Technology & Society (4:005)  
Fall 2011 Syllabus, v. 1

All updated versions of this syllabus will be announced in class and posted on ICON.

**Location/Time:**  
Lectures, 107 English-Philosophy Building; MWF 11:30am-12:20pm  
Exams, SHAM Main Library; Monday 6:30-8:00pm: Sep 19, Oct 17, Nov 14

**Instructor:** Dr. Gayan R. Rubasinghege  
Office: W315 Chemistry building (CB)  
Phone: 319-335-1308  
e-mail: gayanrandikas-rubasinghege@uiowa.edu  
Office hours: Tuesday 11:00am-12:30pm, Wednesday 2:15am-3:45pm, and by appointment

**Required Course Materials:**  
- *Chemistry in Context: Applying Chemistry to Society*, American Chemical Society, 7th Ed.  
- Handheld calculator with exponents, logarithms, square roots, etc.

**IMPORTANT:** Programmable or graphing calculators CANNOT be used during exams.

**Course Description:**  
Exploration of societal and technological issues from a chemical perspective. The course emphasizes chemical and scientific literacy as a means to better understand topics like air and water (and the trace materials found in them that are referred to as pollutants); energy from natural sources (e.g., solar and renewable forms), from fossil fuels (like gas, oil and coal) and from nuclear fission; materials like plastics and polymers and their natural analogs, proteins and nucleic acids; and chemical reactivity and molecular interconversions from simple examples like combustion to complex instances like genetic engineering and the manufacture of drugs. Calculations and mathematical manipulations are minimal, and no college-level science preparation is required. This course is approved as a component of the General Education program of the College of Liberal Arts and Sciences.

**Course Objectives:** The student will be introduced to the language and basic principles of chemistry and application of these to the technology of today’s society. Critical thinking, analysis, and communication skills will be developed through class assignments and discussions.

**Course Website:** A website is available on ICON and has been designed to facilitate your success in the course. If you are currently enrolled in 4:005, you should be able to access the course website. If not, please alert the instructor of this course as soon as possible. This site is meant to supplement this syllabus and will contain an electronic version of the syllabus, abridged lecture notes, practice tests, and announcements (including the time and location of exams and make-up exams).

**Course Administration:** Go to the Chemistry Center, Room E225 CB, for add/drop signatures, make-up exam scheduling, course handouts, and alternate textbooks for loan, and other
administrative matters. Complaint procedures and policies on cheating can also be obtained here. Chemistry Center Hours: 8am-12pm and 1pm-5pm (M-Th); 8am-12pm and 12:30pm-4:30pm (F). Chemistry Center Manager: Jessica Alberhasky, 335-1341 or jalberha@iowa.uiowa.edu.

Quizzes: Quizzes will be given during the class as and when necessary. Questions will be multiple choice or short answer and use of course material (i.e. textbook, lecture notes, etc.) is not allowed during the quiz. The total number of quizzes given is not yet definite but will not exceed ten with each one worth five points.

Writing Assignment: Near the end of the course, you will be asked to read an article from a newspaper, magazine, journal, etc. that describes the impact of one or more current technologies on our environment and/or society (economic, political, and social influences) and then to write a short synopsis including a critical analysis of the article.

Examinations: There will be three unit exams and a comprehensive final. The exam dates are listed below along with tentative chapters to be covered. The first three exams will be held in SHAM Main Library. The location of the final exam will be announced later. Students should bring a #2 pencil, their University ID, and a basic scientific calculator (programmable or graphing calculators are not allowed). You must leave all book bags, cell phones, and wireless devices at the front of the exam room. Cheating will not be tolerated.

Exam #1: September 19th, 6:30-8:00pm – Chapters 1, 2, 3
Exam #2: October 17th, 6:30-8:00pm – Chapters 4, 5, 6
Exam #3: November 14th, 6:30-8:00pm – Chapters 7, 8, 9
Final Exam: December 12th, 2:15-4:15pm – Comprehensive, includes Chapter 11

Make-up Exams: Students are expected to attend all scheduled events and maintain assignment deadlines. You will have the opportunity for a make-up exam if your excuse for illness, mandatory religious obligations, University activity, etc. conforms to the University policy as explained in the Schedule of Courses. You must present documentation (e.g. a doctor’s note) to the Chemistry Center (E225 CB) within 3 calendar days of the missed event. Students may take one make-up exam per semester.

