

# CHEMISTRY 142

SPRING 2011

**CLASS SCHEDULE:**                      **Section 11A**   MWF – 11:45-12:35 AM  
   **Section 12A**   MWF – 12:50-1:40 PM  
**INSTRUCTOR:**                              Dr. Nichole Powell  
**OFFICE LOCATION:**                      Pierce 210  
**OFFICE HOURS:**                              Designated hours:  
   MWF 10:30 – 11:30 am; Tues 1:00 – 1:30 pm. You may stop by  
   my office at any other time or make an appointment via  
   email.  
**CONTACT INFORMATION:**              **Email:** nichole.powell@emory.edu **Telephone:** 770-784-8396

**1. Oxford College and Liberal Arts.** Oxford College is dedicated to a liberal arts education, and science, including chemistry, is an integral part of the liberal arts. In this course, you will have an opportunity to master these liberal arts skills:

- Reasoning:
  1. Problem-Solving
  2. Critical Thinking
  3. Logic
  4. Calculation/Computation
  5. Investigation
  6. Analysis of data
  
- Language
  1. Listening and interpreting
  2. Reading
  3. Writing
  
- Aesthetics
  1. Observing
  2. Seeing relationships among form, pattern, harmony, and shape
  
- Imagination
  1. Prediction
  2. Developing scientific insight (hypotheses)

**2. Learning Goals.** The primary learning goals for this class are for you to:

- Utilize critical thought and reasoning to understand chemical behavior at the microscopic and macroscopic levels.
- From your knowledge of chemistry and chemical systems, be able to develop solutions to problems which you have not encountered before.
- Understand the role of chemistry in everyday life.

**3. Content goals.** You will be expected to master these areas of chemistry:

- Coordination compounds and crystal field theory

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- Intermolecular forces
- Phase diagrams
- Concentration units
- Factors affecting solubility
- Colligative properties
- Kinetics, including rates of reaction and reaction mechanisms
- Equilibrium, including LeChatlier's Principle
- Acids, bases, buffers
- pH and titrations
- Solubility equilibrium
- Entropy and free energy
- Electrochemistry, including electrochemical cells and electrolysis
- Nuclear chemistry

### CLASS MATERIALS (REQUIRED):

1. "Chemistry" 10<sup>th</sup> ed., by Chang (Optional: study guide, student solutions manual.)
2. Non-programmable scientific calculator (must be brought to every class). Students will not be allowed to borrow calculators from their classmates during class assignments, quizzes, or exams. The use of cell phones and PDAs will not be allowed.

For Lab – must have before your first lab meeting

3. Laboratory manual:  
If you did not take Chemistry 141 at Oxford in Fall 2010, you will be given a copy of this year's laboratory manual and the cost will appear on your college bill. This includes students with AP credit, students who took Chem 141 at another school, and students who took Chem 141 in an earlier semester here.
4. Carbon-copy lab notebook.
5. Safety glasses.

### COURSE COMPONENTS:

#### ATTENDANCE

Students are expected to attend each class period. You are allowed 3 absences in lecture and NO absences in lab. Each absence exceeding 3 absences will result in a corresponding point deduction from your final course grade (eg. 4 absences= 1 pt, 5 absences= 2 pts etc). There are no excused absences. Students are responsible for all material covered in the lecture even if they were absent.

#### ASSIGNMENTS

Students are expected to complete all assignments regardless of whether or not they will be graded. Students are expected to work all the end of chapter problems in their textbook.

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### POP QUIZZES

Pop quizzes will be given during the first 5 minutes of class throughout the semester. These quizzes are unannounced and will be used to assess your understanding of the course content. Pop quizzes will primarily assess the content covered in the previous class session. Your lowest Pop quiz grade will be dropped. No make-up quizzes will be given.

