Chemistry 102 - General Chemistry 2, Section 3
Spring 2007

READ CAREFULLY

Course Prerequisites: Chem 101 (Chem 11) grade of C- or better, Chem 101L (11L);
It is a violation of the UNC Honor Code to be enrolled in this course without credit for the proper prerequisites.

Course Section, Time and Location: Section 3, TuTh, 8-9:15 am, Chapman 211.
Course Instructor: Todd L. Austell, Ph.D.
Office: Morehead Labs 206 Email: tlaustell@unc.edu (please do not email class ?’s)
Office Hours: MW mornings 9-11 am by appt.; TTh afternoon by appt.; in plenty of group
help-sessions (TBA)…and other times (TBA).

Required Text and Materials

- Sign up for Webassign Online (and pay fee) or buy ACCESS CODE in student store.
- Three-ring Binder and 3-hole Paper Pad: Buy a good binder to hold all your class handouts, notes, and exams.
  Partial notes will be provided for each lecture on blackboard. (slant-D style binders are recommended)
- A Scientific Calculator: Purchase a good one and LEARN TO USE IT. Don’t buy a calculator you cannot
  understand how to use. They can get pretty complicated. Your calculator should have as the bare minimum the
  following functions…. Note: for Chem 102, calculator must be able to do linear regression…. to find best fit line.

+, -, /, *, x², ln, log, exp, eˣ, √x, 1/x,and stat. functions (mean, standard dev., y=mx+b for x,y data set, i.e. best fit line)

Class Attendance
Attendance at all lectures is mandatory if you hope to do well in this course. Attendance at as
many help-sessions and tutorials as possible is also highly recommended if you have any trouble
with the homework problems. Attendance may be confirmed at random times during the course
and factored into the final grade. DO NOT plan to miss class by leaving town early for any breaks
(special week before Spring Break; even if for a class trip).

Assigned Seating
A designated area of the classroom will be assigned for each lecture. We’ll call this the “rock
star seating” for each class. Seating assignments on these rows will bounce around the class roll to
make sure everyone gets a chance to sit down at the front occasionally. Check the seating
assignment tab on the blackboard website to see if you have an assigned seat for a given lecture.
Attendance will be verified in assigned seating. Absences will result in point deductions from the
nearest exam.

Homework (ONLINE)
A significant number of ONLINE HOMEWORK problems will be assigned once or twice each
week using http://www.webassign.net/. You must purchase your Access Code at the campus
student store or ONLINE ASAP and complete the online Introductory Assignment and survey
during first week of classes. Make sure to also read the STUDENT GUIDE TO WEBASSIGN
online at the above site. Additional homework problems will be recommended from the book
and not assigned ONLINE. Some exam questions will come from the ONLINE and from the
text problems. Try them all…. and then try some more. This is the ONLY way to know if
you’ve learned the material. If you have difficulties, stop by the resource center for help.

Free Tutoring
Free tutorial (HELP) sessions are available in room 305 Morehead Labs (Chemistry Resource
Center) from Noon – 7 pm Monday through Thursday of each week. This resource is set up to
help you find answers to your questions. Make sure to take advantage of this free resource. I’ll
hold some hours in the center as will the other general chemistry professors (times TBA).
Exams / Quizzes
There will be three midterm exams and a final exam with point distributions as shown below. IN-CLASS assignments, ONLINE HOMEWORK, attendance and any quizzes will average together as a fourth exam.

Course Grade:
Calculated as follows:
\[
\text{Final Ave} = \frac{(\text{Average of Exams 1,2,3 and HWIQ}) \times 3 + (\text{Final Exam}) \times 2}{5}
\]

HWIQ = Homework/Webassign/InClassAttendance/Quiz Ave (15% of grade).
Each exam is worth 15% of your grade, and the Final Exam is worth 40%.

