

CHEM 2311, Summer 2010
ORGANIC CHEMISTRY – I

Section A: Tuesday/Thursday 10:00-11:45 pm (M Bldg, G011)
Office Hours: Tuesday 12-1 pm or by appointment
HW/Review sessions (optional): See schedule

<http://www.chemistry.gatech.edu/undergraduate/tyson/CHEM2311SUMMER/2311home.htm>

INSTRUCTOR

Dr. Cameron Tyson
Molecular Science and Engineering Bldg (M) Room 2222L
404-894-8227

TA for the Course: Mr. Imani Jones and Ms. Shadeah Suleiman

REQUIRED TEXTBOOKS

"Organic Chemistry", 10th edition, by T.W. Graham Solomons and Craig B. Fryhle and "Study Guide and Solutions Manual to Accompany Organic Chemistry". *These available at the Georgia Tech bookstore as a bundle at considerable savings over separate purchase from other retailers.*

Personal Response System (PRS) transmitter: A Personal Response System (PRS) transmitter will be required for unannounced quizzes (graded) throughout the term. Attendance will also be taken and PRS credit given for attendance. The transmitter must be purchased from the GT Barnes and Noble Bookstore in the electronics section. Please be sure to enter your GTID number (90X-XX-XXXX) in your PRS unit.

REQUIRED SOFTWARE

Required Software

You must have access to CambridgeSoft's ChemOffice software package consisting of ChemDraw and Chem3D. You will use these to answer homework problems and to generate reports in laboratory classes, and maybe even in ChE and BIO classes!

ChemOffice is downloadable from CambridgeSoft:

Go to: <http://scistore.cambridgesoft.com/sitelicense.cfm?sid=100>.

1. Register with the site (button in top left)
2. Go back to the download page (the link above), enter a gatech.edu email. Follow directions to download the software installer.
3. Install the software. You will be asked for verification/activation code during the installation. This will have been emailed to you (your email program might have placed the message in your junk mailbox - so check there as well!)
4. Enter the info in the installation process and proceed.

MODEL KITS

Many students find model kits useful when studying organic chemistry. You do not need an expensive kit. A small selection of atoms and bonds is useful. Model kits could certainly be shared.

POLICIES, PROCEDURES AND GRADES GRADES

Exam 1	Topics 1 and 2	100 points
Exam 2	Topics 3 and 4	100 points
Exam 3	Topics 5 and 6	100 points
Exam 4	Topics 7 and 8	100 points
Exam 5	Topic 9	100 points
HW/PRS		100 points
FINAL		200 points

The lowest score from exams 1,2,3,4,5 or HW/PRS will be dropped. The course will be graded on the basis of 700 points:

88% (616 points) will guarantee an "A"

75% (525 points) guarantees a "B"

65% (455 points) guarantees a "C"

55% (385 points) guarantees a "D"

Final Options:

If you score 450 points (90%) on Exams 1-5 and HW/PRS (dropping the lowest score) **AND** have a score on each assignment (Exams 1-5 and HW/PRS....no drops) of >75!, you are exempt from the final exam and will receive an "A" for the course.

If you score 400 points (80%) on Exams 1-5 and HW/PRS (dropping the lowest score) **AND** have a score on each assignment (Exams 1-5 and HW/PRS....no drops!) of >65!, you have the option of exempting the final and receiving a "B" for the course. If you choose this option, you must indicate this as your option in writing by **Friday, July 30, 2010**.

LECTURE ATTENDANCE/REVIEW SESSIONS

You are strongly encouraged to attend lectures. Attendance is encouraged, but optional.

STUDENT ID NUMBERS

All work submitted for grading must include your name *and* class roll number (not SSN).

REGRADES

If you want any work regraded you must make a request and return the assignment within one week to the instructor. Work will not be regraded after this deadline.

CLASS NOTES

Notes for each topic should be downloaded from the web (as PDF files) and printed prior to the first lecture dealing with the material. Topics correspond fairly closely to the chapters, with a little reorganization. *These notes are not designed to be comprehensive.* In fact, they are specifically designed to be incomplete. They are designed to serve as the basis for lecture notes, not as a replacement for attending lectures. The notes should minimize the use of lecture time for information transfer, and allow time to work problems in class.

HOMEWORK and PRS

Written Homeworks and PRS (100 points)

Five written homework sets will be assigned, each worth 14 points (total score of 70 for term). *Late answers will not be accepted.* Solutions will be posted on the www site. Homework assignments, answer sheets and solutions are available for download from the Homework page.

PRS (personal response system) will be used in class through out the semester to facilitate learning.

Students must use a single unit for the term and sharing of a single PRS unit is not allowed. PRS participation will comprise a maximum composite score of 30 points for the semester.

Other Problems (not graded)

You should work the problems in each reading assignment as *you get to them*. Problems at the end of the chapter are listed on the class notes (top right hand corner): You should work through as many of these as possible. These will serve as a guide for the types of questions to appear on examinations. Do not submit answers to these problems, they will not be graded.

