Science and Technology First Year Seminar, Fall 2011

Engineering, Society, and Ourselves

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FIRST-YEAR SEMINAR L - 47918 - UCCP 1101 - 741
Meets: 11:00 am - 11:50MW BH128

Other Learning Community Classes
Chemistry 9-9:50 MWF ST 104
English Composition

Course Description:
First Year Seminar I is a discovery of the skills necessary for your success as a university mechanical engineering student and as a future engineering professional. Acquisition of these skills is integrated into an exploration of the concepts encountered in one or more of the following classes: CHEM 1311, and in ENGL 1301 composition course. Seminar is a one credit hour discussion course where you learn to communicate verbally, work collaboratively on complex chemistry and engineering topics, and relate them to your role as a developing engineer.

To achieve success in any field you will need 3 basic things:

- Expert content knowledge and critical thinking ability.
- Superb communication skills, specific to engineering discourse.
- The ability to get along with others and work as a team.

You must have not only a strong command of engineering concepts and the ability to solve complex problems, but you must also be able to communicate both in writing and orally about complex issues if you wish to be highly successful. Because engineering is a collaborative effort, you must be able to get along and work with others if you wish to be employable or go on to post-graduate programs. The first year program provides students with the framework to achieve these critical goals by combining the chemistry large lecture course with the first year writing course and seminar discussion course in an integrated first year experience.

This is a hybrid course using both Blackboard and face-to-face class meetings. Be sure to check Blackboard regularly for assignments, discussions and other important announcements.

Seminar Course Objectives:

The primary objectives of First Year Seminar are for students to:

- Explore the interconnections among the Triad/Tetrad courses;
- Develop critical thinking skills and significant learning;
- Clarify personal values, goals, and strengths;
- And develop the ability to learn through study, discussion, writing, cooperation, and collaboration

Seminar Learning Outcomes:

- Students will apply interdisciplinary knowledge to address and analyze real-world issues
- Students will interpret and evaluate various research materials and/or perspectives

Science Learning Community Specific Learning Outcomes:

- Take personal responsibility and become a self-directed college learner.
- Effectively read and comprehend scientific articles, reports, and books.
- Evaluate the scientific accuracy of claims made in literature relating to engineering.
- Apply engineering and mathematical principles to make decisions.
- Understand the scientific method.
- Collaborate effectively as both an effective leader and follower.
- Communicate on topics related to engineering.
- Relate engineering to other ways of knowing.
- Understand the nature of engineering research.
- Apply chemistry concepts to real world situations.
- Understand the role and purpose of different forms of engineering literature.
- Effectively use library research tools to research on engineering topics.
- Communicate about engineering topics verbally, in writing, and via multimedia presentation.
- Understand and apply the conventions of professional engineers.
- Get along with others.
- Develop awareness of one's present and future role in the community of engineering scholars.
- Understand the role of engineering in greater sociopolitical world context.
- Understand the role of mathematics in engineering.
- Be able to use mathematics such as graphs and basic statistics to explain engineering concepts.
- Develop interpersonal communication skills.
- Use online learning technology effectively.
- Be successful.

**Course Materials:**

Seminar is a discussion course focused on the readings and information gained in your large lecture course. You will work with the books from your other learning community courses. Additional readings will also be supplied to you as handouts, online postings, or from your textbooks for discussion in seminar. As in your lecture classes it is vitally important that you keep up with readings that are assigned in all courses. If you do not keep up with readings it will affect your ability to participate in seminar discussions and will lower your participation grade.

You will also need the following for seminar and other learning community courses:

- Regular computer access (Best to have a personal laptop or plan to use computers available on campus).
- Ability to save your computer generated work and transfer it between school and home and among university computers (Laptop or USB Flash Drive).
- Freestanding seminars not connected to composition will not be required to purchase the composition texts, but they are recommended.
- Positive attitude and desire to make your life extraordinary is highly recommended!

**Course Evaluation:**

- **Attendance:** 20% - Active participation is absolutely vital to this class. Your knowledge and opinion is valued and appreciated at every class meeting. While this syllabus gives an outline of the course, most of the detailed information needed to understand and complete the assignments will be conveyed through in-class discussions. If you are not present and engaged in these discussions, you will be lost.
  - Attendance is taken randomly 10 times per semester.
  - I will record 10 participation grades throughout the semester randomly worth 10 points each.
  - These attendance grades may come from completing online assignments, in class writings or handouts, informal reading quizzes, sign in sheets.
  - It is up to the student to pay close attention at all times to know when and how attendance is counted since any exercise may become an attendance grade.
  - Always keep up with required readings in all learning community classes.
  - You cannot be successful in college unless you develop the habit of never missing any class, so if your punctuality or your attendance becomes a serious problem I will speak with you individually.

