion, peer-review and presentations to help you become an expert on a topic within the seminar theme.

Peer-Review: 15 points
Analysis of background literature: 10 points  (Case studies)
Outline and initial short presentation: 10 points
Oral Presentation(s): 40 points (primarily based on peer review scores)
Final Report (Research Paper): 25 points and yes, proper English is critical!

Final Grade: 90-100 points =A; 80-89 points B; 70-79 points=C; 60-69 points=D; <60=F

Peer Review
You will work in pairs or small groups to proof and make suggestions to each others written assignments. In addition, you will use a rubric to evaluate the presentations of all others. You will also have an opportunity to provide anonymous tips to each speaker.

**Small Groups Workshop.** In preparation for your presentations you will break into small groups to evaluate your draft presentations in PowerPoint. This also serves as an outline for your research paper. The peer-review rubric is available on the class web site.

Bring 2 printed copies of your draft PowerPoint presentation to class for peer-review. For each peer-review, the content and the presentation will be evaluated using the rubrics attached to this syllabus. The intent of peer-review is to help each other improve the content and presentation. Mechanics (grammar) and style (PowerPoint) are important components of peer-review.

Following your presentation, the peer-reviewers will provide their comments. You are expected to edit the presentation and provide a brief written response indicating the changes that you made.

**Writing and Communication Assignments**

1. **Analysis of Reading (250 words), (5 points X 2 = 10 points)**
   Critical analyses of published material of at least 250 words on your selected topics should be prepared, specifically addressing the criteria developed by the class. These materials should include scientific research papers, investigative reports and in some cases, popular ‘views’. This is equivalent to 1 page, typed, double spaced, 1" margins, 12 point, Times New Roman font.

2. **Case Study: MEMO (10 points)**
   Also provide a 1 page (250 word or less) brief introduction and an outline of your presentation based on your selected topic, indicating your ideas and objectives. This can be submitted as a word document. This will be in MEMO format. For details on memo writing, see:
   - http://writingcenter.tamu.edu/how-to/business/memos/
   - http://owl.english.purdue.edu/owl/resource/590/1/

3. **Presentations: 12-15 minutes with introductions and discussion (40 points).** The PowerPoint presentations will provide you with an opportunity to become intimately familiar with your research topic. The intent of this assignment is to allow you to become more comfortable with presentations in front of an audience and to answer questions based on your material. You will be peer reviewed and graded on the PowerPoint presentation (mechanics, use of data, color, images), ability to present your information and to answer questions. Following the presentation, you will have an opportunity to edit your presentation, following formal peer-review. The edited presentation is due the following week at the beginning of class. Also include all peer-reviews.

   **Presentation 1.** (5-10 minutes) Introduction into one or more of the ‘agents’ listed in the course outline (or an agent of special interest to you) in order to allow you and other students to provide input as to suitability.

   **Presentation 2.** A scientifically correct, informative presentation that demonstrates your expertise with the research topic, unanswered questions related to the theme, and your ideas for future research.
TIP: Prior to your oral presentation, practice the talk several times. Staying within the time limit is a strict requirement—you will have 10-12 minutes for your presentation and 3 minutes for questions. Helpful hints on preparing your talk can be found at http://writingcenter.tamu.edu/how-to/communication/writing-effective-presentation-slides/

4. Research Paper (1000 words, 25 points). The research paper will be a scientifically correct report of the topic outlined in your abstract and PowerPoint Presentations. The paper will be a formal analysis of the topic, including data presented in class, and independent research. The document format will be Times New Roman, 12-point font, double-spaced. Citations will be compiled using the format of either Ecology <www.esajournals.org/loi/ecol> or Applied and Environmental Microbiology <aem.asm.org/>. (You can download Endnote citation software from cis.tamu.edu.) The citations and any figures or tables do not count toward the 1000 words. Also, if you use graphics, they must be attached as an appendix or embedded within the text with appropriate figure legends. This should be a professional document.

The University Writing Center http://uwc.tamu.edu.
Online and one-on-one consultation for your writing assignments (2nd floor Evans Library).

Americans with Disabilities Act (ADA) Policy Statement:
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 Statement:
Aggie Honor Code “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 exclude any member of the Texas A&M University community from the requirements or the processes of the Honor System. For additional information please visit: www.tamu.edu/aggiehonor/

Academic Dishonesty:
If you are caught cheating on an exam, or plagiarizing any portion of your writing assignments you will receive a zero for that assignment and will be reported for scholastic dishonesty. As commonly defined plagiarism consists of claiming the ideas, words, writings etc. of another person as your own work. This means you are committing plagiarism if you copy another person and turn it in as your own, even if you have permission of that person. Plagiarism is one of the worst academic sins. If you have any questions regarding plagiarism, please consult the latest issue of the Texas A&M University Student Rules, under the section: Scholastic Dishonesty”.

Plagiarism http://www.tamu.edu/aggiehonor
Plagiarism is defined as theft or inadequate citation of other work, including (but not limited to) primary and secondary literature and internet sources. Plagiarism will result in a grade of ‘zero’
for the assignment AND a deduction of the equivalent amount of points from your grade. For example, a score of minus 10 points (−10) would be the penalty per writing assignment if plagiarism occurs.