SYLLABUS

Western Nevada College
CHEM 100 – Section C01 – 3 credits
Molecules & Life in the Modern World
David Jaeger, Emeritus Professor of Chemistry
Fall Semester 2008

REVISED AUGUST 27, 2008

Prerequisite: MATH 120 or higher

Course Description: CHEM 1000 introduces chemistry with an emphasis on impacts on human society, environmental issues, energy sources, and life processes; it includes four laboratory experiments.

Transfer Information: This course is designed to apply toward a WNC degree and/or transfer to other schools within the Nevada System of Higher Education, depending on the degree chosen and other courses completed. It may transfer to colleges and universities outside Nevada. For information about how this course can transfer and apply to your program of study, please contact a counselor.

Linkage of Course to Educational Program Mission: CHEM 100 is a general education class that promotes the development of knowledge, skills, and attitudes that will benefit students in their personal and professional endeavors.

Course Objectives: Upon successful completion of CHEM 100, a student will have a basic knowledge of chemistry, including the basic concepts of atoms, molecules, chemical reactions, terminology, and their applications to human health and our environment.

Student Learning Outcome: Students who successfully complete CHEM 100 satisfy the general education learning outcome of understanding the methods of science and the role of science and technology in the modern world.

Lecture: Th 7:00-9:45 PM in Cedar Building 313

Contact Info: e-mail: DAJ@uwyo.edu

Required Text: *The World of Chemistry*, 4th edition, by Joesten, Castellion & Hogg
Other: Always bring a calculator to class.

Exams, Quizzes, & Grading: The semester letter grade is assigned using the NSHE grading scale. The point total and distribution are as follows:

Exam 1	100
Exam 2	100
Exam 3	100
Quizzes (10 @5)	50
Final Exam	150
Total	**500**

Each exam and the quiz total will be curved, with cut-off points no higher than those below. Then the separate curves will be added to give the overall curve for the course. Your point total relative to the overall curve determines your semester grade.

90 - 100%	A
80 - 89%	B
70 - 79%	C
60 - 69%	D
<60%	F

Exams 1-3 and the Final Exam will be given during Thursday class meetings as follows:

Exam 1	September 18	Exam 3	November 6
Exam 2	October 16	Final Exam	December 11

There will be a short 5-point quiz during every Thursday class meeting, other than on August 28 and the above exam dates.

Extra Credit: There is only one way in which you can earn up to 12 points extra credit in this course, and it involves in-class participation; see below in this syllabus.

Makeups: There are no makeups or accommodations for missed or poorly performed scheduled course work.

Reading: Formal reading assignments will be not be made. But you will certainly get the most out of lecture if you keep ahead of me in the text. In lecture, I will cover and give examples of the most important points made in the text. This will necessarily result in no lecture coverage for some material in the text; there is simply not enough lecture time to cover all relevant material. *But on exams you are responsible for all material in the text, unless specifically deleted, even though it is not covered in lecture*. I will clearly indicate in lecture, the material to be deleted in each chapter.

Homework: Problem sets will be assigned in lecture. They will not be collected or graded in any way. It is your responsibility to do them in a timely fashion in order to reinforce lecture and reading material. Note that the answers to some of the questions are in the back of the book. *A portion of each lecture exam will be derived from the assigned problem sets*.

Attendance: Attendance will be taken each class period. It is strongly recommended that you attend every lecture, since each one represents about 7% of the course total. Also, from time to time, material will be presented in lecture that is not in the book, and some of it may appear on exams.

Grading Errors: For consideration of a possible grading error on an exam/quiz, you must return it to me no later than the class period following the one in which I hand it back to you. You must include a clear notation on the first page of those questions to be regraded. Please do not include an explanation of why you think your answer

deserves more credit; I can evaluate only the written answer you gave during the exam period. No regrading will be considered if the exam is not returned to me within the time frame noted above. *Note: In the regrading process the entire exam is subject to regrading.*

Students with Learning Disabilities: If you have a documented disability that requires accommodation, please contact Disability Support Services as soon as possible.

