

**Chemistry 505, Allied Health Chemistry II  
Syllabus, Summer 2000**

**Credit:** 4 Quarter Hours of Credit (3 Hours per Week Lecture and 3 Hours per Week Lab, i.e., during the school year)

**Q2S Notice:** Under Semesters this course will become Chemistry 1505, Allied Health Chemistry II which will have 3 Semester Hours of Credit (2 Hours per Week of Lecture and 3 Hours per Week of Lab) with the same lecture contact time but a 50% increase in the lab contact time. In addition, under Semesters many students will be required to register for Chemistry 1505R, a 1 Hour per Week recitation section for this course.

**Lecturer:** **Dr. Allen Hunter** (Office 5015, NMR Lab 5031, X-Ray Lab 5024/5020, Advanced Synthesis Lab 5005)  
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Chemistry 505 Home Page: <http://www.as.yzu.edu/~adhunter/Teaching/Chem505/index.html>

**Textbooks:**

1. Bettelheim and March, "General, Organic & Biochemistry", 5<sup>th</sup> Edition, Harcourt Brace College Publishers, 1998 (required).
2. Bettelheim and March, "General, Organic & Biochemistry: Study Guide", 5<sup>th</sup> Edition, Harcourt Brace College Publishers, 1998 (recommended).
3. Chemistry 505 Problem Sets and Answers, Available from my Chemistry 505 home page (required).
4. Chemistry 505 Lecture Notes, Available from my Chemistry 505 home page (required).

**Lecture:** Monday through Thursday 9:05 to 11:05 in Ward Beecher xxx. **Labs Start Monday, June 19<sup>th</sup>, YOU MUST COME TO THE FIRST LAB ON TIME!!!!!!**

**Office Hours:** Monday through Thursday 8:30 to 9:05 and 11:05 to 11:45. Please feel free to drop in and see me any time during my office hours or during the rest of the week. If you want to be sure to have me there at a specific time outside of my office hours, make an appointment during class or over the phone. I'll generally be in WB 5015 (my office), 5031 (the NMR lab), or 5024/5020 (the X-ray lab) at these other times.

**Course Objectives:** To study the basic concepts of chemistry and needed to understand organic chemistry and biochemistry later in Chemistry 506, to experience the many practical techniques used by the chemist, and to build an appreciation of the importance of these topics in such fields as biology, medicine, and the chemical industry. By the end of this class, students will learn to:

- Understand the importance of mathematics in science.
- Understand the structure of the atom.
- Understand how atoms bond to one another in molecules and compounds.
- Understand how to use the periodic table to explain chemical phenomena.
- Understand intermolecular interactions.
- Understand the properties of solutions.
- Understand the basics of reaction chemistry including rates, equilibria, and acid/bases.

**Course Philosophy:** In the Chemistry 505 lecture we will be covering selected topics in the chapters in the text dealing with General Chemistry (i.e., parts of Chapters 1 through 8).

Chapter	Title
	Introduction to Chemistry 505
1, Appendix A	Matter, Energy, and Measurement
2	Atoms
3	Chemical Bonds
4	Chemical Reactions
5	Gases, Liquids, and Solids
6	Solutions and Colloids
7	Reaction Rates and Equilibria
8	Acids and Bases
	<b>Final Exam (comprehensive)</b>

- This schedule is tentative and the order and relative weighting of topics may be revised as the class progresses. Much of the material in the 1<sup>st</sup> chapter is basic mathematics and will only be outlined in lecture. If this material is unfamiliar to you, extra assignments will be given and help is available at student services.

GRADING SYSTEM	TOTAL POINTS
Midterm Exam (beginning of the 3 <sup>rd</sup> week of class)	150

Laboratory Grade	100
Final Exam (last day of class, comprehensive)	<u>200</u>
Total	450

A 90 - 100%, B 80 - 89%, C 65 - 79%, D 50 - 64%, F Below 50%.

**Exams:** The midterm exam will be given on the day following the completion of the material to be examined. The exact date will be announced in class. **MAKE-UP EXAMS WILL NOT BE GIVEN**. Absences that have not been approved in advance will result in a grade of **ZERO** for that exam. Approved absences for sporting events, holidays, etc. will be given **only** if I am informed in advance and only if I agree. Absences for health reasons or family emergencies must be discussed with me *within 24 hours* of the missed exams for approval to be granted. The points for exams missed during approved absences will be applied to the final exam. In all cases, I must be given a written note explaining the reason for the approved absence and asking to have the points applied to the final exam within one week of the missed exam. If you believe that your exam has been miss-graded or miss-totaled, the **unaltered** exam must be submitted for re-grading *within 48 hours* after it has been returned. The **whole** exam will be re-graded, not just single questions. **You must bring photo ID with you when you write exams and place it on the desk top.**

**Attendance:** Lecture attendance is **mandatory** and will be recorded through daily sign-in sheets *at the start of each class period*. Your timely arrival in class is expected. It is **your responsibility** to be sure you sign in and therefore if you fail to arrive on time or do not sign in you will be deemed to be absent. **Students are responsible for all information, material, and announcements made in class.** Attendance in class, **as recorded on the sign in sheets**, is used in deciding borderline grades. Those students who are recorded as *officially absent* (i.e., based on the sign in sheets) for *more than 10% of classes for which I have attendance records* will have their grades adversely effected.

**Assigned Readings, Problems, and Studying:** You are required to read the assigned chapters from the lecture and lab texts **before** we discuss them in class. Some question based on these will appear on exams. I will assign problems from the text and problem sets regularly. These will not be graded but are very important since these are the questions on which most of the exams will be based! **It is recommended that for all courses students study at least 2 to 3 hours outside of class for every scheduled class hour. For Chemistry 505 over the summer, this corresponds to approximately 20 hours a week. Experience in past years suggests that this is a minimum for success in Chemistry 505 (many students who have taken this class in the past report that it was the most difficult course that they took as an undergraduate).**

**Repeating the Class:** When repeating a course, the Chemistry Department has decided that it is in the best interest of our students to have all students repeat the entire course, including the current laboratory!

**Passing the Laboratory:** To pass the course, you must obtain a grade of at least 70% in the laboratory portion and you must have successfully completed all the scheduled experiments.

**Safety:** The potential of risk is present in some lecture demonstrations and laboratory experiments. Accidents have been rare, but have happened. Faculty and staff members exercise great care to minimize and, where possible, eliminate all potential hazards. Additionally, minimization of risks requires that students come well prepared for each assigned exercise and are attentive in class. Safety glasses must be worn in the laboratory at all times. If you have a condition (e.g., chemical sensitivity, pregnancy) that might affect your laboratory safety, discuss it with your physician and instructor and alternate arrangements for the lab may be made. Contact the instructor immediately if you have any questions on this or any other safety issues.

**Materials fees:** The materials fees collected for this laboratory course are used to partially defray the cost of replacing expendable materials and obsolete equipment, repairing equipment, and obtaining new equipment appropriate for student use in state of the art instruction in the laboratory science of chemistry.

**Academic Honesty:** In accordance with university policy and professional standards, the highest levels of academic integrity are expected in this lecture and lab. The code of student conduct will be *strictly* enforced. Academic dishonesty will result in reductions in grades and/or expulsion from this class and/or the university. *[Note: Representative exams are photocopied before they are returned. These photocopies are compared to the originals returned for re-grading to check if answers have been altered.]*

**Computer Laboratory:** The "Windows 95" computer lab is located in room WB 5043 and contains 25 Pentium II computers equipped with a range of software. It is available for students to work on their chemistry assignments during the posted hours.