<table>
<thead>
<tr>
<th>Score</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>93-100</td>
<td>A</td>
</tr>
<tr>
<td>90-92</td>
<td>A-</td>
</tr>
<tr>
<td>87-89</td>
<td>B+</td>
</tr>
<tr>
<td>83-86</td>
<td>B</td>
</tr>
<tr>
<td>80-82</td>
<td>B-</td>
</tr>
<tr>
<td>74-79</td>
<td>C+</td>
</tr>
<tr>
<td>66-73</td>
<td>C</td>
</tr>
<tr>
<td>60-65</td>
<td>C-</td>
</tr>
<tr>
<td>50-59</td>
<td>D</td>
</tr>
<tr>
<td>&lt;50</td>
<td>F</td>
</tr>
</tbody>
</table>

Grading Scale for Final Course Grade

When the Final Grade averages are calculated, all fractional points are rounded to the nearest integer grade (from two decimal places). For example: 82.46 rounds to 82, 92.51 rounds to 93.

Previous Grade Stats (>4000 students)

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>12.46%</td>
</tr>
<tr>
<td>A-</td>
<td>5.97%</td>
</tr>
<tr>
<td>B+</td>
<td>7.06%</td>
</tr>
<tr>
<td>B</td>
<td>12.91%</td>
</tr>
<tr>
<td>B-</td>
<td>7.92%</td>
</tr>
<tr>
<td>C+</td>
<td>11.38%</td>
</tr>
<tr>
<td>C</td>
<td>19.67%</td>
</tr>
<tr>
<td>C-</td>
<td>7.97%</td>
</tr>
<tr>
<td>D</td>
<td>7.57%</td>
</tr>
<tr>
<td>F</td>
<td>7.97%</td>
</tr>
</tbody>
</table>

Missed Exams/Quizzes, In-Class Assignments, ONLINE Homework
No make up exams will be offered under any circumstances. Missed quizzes and in-class assignments may also NOT be made up. This allows attendance to factor into your class grade.
No late ONLINE Homework will be accepted for any reason… including computer problems.

***If you need to reschedule your FINAL EXAM due to a conflict with several other exams, you must submit a Dean's note of approval BEFORE the last day of class.

BLACKBOARD Course Site and Email: Email and BLACKBOARD (http://blackboard.unc.edu/) will be used extensively to manage this course. Lecture notes, handouts, useful web links, assignments, grade information will be available at the BLACKBOARD site. You’ll need a UNCONYEN and password to log into the site. You can also participate in a class DISCUSSION FORUM at this site. Check it out. Web page URLs will frequently be referenced in class to provide additional information, interesting side notes, tutorials,…etc. All material included on BLACKBOARD site is testable material.

Note: You must have and use a UNC email address for this course.
Tentative Schedule of Lecture Topics:

### Course Introduction
- Nuclear Chemistry
- Gases
- Intermolecular Forces: Liquids and Solids
- Modern Materials (TENTATIVE)
- Properties of Solutions
- Chemical Kinetics
- Chemical Equilibrium
- Acid-Base Equilibria
- Additional Aspects of Aqueous Equilibria
- Chemistry of the Environment (TENTATIVE)
- Chemical Thermodynamics
- Electrochemistry
- The Chemistry of Life: Organic and Biological Chemistry (TENTATIVE)

### Tentative Exam Dates:
(Do NOT schedule early spr. break flight)
- Feb. 8, 13, 15, 20; Mar. 6, 8, 20, 22; Apr. 10, 12, 17.

Final Exam: Thursday, May 3, 8 AM in Chapman 211

### Honor Code Policy:
...as adopted by Dept. of Chemistry on Sept. 9, 1977.

"Since all graded work (including homework to be collected, quizzes, papers, mid-term examinations, final examinations, research proposals, laboratory results and reports, etc.) may be used in the determination of academic progress, no collaboration of any kind is permitted unless the instructor explicitly indicates that some specific degree of collaboration is allowed. This statement is not intended to discourage students from studying together or working together on assignments which are not to be collected."

Note: I encourage you to work together in exam preparation.

### Other Honor Code Reminders
- It is a UNC Honor Code violation to receive aid on a take-home assignment from any source other than those defined as useable on the assignment.
- It is a UNC Honor Code violation to receive any assistance or to work with any other person on an ONLINE HOMEWORK assignment.
- It is a UNC Honor Code violation to observe anyone else violating the above policy with respect to ONLINE HOMEWORK and to not report the infraction to the instructor.
- It is a UNC Honor Code to write on any graded exam prior to submitting it for a REGRADE request.
- It will be deemed a UNC Honor Code violation if anyone passes any notes from the class to any online resource, commercial or otherwise.
- It is a UNC Honor Code violation to use a programmed calculator in an in-class exam.