Academic Dishonesty: Academic dishonesty is an unpleasant fact of life perpetrated by a small fraction of students. Anyone found guilty of academic dishonesty will receive an F for the entire course.

Classroom Courtesy: I will treat the class as a whole and individual students with courtesy, and I expect to be treated likewise. On your part, this includes arriving for class on time; waiting until class is over before leaving; and not talking and not reading unrelated material during class.

Changes: Changes to the above are not anticipated, but if necessary, they will be announced in class.

Chronological Course Outline:

1. Chapter 1. Living in a Chemical World
2. Chapter 2. The Chemical View of Matter
3. Chapter 3. Atoms & the Periodic Table
4. Chapter 4. The Air We Breathe
5. Chapter 5. Chemical Bonding & States of Matter
6. Chapter 8. Chemical Reactivity: Chemicals in Action
7. Chapter 9. Acid-Base Reactions
8. Chapter 10. Oxidation-Reduction Reactions
9. Chapter 11. Water, Water Everywhere, But Not a Drop to Drink?
10. Chapter 12. Energy & Hydrocarbons
11. Chapter 13. Nuclear Changes & Nuclear Power
12. Chapter 14. Organic Chemicals & Polymers
13. Chapter 15. The Chemistry of Life
14. Chapter 16. Nutrition: The Basis of Healthy Living
15. Chapter 17. Chemistry & Medicine
16. Chapter 18. The Chemistry of Useful Materials

EXTRA CREDIT

NOTE: Above all, the following is not indented to intimidate or to cause undue anxiety. I believe that it will facilitate your learning of chemistry.

As noted above, there is only one way in which you can earn extra credit in this course. It involves in-class participation as described below.

In-Class Questions & Answers

Each of you will be asked to print your name on an index card. You may choose not to do so, without penalty. I will use the cards to randomly call on about 3-4 students per class meeting, and will

ask each student called upon to answer a question based on (a) material that we have just covered in lecture and/or (b) closely related material that we have covered in another lecture. Here are the main guidelines:

- You may choose to answer the question or "pass".
- If you choose to answer the question, you may consult your neighbors before answering.
- The class, by consensus, will decide if the answer is "correct" or "incorrect".
- A "correct" answer will earn 6 extra credit points.

Other guidelines:

- If you "pass", you will not be called upon again in that round. There will be at least two rounds during the semester.
- If you are called upon and are absent, for whatever reason, you have in effect taken a "pass".

Since I am a new part-time instructor at WNC, I have included a brief CV below. I was a chemistry professor in the Department of Chemistry at the University of Wyoming for 36 years, retiring in 2007.

David Jaeger – Brief CV

Education

Ph.D. in Organic Chemistry, University of California, Los Angeles	1970
B.S. in Chemistry, Stanford University, Stanford, CA	1965

Professional Experience

National Science Foundation Postdoctoral Fellow, Department of Chemistry, Stanford University	1970-71
Assistant Professor, University of Wyoming	1971-76
Associate Professor, University of Wyoming	1977-81
Sabbatical Leave, Department of Chemistry, Emory University, Atlanta, GA	1982
Sabbatical Leave and Visiting Professor, Department of Chemistry, Duke University, Durham, NC	1989
Sabbatical Leave, Department of Chemistry, Emory University, Atlanta, GA	2000
Head, Department of Chemistry, University of Wyoming	1990-93
Professor, University of Wyoming	1982-2007

Awards

Selected as a "Top Prof" by Mortar Board, University of Wyoming	1982
Burlington Northern Foundation Award for Distinguished Faculty Scholarship, University of Wyoming	1988
Selected as "Undergraduate Professor of the Year" by the Undergraduate American Chemical Society Affiliate, University of Wyoming	1997
George Duke Humphrey Distinguished Faculty Award, University of Wyoming (top U.W. faculty award)	1997
Selected as a "Top Ten Teacher" by the College of Arts & Sciences Graduating Class, University of Wyoming	1998
Exemplary Faculty Award, College of Arts & Sciences (top College faculty award)	2002
Extraordinary Merit Award for Teaching, College of Arts & Sciences	2003