Grading: The final grade will be a composite of the three unit exams, the comprehensive final, quizzes and graded homework. Course grades will be curved to meet the recommended grade distribution of CLAS for Elementary Courses. Plus and minus grades, where appropriate, will be given.

<table>
<thead>
<tr>
<th>Recommended Grade Distribution of the College of Liberal Arts and Sciences for Elementary Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>A</td>
</tr>
<tr>
<td>B</td>
</tr>
<tr>
<td>C</td>
</tr>
<tr>
<td>D</td>
</tr>
<tr>
<td>F</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grade</th>
<th>% of Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>15</td>
</tr>
<tr>
<td>B</td>
<td>34</td>
</tr>
<tr>
<td>C</td>
<td>40</td>
</tr>
<tr>
<td>D</td>
<td>8</td>
</tr>
<tr>
<td>F</td>
<td>3</td>
</tr>
</tbody>
</table>

Average GPA = 2.5 out of 4.0
**Classroom Conduct:** While attendance will not be taken during class, it is *highly recommended* that students attend all lectures. Discussion and example problems presented during lecture may have direct bearing on exam questions. It is expected that students attending lecture will respect the lecturer and other students by remaining reasonably quiet during class. *Please turn off cell phones during lecture.* During some periods, students may be asked to respond to instructor questions or discuss a topic with other students around them. Disrespectful comments or actions will not be tolerated.

**College of Liberal Arts & Sciences Policies and Procedures**

**Administrative Home of the Course:** The administrative home of this course is the College of Liberal Arts and Sciences, which governs academic matters relating to the course such as the add/drop deadlines, the second-grade-only option, issues concerning academic fraud or academic probation, and how credits are applied for various graduation requirements. Different colleges might have different policies. Questions should be addressed to 120 Schaeffer Hall, your academic advisor, or consult the CLAS *Student Academic Handbook*.

**Academic Fraud:** The University expects the highest level of integrity from its students. Plagiarism and any other activities that result in a student presenting work that is not his or her own constitute academic fraud. Academic fraud is a serious matter and is reported to the departmental DEO and then to the Associate Dean for Academic Programs and Curriculum. Instructors and DEOs decide on appropriate consequences at the departmental level while the Associate Dean enforces additional consequences at the collegiate level. See the CLAS Academic Fraud section of the CLAS *Student Academic Handbook*.

**Electronic Communication:** University policy specifies that students are responsible for all official correspondences sent to their University of Iowa e-mail address (@uiowa.edu). Faculty and students should use this account for all correspondence. (*Operations Manual*, III.15.2. Scroll down to k.11.)

**Making a Suggestion or a Complaint:** Students have the right to make suggestions or complaints and should first visit with the instructor, then with the Chemistry DEO. All complaints must be made within six months of the incident. For further information, consult the CLAS *Student Academic Handbook*.

**Accommodations for Disabilities:** A student seeking academic accommodations first must register with the *Student Disability Services* (3100 Burge Hall, 335-1462) and then meet privately with the course instructor to make particular arrangements. A student approved for accommodations should then go to the Chemistry Center, Room 231 CB, to coordinate the proposed accommodations.

**Understanding Sexual Harassment:** Sexual harassment subverts the mission of the University and threatens the well-being of students, faculty, and staff. All members of the UI community have a responsibility to uphold this mission and to contribute to a safe environment that enhances learning. Incidents of sexual harassment should be reported immediately. See the UI *Comprehensive Guide on Sexual Harassment* for assistance, definitions, and the full University policy.
Reacting Safely to Severe Weather: The I Operations Manual section 16.14 outlines appropriate responses to a tornado or to a similar crisis. If a tornado or other severe weather is indicated by the UI outdoor warning system, members of the class should seek shelter in rooms and corridors in the innermost part of a building at the lowest level, staying clear of windows, corridors with windows, or large free-standing expanses such as auditoriums and cafeterias. The class will resume, if possible, after the UI outdoor warning system announces that the severe weather threat has ended.

Student Classroom Behavior: The ability to learn is lessened when students engage in inappropriate classroom behavior, distracting others; such behaviors are a violation of the Code of Student Life. When disruptive activity occurs, a University instructor has the authority to determine classroom-seating patterns and to request that a student exit immediately for the remainder of the period. One-day suspensions are reported to appropriate Departmental, Collegiate, and Student Services personnel (Office of the Vice President for Student Services and Dean of Students).