- **Participation:** 10% - This course is designed to be effective when students actively engage and contribute to the success of the class, therefore a participation score of 0 to 100 will be given based on your contribution to the class. An A is not difficult to attain if you come to class, bring in any requested
material, are prepared for discussion, and actively engage in a positive way. However, simply showing up will not earn you full points. Your participation in discussions, group work, etc. will determine your participation grade. Obviously if you have an attendance problem, you can expect this score to be correspondingly low, but factors such as excessive off topic talking, sleeping, inappropriate internet use (Facebook, email, games, chat) and other inappropriate behaviors will lower your participation grade. Being a good citizen of the university and learning community is required.

- **Reflective Assignments:** 40%- Three reflective assignments will comprise 40% of your course grade. Consider these assignments to be like your “exams” and the Integrated Research Experience discussed below to be like your final exam. The reflective assignments are designed to develop your metacognitive abilities. Metacognition basically means thinking about your own thinking. The more you reflect on your own experiences in college and make positive steps to improve, the better you will do. The three assignments are as follows. More information will be given in class.

  - Group Video- Adjustment to Life as a University Mechanical Engineering Student- 10%
  - Academic Portfolio- Prove how you are adapting academically with documents, pictures and words- 15%
  - End of Semester Reflection- Action Plan for Next Semester Success- 15%

- **Integrated Research Experience- Composition/ Seminar Engineering Poster Presentation- 30%**
  First year seminar I is a true academic seminar class, where in conjunction with your composition class (if you have one) you will work as a research team with classmates to become subject matter experts on a current topic of engineering, in an area of mutual interest. Through collaborative library research, a writing sequence designed for engineering students, and regular discussions in seminar, you will ultimately produce and present a scientific poster presentation to tetrad faculty, students, and other invited guests. For composition-linked classes this presentation will be a culmination of the semester long writing sequence in composition and will cover the information presented in your final composition paper. This is a shared interdisciplinary assignment combining your writing, discussion, presentation, chemistry, engineering, and other interdisciplinary skills.

  The assignment consists of the following graded components:

  - **Writing process:**
    - Team contract/Teamwork (2%)
    - Annotated bibliography (4%)
    - Draft presentations (4%)

  - **Final Presentations (15%)**
    - In class and at First Year Celebration

*Final presentation grade for the assignment will be included in your final grade for all Learning Community classes (see each instructor syllabus for details). By the end of the first year, students will have the skills and confidence needed to present complex information clearly at any academic conference. You will present your topic at Celebration Day.

**Assignment Due Dates:**

- Wednesday, August 24- First Day of classes
- Friday, September 9- Research Team Contract
- Friday, September 23- Group Video- Present them in class the following week.
- Friday, October 8- Annotated Bibliography
- Friday, October 28- Online Academic Portfolio
- Friday, November 14- Draft of Poster in PowerPoint Format
Monday-Wednesday, Nov 21, 22, 23 – Final Poster. Your group will sign up for a presentation time on one of these days.

Thanksgiving Nov 24- Eat Turkey/Watch Football

Thursday, December 1- Celebration Day Poster Presentation

Friday, December 2- End of Semester Reflection

I require few outside assignments, so note that if you fail to turn in any major assignment you drop one to two full letter grades.

If you do not have composition, or if you drop composition or other tetrad classes during the semester, you must still complete all assignments, or contact me via email and in person for alternate assignments.

Expectations:
In this class we are learning how to be successful both in college and in life as science professionals. For this reason my philosophy is to treat you as the professional that you are aspiring to be. Let this thought guide you any time that you are not sure how you should conduct yourself in seminar:

"How would I be expected to conduct myself if I were already working as a professional engineer and if my paycheck depended on professional behavior."