### EXAMINATIONS

Four (4) exams are scheduled during the regular class period. No make-up examinations will be given. Excuses including the reason for missing an exam must be presented **before** the scheduled exam- this may be done by email or sending a note to class. If the excuse is accepted, the grade obtained on the final exam will count in place of the missed exam. If your excuse is not accepted you will receive a zero for that exam. You may only be excused from missing 1 exam.

#### Anticipated Exam Schedule:

#1	Friday, Feb. 4
#2	Friday, Feb. 25
#3	Friday, Apr. 8
#4	Friday, Apr. 22

Exam dates are subject to change. The sections to be covered in each exam will be announced in class.

**Final Exam** – will be given during the final exam period.

**Section 11A** on Friday, April 29 at 2 - 5 pm.

**Section 12A** on Thursday, April 28 at 9 - 12 noon.

The final examination is mandatory and will be comprehensive. Any material discussed during the semester may be included in this exam. Final exams will not be returned.

### **GRADING:**

(a) Pop quizzes will account for 5% of your overall lecture grade. The final will count as two exam grades, giving a total of 6 (4 exams + final counting twice). The lowest of these 6 grades will be dropped. This average will constitute the remaining lecture portion of your course grade.

Exception: If you have a zero on an exam due to missing the exam without a valid excuse no grade will be dropped, including the zero.

(b) Your course grade will be computed by taking 80% of your lecture grade and 20% of your lab grade.

### GRADING SCALE

A = 93 - 100	A- = 90 - 92	B+ = 87 - 89	B = 83 - 86	B- = 80 - 82	C+ = 77 - 79
C = 73 - 76	C- = 70 - 72	D+ = 67 - 69	D = 60 - 66	F = below 60	F

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Note: You must have a passing grade in both lecture and lab to pass the course. If you fail either the lecture or the lab you will receive an "F" in the course

Final course grades will only be available in OPUS. Final exam grades will not be distributed.

### *Errors in grading:*

Exams should be reviewed immediately upon return for grading or addition errors. If there appears to be an error, submit your request for a regrade **in writing** no later than three days after the exam was returned in class. The Regrade Request form is available in Blackboard.

### HONOR CODE

It is expected that students will adhere to the Honor Code. It is expected that students will not cheat, contribute to or condone the cheating of others. You are therefore expected to submit your own best effort on all assignments. Exams will not be proctored unless it is believed that the Honor Code is being violated. Pens/pencils and a non-programmable calculator are the only tools you are allowed to bring to and use in exams (no cell phones). Unless otherwise specified, collaboration is not allowed in any assignment to be submitted – including laboratory reports. You may collect data in groups however you may not collaborate with other students when completing lab report sheets/formal summaries/reports.

### "RULES OF ENGAGEMENT"

Expectations regarding class deportment and interpersonal interaction will be discussed on the first day of class. Below are a few general notes.

- Students are expected to arrive to class on time and stay for the entire class period.
- Cell phones are not allowed in class. Students will be asked to leave the class if they are caught texting.
- Laptops are only allowed in class if you have an e-textbook or it serves as your primary means of taking notes. You must request permission from me before bringing your laptop to class.
- Students must be appropriately dressed for class and lab. No undergarments should be visible.

### Q&A SESSIONS

A question and answer session will be conducted in the class session prior to each exam.

### LEARNLINK AND BLACKBOARD

Blackboard will be the primary means of communicating outside of class. It will also house supplementary course resources. Students are also expected to read the class LearnLink conference (under Oxford Chemistry) regularly, as well as any subconferences within it.

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### COURSE SCHEDULE

Chap. 22, sections 22.3, 22.5, 22.7	Chap. 15
Chap. 11	Chap. 16
Chap. 12	Chap. 18
Chap. 13	Chap. 19
Chap. 14	Chap. 20

The course schedule is subject to change. The sections to be covered in each exam will be announced in class.

\* No class will be held on Wednesday, April 6<sup>th</sup>. A makeup class will be held as follows:

**Section 11A** on Tuesday, April 12<sup>th</sup> at 8:30 am

**Section 12A** on Thursday, April 14<sup>th</sup> at 8:30 am