



Syllabus

CH 301 Chemistry and Society

Espinal, Jack L.

Mission Statement: The mission of Park University, an entrepreneurial institution of learning, is to provide access to academic excellence, which will prepare learners to think critically, communicate effectively and engage in lifelong learning while serving a global community.

Vision Statement: Park University will be a renowned international leader in providing innovative educational opportunities for learners within the global society.

Course	CH 301 Chemistry and Society MY
Semester	F1F2005
Faculty	Espinal, Jack L
Title	Senior Instructor
Office Location	Fort Myer, Virginia
Office Hours	By Appointment
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Semester Dates	17 October – 18 December 2005
Class Days	Tuesday
Class Time	5:00PM - 10:00 PM
Prerequisites	None
Credit Hours	3

Textbook: Schwartz, Truman A. Chemistry In Context, Fifth. WCB/McGraw-Hill, 2005
Course Website: - <http://www.jespinal.com>

Textbooks can be purchased though the [MBS bookstore](#)

Additional Resources:

Ebbing, Darrell D. Introductory Chemistry Houghton Mifflin Company 1995
Partington, James. A Short History of Chemistry. Dover Publications 1989
Salzberg. From Caveman to Chemist. American Chemical Society 1991
Chemtool <http://www-tech.mit.edu/Chemicool/>
The Periodic Table <http://www.shcf.ac.uk/chemistry/web-elements/index-fr.html>
Internet Chemical Resources <http://falcon.sbuniv.edu/~ggray/interrec.html>
Metropolitan District of Washington Park Site <http://www.park.edu/virginia>
Park University Library <http://www.park.edu/library/index.asp>

Quantico Marine Corps Base Family Library <http://www.quantico.usmc-mccs.org/quanticolibrary.htm>

Fort Myer Post Library <http://www.fmmcmwr.com/librarymyer.htm>

Course Description:

A series of case studies of legal, economic and social problems occasioned by the advance of science and technology in contemporary society. Open to all students. 3:0:3

Educational Philosophy:

I believe that learning is a human experience where students learn best from interaction with the instructor, each other, and the world around them. My classes will use demonstrations, lab experiments both in the classroom and at home, class/group assignments; problem solving, discussions of readings, oral reports/presentations; field trips, films, slide shows, readings, videos, quizzes, dialogues, presentations, examinations, the internet, videos, web sites, and group interactions.

Learning Outcomes:

Upon completion of this course, the successful student will be able to:

1. To Explain the chemistry involved in problems facing society today including the Ozone Hole, Global Warming, Water Pollution, Air Pollution, Acid Rain, and Nuclear Radiation..
2. To present scientific information in a way that can be understood by a layman.
3. To use the scientific method while conducting lab experiments.
4. To balance simple chemical equations and solve chemistry related problems
5. To use the Periodic Table as a source of Chemistry information.

Course Assessment

Assessment of learning will be determined by using the following:

1. **Film Assessment:** Student learning groups will view video tapes and DVDs in class and use group discussion techniques to critically analyze problems presented and respond to questions
2. **Quizzes:** Both announced and unannounced quizzes on material will be administered.
3. **Mid-term and Final Exams:** Students will complete two examinations.
4. **Research Project and Presentations:** A topic is to be chosen, research material gathered, and a paper formulated. Research material should be information gathered from, but not limited to, academic journals. Popular magazines should not be included. APA format and a minimum of 3 academic references must be cited. Topics can be selected from a list provided by the Instructor or students may propose a subject and get Instructor approval.
5. **Lab Exercises:** Students will in class and at home lab exercises and write up the results.
6. **Smithsonian Field Trip:** Student learning groups will make a presentation on an assigned subject based on an investigation of the Smithsonian Institution Field Trip

Grading:

The final course grade will be determined by the following measurements:

1. Video and DVD assessments 20%
2. Quizzes 10%

3. Midterm and Final Examination 35%
4. Research Project and Presentation 20%
5. Smithsonian Field Trip Presentation 15%

Final course grading scale:

93-100 % = A

83-92 % = B

73-82 % = C

63-72 % = D

62 % and below or more than 15 course hours missed = F

Late Submission of Course Materials:

If an assignment is due on a night that the student is not present, it is the student's responsibility to get the assignment to the instructor on the due date. One percent will be deducted for late work, but video / DVD reviews and lab experiments performed in class cannot be made up. Students missing class will receive zeros for these activities. Missed examinations must be taken within 10 days of the scheduled date.

Classroom Rules of Conduct:

- Class participation is expected..
- Students are expected to attend all classes and be on time.
- Students are required to read all material assigned prior to class and apply the material during class discussions, activities, and exercises.
- The student is responsible for providing the instructor with justification for an excused absence, either prior to or immediately after the absence.
- Computers are now an integral part of our educational experience.
- Students must be responsible for planning ahead and meeting deadlines.
- Students will conduct themselves in a professional manner at all times.
- Students are expected to respect other students' opinions and values, even if they disagree with those opinions and values.
- There should only be one person talking at a time. Side bar conversations will not be tolerated.
- Video tapes shown in class and associated study guides cannot be made up. Students missing class will receive zeros for these assignments.
- Lab experiments performed in class cannot be made up. Students missing class will receive zeros for these assignments.