EXAMS: SCHEDULE, MAKE-UPS AND DROPS

You must take the exam at the assigned lecture time. ***Photo-ID is required at each exam.*** The only valid reasons for missing an exam are: illness, official Tech business and out-of-town job interviews. *Make-ups can only be given if advance notification is given or upon presentation of a doctor's note.* All make-up exams must be administered before the exams are returned to the class in the next lecture. Exams not made-up by this time, for any reason, will receive a score of zero and will be the drop grade for the class. The lowest score from Exam 1, 2, 3, 4, 5 or HW/PRS will be dropped. If an exam is missed for any reason, that score (zero) will be dropped. However, do not miss an exam just because you know that you can drop it!

RETURNED WORK

All graded assignments will be returned as soon as possible, usually at the next lecture. Work not picked up in lecture will be available form outside of the instructor's office door.

MATERIAL COVERED/STUDENT RESPONSIBILITIES

You are responsible for all material presented in lectures and in assigned readings. You are also responsible for announcements made in class, which will also be posted on the www page or distributed by email. You must check the web site and you *prism.gatech.edu* email account on a regular basis. Note: there are potential problems associated with automatic forwarding of messages from *prism* to other email addresses; check your *prism* account even if you have it set up to forward email elsewhere.

THE TECH ACADEMIC HONOR CODE

You are required to adhere to the Georgia Tech honor code (<http://www.honor.gatech.edu/>). The work you submit on examinations must be entirely your work without reference to notes or other materials.

WORKING IN GROUPS

Most learning takes place *outside* of the classroom. Although lectures should put things in perspective, working through the textbook, and solving the problems is when you will come to terms with the material. I encourage you to work together on these reading and problem assignments. For most students, it is actually unwise to try to work alone. Although you might study in groups, remember that you are ultimately responsible for your learning. Everybody can benefit from team work. If you are struggling with the material you stand to learn a lot; if you are an "Organic Whiz" you also stand to learn from the challenge of presenting your understanding to others. You will learn through teaching.

Though you are encouraged to teach one another through related examples and discussion of additional problems or topics in the notes and book, it is strictly prohibited to share electronic files or copy each other's work. The work that you submit must be your own.

COMPETITION AND GRADING

Formal education often puts students in competition with each other for good grades. We do not believe that competition for grades, and the exclusion of everything else, is the most effective way to foster student development. Although grades will be assigned based on a numerical score which judges attainment on exams, The course is structured such that if you show a desire to learn, put *the effort in, and have some intellectual ability, you can get the grade you want. With this in mind, please take the time to read the Grades, Expectations and Minimum Requirements section, and decide what you want from the course.*

CANCELLATION OF CLASSES

If class is cancelled by Georgia Institute of Technology owing to campus closing, the entire schedule for the course will be delayed by one lecture. This will move all exams and HW due dates back by one lecture.

TIME COMMITMENTS

We all have extensive demands on our time. For each lecture you should aim to put in *at least* another two hours of your own time. You will need to spend more time preparing for exams. Some students will require more, some less.

GRADES, EXPECTATIONS AND MINIMUM REQUIREMENTS

(adapted from J. H. Williams in *The Teaching Professor*, Aug 1993)

"D" -55%- Some demonstration of detailed knowledge of organic reactions.

"C" -65%- Detailed knowledge of structure and bonding, be able to show movement of electrons during reactions, know individual organic reactions.

"B" -75%- Requirements for a "C", plus some demonstrated success of multistep synthesis of molecules, some success showing movement of electrons for multistep reactions.

"A" -88%- Requirements for a "B", plus: write consistently good complete pathways for multistep reactions based on simple mechanistic concepts showing flow of electrons in each step. Propose good syntheses for molecules using a string of individual organic reactions.

"A" students have virtually perfect performance. Their commitment to the class resembles that of the teacher. They always read the assignment, and their attention to detail is such that they occasionally catch the teacher's mistakes (we all make them!). An "A" student is CREATIVE, COMMITTED, ORGANIZED, and CURIOUS, has a RETENTIVE MIND (and exercises it), has a WINNING ATTITUDE, and SHOWS INITIATIVE."

"V" audit - same as for "S"

"S"atisfactory (S/U) - Exams 1-5 to a "C" level (no drops), Final not required, or "D" including Final

If every student gets 88+%, everyone gets an "A"

SOME STUDY TIPS

Understand and Rationalize. Read the text, prepare your own summaries. Typically each section in the text can be generalized in one or two lines or equations. Read the chapter summaries. Do you understand each point? Can you apply each concept? Work as many of the problems in the book as possible. Do them in order. If you have no trouble with the first few parts of a multi-part question, you might want to pick a few of the latter parts at random. Study in groups. ***Keep up to date! Ask Questions!!***