TEXAS A&M UNIVERSITY - CORPUS CHRISTI
Fall 2014
CHEM 4292: Senior Chemistry Seminar
Time: M 9:00-10:40 a.m.

Instructor information:
Instructor: Dr. Tim Causgrove
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Telephone: 825-2399
E-mail: tim.causgrove@tamucc.edu
Office Hours: TR 11-12; WF 9:30-11

Course Description
Senior seminar is a capstone course for chemistry majors. Students are asked to apply the information, theory and skills acquired in the classroom and laboratory to the examination of significant, chemistry-related societal issues. Coursework involves the analysis of research reports, review articles and other professional papers, preparation of essays and participation in case-based study exercises. Senior seminar also emphasizes professional development activities to help students prepare for life after graduation.

Course Objectives
• Review important societal issues related to chemistry
• Enhance skills in critical analysis, discussion and technical writing
• Develop research skills in the acquisition, organization and presentation of chemical information
• Develop professional development skills in identifying personal skill sets, researching organizations, developing contacts, preparing resumes, interviewing and negotiating salary and benefits

Major Course Requirements
Case-based Studies
A number of societal issues have significant, chemistry-related components. A rational solution to problems associated with these issues requires the participation of scientifically literate citizens. This class will review a number of such issues. Students will analyze reference material and prepare short essays on a number of topics. Classroom exercises will involve case-based scenarios that will require analysis, discussion, review and group-based decision making.

Essays. Each topic will require the preparation of a short (350-400 word) essay, guided by a set of questions provided with the reference material. Essays should be targeted to an audience of peers, i.e. fellow chemistry/science majors who have not read the background material. Essays will be judged according to the following criteria, though these are not necessarily exhaustive:

Excellent (3 pt): Essay addresses the topic thoroughly yet succinctly. Essay length is appropriate. Guiding questions have been addressed and answered. No factual errors are present. Few, if any, errors in spelling or grammar are present. Narrative is easy to read:
there is minimal use of slang or colloquialism, sentences relate to each other and combine
to tell a story vs. a collection of declarative statements.

Good/Fair (2 pt): Essay addresses the topic reasonably well but some guiding questions
may not have been fully addressed. Essay length may be too long or short. Most guiding
questions have been addressed and answered. Some factual, spelling or grammatical
errors are present. Reasonable narrative but could still use some revision.

Poor (1 pt): Essay weakly addresses topic. Length does not meet specified standards. Few
guiding questions are being appropriately addressed. Numerous factual, spelling or
grammatical errors, heavy use of slang or colloquialism. Essay composed primarily of a
collection of declarative statements.

Professional Development
A number of exercises related to the elements of a successful job search will be covered,
including: the identification of personal skill sets, organizational research, interviewing skills,
preparation of a resume, salary requirements and personal budgets.

Presentation
A 15 minute PowerPoint presentation will be required of all students, on a chemistry-related
topic of their choice. An abstract (Title and 1 paragraph summary) of the presentation will be
required approximately half-way through the semester. Choice of topic is up to the student but
it must relate directly to chemistry. If you have a question regarding your choice consult with
your instructor.

Grading
There are no exams for this course. Grades will be determined on the basis of the total number
of points earned on attendance/class participation, essays, professional development items,
and the abstract/final presentation.

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Number</th>
<th>pts/assignment</th>
<th>total possible points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendance/participation</td>
<td>14</td>
<td>2</td>
<td>28</td>
</tr>
<tr>
<td>essays</td>
<td>4</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>Prof. Dev. Items</td>
<td>5</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Presentation abstract</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Presentation</td>
<td>1</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5</strong></td>
<td><strong>23</strong></td>
<td><strong>62</strong></td>
</tr>
</tbody>
</table>

The grading scale will be: A ≥ 90% of possible points, B ≥ 80 %, C ≥ 70 %, D ≥ 60 %, F < 60
%. There will be a 10% reduction, per day, in credit for overdue assignments.

Attendance & Participation
Attendance and participation in class discussions is required and will count for a significant
portion of your grade.

Required Text

All other materials related to each topic will be posted on Blackboard or provided in class.
**Academic Integrity and Honesty:**

University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of another as one’s own work.) In this class, academic misconduct or complicity in an act of academic misconduct on an assignment or test will result in a zero for the assignment or an F for the course.