Course Topic/Dates/Assignments:

Date	Reading	Prepare for Class	Class Activities	Evaluations
Tuesday 18 Oct 05	Chemistry in Context, Chapter 1	Exercises 2,8, 9, 15, 16,	Composition of Materials The Skeptical Chemist	
Tuesday 25 Oct 05	Chemistry in Context, Chapter 1	Exercises 17, 18, 19, 21, 31, 32, 34	The Air We Breathe The Periodic Table	Quiz
Tuesday 1 Nov 05	Chemistry in Context, Chapter 2	Exercises 1, 2, 5, 6, 8, 34	Protecting the Ozone Layer The Skeptical Chemist Report	Topics Due
Tuesday 8 Nov 05	Chemistry in Context, Chapter 3	Exercises 2, 6, 15, 18, 21	Chemistry of Global Warming	Quiz
Tuesday 15 Nov 05	Chemistry in Context, Chapter 4	Exercises 1,4, 5, 6, 9, 14	Energy, Chemistry & Society, Skeptical Chemist	Mid Term
Tuesday 21 Nov 05	Chemistry in Context, Chapter 5 (197-214)	Exercises 3, 4, 9 Due on 30 Nov	No Class This Night Sat 3 Dec 2005	Field Trip on Sat 3 Dec 2005
Tuesday 30 Nov 05	Chemistry in Context, Chapter 5 (215-239)	Exercises 16, 17, 19, 21	The Wonder of Water The Skeptical Chemist Report Presentations	Quiz
Saturday 3 Dec 05			Smithsonian Field Trip 10 AM – 3 PM	No Class on 21 Nov 05
Tuesday 6 Dec 05	Chemistry in Context, Chapter 6	Exercises 1, 3, 7, 8, 9, 30, 40	Neutralizing the Threat of Acid Rain Skeptical Chemist Report Presentations	Quiz
Tuesday 13 Dec 05	Chemistry in Context, Chapter 7	Exercises 1, 3, 4, 31	The Fires of Nuclear Fission Report Presentations Final Exam	Final Examination

Academic Honesty:

Academic integrity is the foundation of the academic community. Because each student has the primary responsibility for being academically honest, students are advised to read and understand all sections of this policy relating to standards of conduct and academic life. [Park University 2005-2006 Undergraduate Catalog](#) Page 85

Academic dishonesty included committing or the attempt to commit cheating, plagiarism, falsifying academic records, and other acts intentionally designed to provide unfair advantage to the student.

- Cheating includes, but not limited to, intentionally giving or receiving unauthorized aid or notes on examinations, papers, laboratory reports, exercises, projects, or class assignments which are intended to be individually completed. Cheating also includes the unauthorized copying of tests or any other deceit or fraud related to the student's academic conduct.

- Plagiarism involves the use of quotations without quotation marks, the use of quotations without indication of the source, the use of another's idea without acknowledging the source, the submission of a paper, laboratory report, project, or class assignment (any portion of such) prepared by another person, or incorrect paraphrasing.
- Falsifying academic records includes, but is not limited to, altering grades or other academic records.
- Other acts include:
 - Stealing, manipulating, or interfering with an academic work of another student or faculty member
 - Collusion with other students on work to be completed by one student
 - Lying to or deceiving a faculty member.

Attendance Policy:

Instructors are required to maintain attendance records and to report absences via the online attendance reporting system.

1. The instructor may excuse absences for valid reasons, but missed work must be made up within the semester/term of enrollment.
2. Work missed through unexcused absences must also be made up within the semester/term of enrollment, but unexcused absences may carry further penalties.
3. In the event of two consecutive weeks of unexcused absences in a semester/term of enrollment, the student will be administratively withdrawn, resulting in a grade of "F".
4. A "Contract for Incomplete" will not be issued to a student who has unexcused or excessive absences recorded for a course.
5. Students receiving Military Tuition Assistance or Veterans Administration educational benefits must not exceed three unexcused absences in the semester/term of enrollment. Excessive absences will be reported to the appropriate agency and may result in a monetary penalty to the student.
6. Report of a "F" grade (attendance or academic) resulting from excessive absence for those students who are receiving financial assistance from agencies not mentioned in item 5 above will be reported to the appropriate agency. [Park University 2005-2006 Undergraduate Catalog](#) Page 89

Disability Guidelines:

Park University is committed to meeting the needs of all students that meet the criteria for special assistance. These guidelines are designed to supply directions to students concerning the information necessary to accomplish this goal. It is Park University's policy to comply fully with federal and state law, including Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, regarding students with disabilities. In the case of any inconsistency between these guidelines and federal and/or state law, the provisions of the law will apply. Additional information concerning Park University's policies and procedures related to disability can be found on the [Park University web page](#) Page 33

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