To further guide you here are a few suggestions:
- Your participation is appreciated and expected, but make sure that you have the floor before speaking!
- Only one person should speak at any given time.
- Silence all electronic devices during a meeting.
- Use laptops maturely to add to the discussion, but please do not allow them to distract you.
- I may ask you to share any work you are doing via laptop or handheld device.
- Limit the use of electronic devices to emergencies only.
- Absolutely do not check e-mail, text messages, play games, surf the web, or receive non-emergency communications of any kind via any electronic device unless it is part of the class discussion.
- The preferred method of contacting me is via blackboard email. If you ask me something in class, be prepared to follow up the discussion with a reminder email.
- All correspondence about the class should be sent via the Blackboard email system not through regular email.
- Your writing in e-mail should be very concise and to the point, but should also be professional.
- E-mail is not the same as instant messaging or text messaging and should have appropriate grammar, punctuation, and capitalization throughout even if you are using a handheld device.

Rights Responsibilities and Civil Discourse:

In this course we will engage in active learning including frequent group activities and interactions. We will be exploring real world science topics that may at times result in heated discussions as we meet the objectives of the course such as developing attitudes of caring and clarifying personal goals and values. To meet these many significant learning objectives it will be necessary to establish some ground rules for class discussions so that no one individual dominates the discussion and so that the diverse opinions of others can be respected. You and your classmates will make suggestions that will ultimately be compiled into a set of rules responsibilities and guidelines for civil discourse in this class. Students are expected to read and follow the University Code of Conduct in the Student Handbook, given to them in class at the beginning of the 1st semester.

Students with Disabilities and Veterans:

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 call or visit Disability Services at (361) 825-5816 in Driftwood 101.
If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816.

**Academic Advising:**

The College of Science and technology requires that students meet with an Academic Advisor as soon as they are ready to declare a major. The Academic Advisor will set up a degree plan, which must be signed by the student, a faculty mentor, and the department chair. The College’s Academic Advising Center is located in Faculty Center Room 178. Phone is (361) 825-6094.

**Grade Appeal Process:**

As stated in University Rule 13.02.99.C2, Student Grade Appeals, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Rule 13.02.99.C2, Student Grade Appeals, and University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules Web site at [http://www.tamucc.edu/provost/university_rules/index.html](http://www.tamucc.edu/provost/university_rules/index.html). For assistance and/or guidance in the grade appeal process, students may contact the Office of Student Affairs.

I am thrilled that you chose Texas A&M University- Corpus Christi and Science Learning Communities. Go Islanders!
Shared Interdisciplinary Tetrad Assignment
Addendum for Freestanding Seminars

This addendum is for students that do not have an English composition course as part of their learning community.

Students taking English composition spend the entire semester developing university level academic writing, scientific writing, research skills, and write a research paper on a their cause and effect topic upon which their poster is based. While it is recommended to take composition at the university level, some students do not for a variety of reasons.

The shared interdisciplinary tetrad assignment in first year science learning communities is to present a cause and effect poster on a science topic at the end of the semester. Particular emphasis for this assignment is on explaining the scientific mechanism of a process in detail to a molecular, atomic, or cellular level depending on the topic based on current primary science literature. Presentations should equal the depth of understanding of topics presented in large lecture classes.

The grading for all final poster presentations is equal regardless of whether or not a student is in a composition class or freestanding seminar. This addendum to my syllabus outlines ways to ensure that your final tetrad shared assignment poster presentation meets the same high standards of students taking a university science learning community composition class. You are not required to write a research paper as are students who take composition, however, you are required to research literature, fully understand it and present it in the form of a flawless scientific poster with full in text citations in APA style, and a comprehensive list of citations.

You must do the following:

☐ Sept 10- Form a team of 3-5 individuals (2%).
  o Submit a team contract to Blackboard with:
  o Team name.
  o Team members.
  o Short summary of your proposed topic.
  o Web links and information about your topic.

☐ October 8- Annotated bibliography in APA style with at least 5 journal articles per person (4%).
  o At least 3 must be primary research journal articles

☐ November 12- Create a draft version of the poster in Powerpoint and upload to Blackboard, be prepared to present in class (4%)
  ☐ Nov 22-24- Present your final poster in class one week prior to celebration day (10%)
  ☐ Nov 30- Present your final poster at celebration day (5%)
  ☐ Attend group conferences with instructor (Class attendance and participation points).
  ☐ Meet all requirements of poster presentation rubric posted on my web site.
  ☐ Work as a team.

This is collaborative team work. Team work is required. It your responsibility to form teams and complete the work described above. Anyone presenting alone for any reason automatically receives 10 points off their final grade.
Your grade for the final project is based on all of the factors listed above.

You must see me if you have any questions, concerns, or need assistance.