**Dropping a Class:**

I hope that you never find it necessary to drop this or any other class. However, events can sometimes occur that make dropping a course necessary or wise. Please consult with me before you decide to drop to be sure it is the best thing to do. Should dropping the course be the best course of action, you must initiate the process to drop the course by going to the Student Services Center and filling out a course drop form. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. November 7 is the last day to drop a class with an automatic grade of “W” this term.

**Classroom/professional behavior:**

Texas A&M University–Corpus Christi, as an academic community, requires that each individual respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the Student Code of Conduct, classroom behavior that interferes with either (a) the instructor’s ability to conduct the class or (b) the ability of other students to profit from the instructional program may be considered a breach of the peace and is subject to disciplinary sanction outlined in article VII of the Student Code of Conduct. Students engaging in unacceptable behavior may be instructed to leave the classroom. This prohibition applies to all instructional forums, including classrooms, electronic classrooms, labs, discussion groups, etc.

**Grade Appeals:**

As stated in University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures, 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 Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules website at [http://www.tamucc.edu/provost/university_rules/index.html](http://www.tamucc.edu/provost/university_rules/index.html) and the College of Science and Engineering Grade Appeals webpage ([http://sci.tamucc.edu/students/GradeAppeal.html](http://sci.tamucc.edu/students/GradeAppeal.html)). For assistance and/or guidance in the grade appeal process, students may contact the chair or director of the appropriate department or school, the Office of the College of Science and Engineering Dean, or the Office of the Provost.

**Disabilities Accommodations:**

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 Corpus Christi Hall 116.

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.

**Statement of Academic Continuity**

In the event of an unforeseen adverse event, such as a major hurricane and classes could not be held on the campus of Texas A&M University–Corpus Christi; this course would continue through the use of Blackboard and/or email. In addition, the syllabus and class activities may be modified to allow continuation of the course. Ideally, University facilities (i.e., emails, web sites, and Blackboard) will be operational within two days of the closing of the physical campus. However, students need to make certain that the course instructor has a primary and a secondary means of contacting each student.
<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Assignment</th>
<th>What's Due</th>
<th>Points*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sep  8</td>
<td>Introduction/Library Skills</td>
<td>Climate Change essay</td>
<td></td>
<td>2</td>
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<tr>
<td>Sep  15</td>
<td>Skills Analysis</td>
<td>skill list</td>
<td></td>
<td>2</td>
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<tr>
<td>Sep  22</td>
<td>Resumes &amp; interviewing</td>
<td>resume (draft)</td>
<td>skill list</td>
<td>4</td>
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<tr>
<td>Sep  29</td>
<td>Climate Change</td>
<td>antibiotics essay</td>
<td>Atmos. essay</td>
<td>5</td>
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<tr>
<td>Oct  6</td>
<td>Career Center</td>
<td>Organization list/abstract</td>
<td>resume (draft)</td>
<td>4</td>
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<tr>
<td>Oct  13</td>
<td>Antibiotic resistance</td>
<td>Pollution essay</td>
<td>antibiotics essay</td>
<td>5</td>
</tr>
<tr>
<td>Oct  20</td>
<td>Salary &amp; Budget</td>
<td>budget</td>
<td>Org list/abstract</td>
<td>6</td>
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<tr>
<td>Oct  27</td>
<td>Pollution &amp; Toxicology</td>
<td>Weapons essay</td>
<td>Pollution essay</td>
<td>5</td>
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<tr>
<td>Nov  3</td>
<td>Graduate/Professional School</td>
<td>resume (final)</td>
<td>budget</td>
<td>4</td>
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<tr>
<td>Nov  10</td>
<td>Chemical Weapons</td>
<td>work on presentations</td>
<td>Weapons essay</td>
<td>5</td>
</tr>
<tr>
<td>Nov  17</td>
<td>Class Presentations</td>
<td>work on presentations</td>
<td>Presentations</td>
<td>2</td>
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<tr>
<td>Nov  24</td>
<td>Class Presentations</td>
<td>work on presentations</td>
<td>Presentations</td>
<td>12</td>
</tr>
<tr>
<td>Dec  1</td>
<td>Nobel Prize Winners</td>
<td>special item (in class)</td>
<td>resume (final)</td>
<td>4</td>
</tr>
</tbody>
</table>

Total: 60

*point totals for each date includes 2 pts for attendance and participation