### Specific Class Guidelines
- Cell phone use is not permitted in class. If your cell phone rings during the class period, you must notify me (Todd) at the end of the lecture. The penalty is a TWO POINT deduction from your nearest exam score. It’s an honor code violation not to notify me if your cell phone rings… or not to tell me if a neighbor’s rings and they do not admit it.
- Please keep laptop computers closed during lecture… except with my permission on select rows.
- Please do not read newspapers during lecture.
- Please throw all snack wrappers and drink bottles/cans in the proper receptacles… not on floor.
Keys to Making a Good Grade
1) Make sure to prepare for and come to class. Read ahead of time and look over notes outline.
2) Do all the ONLINE HOMEWORK and as many assigned problems as possible ahead of time.
3) Ask questions as soon as you have them. Don't delay.
4) Keep up. If you wait to the last minute to study for one of my exams, more than likely you will fail it.
5) Don't think this class is a "weed out" class. It is not. For the most part, what you'll be learning is the same material taught in most high school programs that have two years of chemistry.

The Importance of Math Skills (Algebra)
My experience with general chemistry instruction has proven to me that the number one issue that tends to lower a student’s grades in the class is a weakness or lack of math skills. This applies to all students…including those who have placed out of or into calculus.
It’s imperative that all students review their algebra skills (not calculus) prior to the beginning of this course. Important topics that you must remember include but are not limited to the following: solving word problems, using log and exponent rules, solving equations of one variable, solving quadratic equations, performing simple math WITHOUT at calculator.
THINK YOU MAY BE WEAK IN MATH?..FIND A BOOK AND REVIEW PRIOR TO CLASS.

Words of Encouragement
I love UNC and I love teaching this course. I’m going to give you my all as an instructor, and I expect the same from you as a student. If you follow all my guidelines and are disciplined in how you approach this course material, you can do well. I want to make this class the most positive experience possible for you, but I also want you to have a great UNC experience. Feel free to use me as an advisor and resource not just for this course but for your whole UNC experience.

Todd

A few more words so you know a little bit more about your instructor:
Todd L. Austell, Ph.D. (Please call me Todd) Born sometime in the 1960's in Shelby, NC.
B.S. Chemistry (B.S. Biology). UNC 1987.
First majored in Math and Pre-med, before changing to the above.
Lived in Granville and then R.A'ed in Ehringhaus as an undergrad.
DOE Fellowship in Nuclear Chemistry, San Jose (SJSU), California, Summer 1986.
Reentered UNC Graduate School in 1988.
Dissertation Title: Electrospray and Microelectrospray Ionization: Applications with Mass Spectrometry.
Previous Teaching Experience: Chem. 101,102,241,261,101L,102L,441L,481L.
Assistant Professor at United States Air Force Academy in Colorado Springs, Colorado from July 1997 - June 1998.
Current Positions:
Research Assistant Professor in UNC Chemistry Dept. since July 1, 1998.
Director of General Chemistry Laboratory (Chem. 101L/102L) program since July 1, 1998.
Director of the Chemistry Tutorial Program since August of 1999. Located in Morehead Labs 305.
General College advisor for science majors, for the Johnston Scholars Program, and for the Covenant Scholars program.
Departmental advisor for Chemistry majors.
Random Stuff: Volunteer Campus Tour Guide at UNC from 1990-2001. Still occasionally give tours and help out at U'grad. Admissions. I worked extensively with Student Ticket distribution for football and b-ball on campus for 6 years while in graduate school. I can help you understand the distribution process if you're confused. I go to many UNC sports events.

Hobbies: Racquetball, Disc Golf, Ultimate Frisbee, Four-wheeling, Hiking, Camping and Rock Climbing, Basketball, Physical Fitness....and a true-blue Carolina fan of all sports.
Interests: Music (listening to), electronics, computers, Bible study, and science in general.

Other important information: A Christian since 1976 and attendee of the Chapel Hill Bible Church.
Faculty sponsor/advisor for the UNC Fellowship of Christian Athletes.
( FCA is currently shut down on campus awaiting interest in a new start)
Faculty advisor for UNC Champions for Christ.
Faculty advisor for NEW Christian Fellowship/Discussion Group for Science Majors... hopefully starting in Spring of 2007.