

Chemistry 102
Syllabus
Spring 2005

Instructor: Martha K. Newchurch

Office: 122 Beauregard Hall, Phone: 448-4503, 448-4502,

E-mail: Martha.Newchurch@Nicholls.edu

Office hours: 10:00-11:30a.m. and 1:00-4:00 pm MWF and by appointment.

Catalog Description: Chem 102. General Chemistry II. 3-3-0 Prerequisite: Chem 101. A continuation of Chem 101. A terminal course for students who do not plan to enroll in additional chemistry courses.

Prerequisite/corequisite: Chemistry 101.

Required Textbook and other Materials: The Extraordinary Chemistry of Ordinary Things by Carl H. Snyder. John Wiley and sons, Inc. Publishers.

Required Supplementary Readings: Extensive use of the Internet for group projects and papers.

Goals of Course: To provide students with an understanding of the general principles of chemistry as these principles relate to the political, social and economic impact resulting from the manufacture; use and misuse of chemical compounds. Students will become scientifically literate and better able to understand and assess issues involving the chemical industry.

There will be demonstrations, lectures, problem solving, and class discussion during class. Students will be given opportunities to develop problem solving and critical thinking skills.

This course is to contribute to the student's preparation to be a rational, skilled and educated member of this world community.

Student Outcome Objectives:

1. To appreciate the role that chemistry plays in everyday life.
2. To evaluate environmental issues in light of the chemistry involved with those issues.
3. To make informed judgments on crucial issues that are of current concern worldwide while providing a basic understanding of chemical principles and practices.
4. To know that humans live in a chemical environment and that chemistry affects every aspect of our lives.
5. To grasp the notion of interdependency and to see that without some understanding of chemistry, it is impossible to fully understand

environmental issues such as ozone depletion, global warming, air and water pollution, and the hazards of toxic materials.

6. To integrate new chemical principles with what we already know.

Course Content:

This is a tentative schedule and subject to change at the discretion of the instructor.

Chapter 12: Solids, Liquids and Especially Gases

Chapter 14: Chemicals, Pollution and the Environment.

Chapter 20: Poisons, Toxins, Hazards and Risks

Test 1

Chapter 6: Introduction to Organic Chemistry

Chapter 7: Petroleum

Chapter 21: Polymers and Plastics

Chapter 22: Cosmetics and Personal Care

Chapter 23: Medicines and Drugs

Test 2

Chapter 15: Fats and Oils

Chapter 16: Carbohydrates

Chapter 17: Proteins

Chapter 19: Vitamins, Minerals, and Additives

Test 3

Course Requirements:

- Three exams will be given during the semester. (100 points each)
- One group paper including references with a power point presentation to the class on an environmental topic selected by the group and approved by the instructor. (100 points)
- Three individual papers on topics pertinent to the material covered in the text which relate to real world experiences. (30 points each)
- Homework questions assigned from the text including the activity on Risk Assessment. (60 points)

Group Power point Presentations will begin two weeks after the topics have been selected. One or two presentations will be given at each class. These presentations should take about 10 minutes.

At the end of each chapter there is a set of Exercises, the answers to some of which appear in the text. I have found that the best way for any of us to understand chemical concepts is to see demonstrations, work problems, and to think about applications of the concepts. Therefore, it is important that you be able to work the end *of the chapter* exercises for each chapter. To help you progress through this course, do the following: 1. Read the material before class. 2. Bring you text to class-illustrations in the book will be helpful during the lecture/discussion. 3. Keep abreast of current events. Read the newspaper, TV news, etc.

PAPERS: Each student must turn in 3 short papers. Each one must be at least 2 pages (typed, double spaced) and no more than 4 pages. The papers will be graded on the basis of relevance to the topic and how specific information was obtained and used. If the assignment expects a position to be taken, the side of the issue chosen will not influence the grade.

Choose one item from 3 of the 4 groups of topics given by the instructor. The deadline for the paper from each group is given. Once a deadline is passed. No topic from that group may be chosen. Thus, if you do not submit a paper from Group 1, then you must submit one each from the remaining groups on or before their deadlines.

For papers turned in late, a penalty of 10% per day (including weekends) will be assessed. No late paper will be accepted more than 5 days late. Late penalties may be waived for an acceptable excuse presented in writing.

Homework: We will conduct the class using a discussion format to take advantage of the expertise and wealth of experiences of class members. To optimize everyone's learning in the course, each of you must actively participate in our discussions. Therefore, it will be important for you to be prepared for each class. The best preparation you can make is to read the assigned material before we discuss it in class. Depending upon your individual backgrounds, the material may seem unclear upon first reading, but at least you will have had a chance to begin thinking about the subject at hand and you will be prepared to increase your understanding of the topic when we tackle it in class.

Methods of Evaluation:

- Total points for the course: 550.
- The grade is based on a ten point grading scale.
- 90-100 %=A, 80-89%=B, 70-79%=C, 60-69%=D, and below 60%=F

Make-Up policy: Work should be made up within two class periods after returning to school with an excused absence.

Attendance: will be taken at each class meeting. You will be expected to get missed class notes and assignments from a classmate. There will be no makeup class-work. Makeup exams will be taken the same day as the final. Please call and leave a message if you will be absent.

Academic Honesty Policy: Dishonesty will not be tolerated. Any student found cheating will be subject to the penalties as stated in the Student Code of Conduct Handbook: including but not limited to a score of zero on exam, expulsion from the class or expulsion from the University.

Semester Withdrawal Drop Date: The final day to drop with a 'W' is Thursday, April 7, 2005.

Academic Disability: If you have a documented disability that requires assistance, you will need to register with the Office of Disability Services for coordination of your academic accommodations. The Office of Disability Services is located in Peltier hall, Room 100-A. The phone number is (985) 448-4430. Please notify the instructor if you have a disability, so accommodations can be made. It is the general policy of Nicholls State University to assure equal opportunity for all qualified persons. Reasonable accommodations of qualified persons with disabilities will be made provided the students have self-identified with the Office of Disability Services and have provided the required documentation. Instructors will make every reasonable effort to modify the teaching methods, requirements and/or procedures of the courses and examinations appropriately to accommodate the special needs of the students with disabilities, provided the academic integrity of the course or examination is not violated, and the health and welfare of all students are safeguarded.