COURSE NUMBER: CH 300
COURSE TITLE: Chemistry Seminar
INSTRUCTOR: Mr. Jack L Espinal
Home Phone: 703 534-7484
Web Page: http://www.jespinal.com
E-Mail: jespinal@laser.net
TERM DATES: 11 August – 11 October 2003
MEETING TIME: Mondays 5:00 PM - 10:00 PM
LOCATION: Fort Belvoir

SYLLABUS FOR CHEMISTRY SEMINAR

I. 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.

II. GOALS OF THE COURSE: This course presents history of Chemistry with emphasis on how it relates to changes and problems in society. It will help prepare you to make decisions about important environmental, social, and ethical issues that face our society and our small planet. You will learn to use the scientific method in gathering information needed to make those decisions. You will use simple problem solving techniques and experiments related to the discipline of Chemistry.

III. LEARNING OBJECTIVES: Park University continues to strive toward its goals / heritage of educating the total person so that he/she may function effectively as individuals and as members of his/her chosen profession, and in the local, national, and world community. To that end the following literacies are stressed in this course.

Science Literacy
1. Understanding of the nature and role of scientific evidence in the pursuit of knowledge.
2. Recognition of the importance of the scientific method of argument and modeling process.
3. Appreciation of the origins of scientific inquiry and method and seeing their continuing presence in the mutual interaction between human society and its physical environment.
4. Acquisition of tools for successful involvement in scientific pursuits of the scientific community.

Critical Literacy
1. Understanding and mastery of the basic skills in communication, computing, and information management.
2. Recognition of the diversity in the processes and methods of critical thinking and problem-solving, and recognition of standards of excellence.
3. Appreciation of the history and variety of approaches for examining and using information, and their technological applications in contemporary life.
4. Acquisition of tools for gathering, retrieving, evaluating, and communicating information and data for various purposes. These tools should include the basic skills in writing, speaking, listening, computing and the use of computers, and problem solving.

Civic Literacy
1. Recognition of the existence of diverse alternative systems and their necessary global relationships.
2. Acquisition of tools for responsible citizenship involvement and for participation in economic and social endeavors.

Values Literacy
1. Understanding of the importance of value concerns in human life, and the ability to distinguish them from factual matters.
2. Recognition of the major ways proposed for resolving value questions, and the ability to evaluate them and use them where appropriate.

IV. COURSE ARRANGEMENTS: Lectures, class/group assignments; problem solving, experiments, discussions of readings, oral reports/presentations; field trips; films, videos, and other media that may be deemed appropriate and available will be used throughout the course.

V. COURSE REQUIREMENTS: Students are required to read all assigned material prior to class and be prepared to discuss them and apply them to problem solving situations presented in class. Assigned problems and chapter questions will be completed before the beginning of class. Discussion of chapter questions and assigned problems will be the basis of the class participation grade. Students will research an instructor approved Chemistry related problem, theory, or principle, and make an oral presentation on that subject to the class.

VI. TEXTBOOK: Salzberg, Hugh W. (1991). From Caveman to Chemist. American Chemical Society, Washington, DC.
VII. SUPPLEMENTAL RESOURCE MATERIALS LIST:
The course web page: http://www.jespinal.com
Ebbing, Darrell D. Introductory Chemistry Houghton Miffin Company 1995
Partington, James. A Short History of Chemistry. Dover Publications 1989

Chemtool http://www-tech.mit.edu/Chemicool/
The Periodic Table http://www.shef.ac.uk/chemistry/web-elements/index-fr.html
Internet Chemical Resources http://falcon.sbuniv.edu/~ggray/interrec.html

VIII. CLASS MEETING AND EXAMINATION SCHEDULE:

Date	Reading Prior to Class	Class Activities	Evaluations
Monday August 11, 2003	None	Introduction Chemistry Concepts	
Monday August 18, 2003	Caveman to Chemist, Chapter 1-4. Key concept list	Ancient Technology thru the Roman Eras	Quiz
Monday August 25, 2003	No Class - Field Trip	Chemistry in American Life	Smithsonian Field Trip
Monday September 1, 2003	Caveman to Chemist, Chapter 5-7 Key concept list	Alchemy Student Presentations	Quiz
Monday September 8, 2003	Caveman to Chemist, Chapter 8-9 Key concept list	The Renaissance	Mid Term
Saturday September 13, 3003	Smithsonian Field Trip	First Chemists Gas Laws	
Monday September 15, 2003	Caveman to Chemist, Chapter 10-11	Field Trip Presentations Oxidation Atomic Weights & Formulas, mole Avogadro	Quiz
Monday September 22, 2003	Caveman to Chemist, Chapter 12-13 Key concept list	Oxidation Atomic Weights & Formulas Mendeleev	
Monday September 29 2003	Caveman to Chemist, Chapter 14-15 Key concept list	Organic Chemistry Base Metals to Gold Atomic Chemistry, Review for Exam	Quiz
Monday October 6, 2003	Caveman to Chemist, All Previous reading		Final Exam

IX. CLASS POLICIES: Class participation is expected and will form a part of the final grade. Students are expected to come to all classes and be on time. Roll will be checked each class meeting. Classes missed for legitimate reasons, such as illness, temporary duty, are excusable; however, the student must make up the missed work as follows: written chapter problem solutions/comments must be turned in by e-mail prior the missed class session. Written solutions to problems and discussion subjects covered in class will be prepared and presented to the instructor at an agreed upon date and an additional ten chapter questions will be completed. (a partial failing grade for class participation will be assessed for un-excused absences). Video tapes shown in class and associated study guides cannot be made up. Students missing class will receive zeros for these assignments. The course web page - http://www.jespinal.com - contains electronic copies of many of the exercises and practice sets used in class. Browse the web page to see what is there.

Academic honesty is required of all members of a learning community; hence, the College will not tolerate cheating or plagiarism on tests, examinations, papers, and other course assignments. Students who engage in such dishonesty may be given failing grades or expelled from the College.
Plagiarism, the appropriation or imitation of the language or ideas of another person and presenting them as one's original work, sometimes occurs through carelessness or ignorance. This does not make it less serious, however. Students who are uncertain about proper documentation of sources should consult their course faculty member.

X. GRADING POLICY: Grades will be based upon the following assignments and activities:

Item	**Weight**

Class Participation	5 points per session
Reading, Problem Sets, Take home Labs (About 12)	10 points each
Quizzes & Video Guides (About 7)	10 points each
Group Presentations (About 4)	10 points each
jj Research Project / Presentation	100 Points
Smithsonian Field Trip & Presentation	50 points
Midterm Examination	100 points
Final Examination	150 points

Note: Students must have at least a passing grade for each of the above areas to receive a passing grade for the course.

Letter Grades for the course will be calculated as follows:

Percentage	Grade
93-100	A
80-92	B
70-79	C
60-69	D
Below 60 or 3 un-excused absences	F

XI. MAKING UP A MISSED FINAL EXAM: Only extraordinary circumstances warrant a student's being allowed to make up a missed final examination. It is the student's responsibility to contact the instructor before the scheduled exam or by the end of the first working day after the day of the missed exam to request permission to take a make-up exam. In the process of determining whether a make-up exam should be allowed, the burden of proof is on the student. The instructor has the right to request verification of any excuse offered by the student.

The student who is denied permission to take a make-up exam may appeal immediately to the Academic Director or Resident Center Administrator. The appeal must be made by the end of the first working day after the day of the denial. The appeal will be forwarded immediately to the Assistant Vice President for Extended Learning whose decision will be final.