



# CHM 151 Syllabus, Fall 2008

## TR 11:30 am– 12:45 pm, Section 34762, GCCN D 124

Instructor: Christina Clark

Email: [cclarkchemistry@yahoo.com](mailto:cclarkchemistry@yahoo.com)

Office Location: \_\_\_\_\_

Web page: <http://www.cclarkchemistry.com>

Office Hours: \_\_\_\_\_ or by appointment

CHEM Help Hours: Mondays 9:00 am – 5:00 pm in PS150 (FREE Tutoring!!)

### Course Description

Welcome to Chemistry 151 at GCC. Chemistry 151 is the first semester of a two-semester sequence of General Chemistry covering chapters 1-11 in *Chemistry* by McMurry/Fay. This course assumes that you have had an introduction to chemistry, either in high school or an introductory course in college (e.g., CHM 130) in the not-too-distant past, as well as the equivalent of Intermediate Algebra (MAT 120 or 122). In this course we will cover elements and compounds, atoms and molecules, chemical and physical properties and changes, chemical bonding models, and properties of solutions. We will look at how measurable macroscopic properties can be explained by phenomena that occur at the molecular level. Throughout the learning process, you will also improve your critical thinking, questioning, and problem solving skills.

Success in this course is a matter of exposure and practice. Staying current (or ahead) with readings and practice problems will greatly help you process the new information presented in class. Be patient when doing the problems – you *learn* the most when you struggle to figure out how to do a problem. Also be aware that it may take several readings to understand the material. **Plan to study at least 2-3 hours outside of class for every hour of lecture.** It will be most beneficial if you spread your study time out a little bit everyday (about 30 -60 minutes) rather than trying to spend a whole day studying the material. Spreading it out will give you time to process the information without taxing your brain!

**Lab is a separate 1-credit course (you receive a separate grade for lecture and lab), and you must enroll separately for lab.** You do not need to have the same instructor for lecture and lab, although you may find it to be beneficial to do so.

Official course competencies and a course outline are available from the District Website or from GCC's Chemistry Home page (under "Programs and Course Advice") (<http://www.gc.maricopa.edu/chemistry>).

### What you need for this class:

#### Required:

*Chemistry* by McMurry/Fay, 5<sup>th</sup> Edition (Prentice Hall, 2008)

**Homework assignments** – on MasteringChemistry (an online homework/tutoring program). Homework assignments will be due by 11:30 AM on the due date. The schedule of homework due dates is included starting on page 3.

**Calculator:** A **non-programmable calculator** (basic or scientific) capable of computational and exponential functions will be necessary for homework and exams. Common uses will include scientific notation, logarithms, exponents, and x-roots (especially if you continue on to CHM 152/154). Programmable calculators will not be permitted on quizzes or exams (the department has calculators you can borrow).

#### Optional:

**PowerPoint slides** available on my website: <http://www.cclarkchemistry.com> - you will find these useful to print out (as handouts –4 per page) and bring to class.

**Worksheets** with answer keys on Dr. Leedy's website: [http://glory.gc.maricopa.edu/~dleedy/151\\_lecture.htm](http://glory.gc.maricopa.edu/~dleedy/151_lecture.htm)  
students typically find these very helpful when studying for exams.

**Chapter Study Guides** and **Previous Semester Exams:** <http://www.cclarkchemistry.com> - another helpful resource when studying for exams.

**Solutions Manual** to accompany McMurry/Fay

### Attendance Policies

Attendance will be taken daily. Anyone not enrolled in the class may not attend (liability issues). Therefore, you may not bring children to class (call Child Care Resources and Referral Service (602-244-2678) for free help finding last-minute State-approved day care). Anyone with more than 4 absences during the first 45 days of the semester may be dropped from the course. **After October 31<sup>st</sup>, if you stop coming to class and do not withdraw, you will be assigned an "F" for the course.**

**You may request in writing, up to the last day of class, to receive a "W" at the end of the semester. Once you submit this written request, you may no longer attend class. If you take the final exam or fail to submit a request in writing, you will be assigned a letter grade for the course!**

**Course Grading** (It is your responsibility to elect to take this course Pass/Fail at the beginning of the semester.)

You can check your grades throughout the semester on Blackboard.

|                               |  |
|-------------------------------|--|
| *One-hour Exams 100 pts (x 4) | 400 pts                                    |
| *Final Exam                   | 200 pts                                    |
| *Homework 5 pts (x13)         | 65 pts                                     |
| * Quizzes 5 pts (x ~10)       | 50 pts (only the top 10 grades will count) |
| Total                         | <b>715 pts</b>                             |

### **Course Grade Assignments**

| <u>Percent average</u> | <u>Point Range</u> | <u>Letter grade</u> |
|------------------------|--------------------|---------------------|
| ≥ 90 %                 | 644 – 715          | A                   |
| ≥ 80 %                 | 572 – 643          | B                   |
| ≥ 70 %                 | 501 – 571          | C                   |
| ≥ 60 %                 | 429 – 500          | D                   |
| < 60 %                 | <428               | F                   |

- **Special Circumstances for Exams:** None of the graded exams will be dropped. Therefore, it is imperative that you be present for every exam and plan travel and other events accordingly. If university-sanctioned travel or excused events do interfere with an exam date, then it is your responsibility to contact me BEFORE the scheduled exam and take the exam BEFORE the regularly scheduled time. You must **show documentation** in order for an early exam to be administered. All exam dates are scheduled at the beginning of the semester. Exam dates will not be changed but the material covered on them might be shifted depending on the pace of the course. If you must miss an exam due to an **excused absence (with documentation provided)**, the average of your other three exams will replace the missed exam. Except for Exam 3. This is the most difficult exam of the semester and no absences will be allowed for it. If you miss this exam, you will receive a grade of zero (0) on it.
- **Homework:** Graded homework exercises will help you gauge your understanding of the material presented in each chapter. Homework assignments will be scored out of 5 points and will be graded on relative performance. If you answer 70 – 100% of the questions correctly, you will receive 5 points. 50 – 69% correct will earn you 3 points. Less than 50% will result in a score of 0 for a homework assignment. Accessing and submitting homework will be covered the first day of class.
- **Quizzes:** Some quizzes will be individual and some will be group. Quizzes will not be announced and will be given during lecture. Therefore it is in your best interest to attend every class. Quizzes will be graded on a five-point scale. Make-up quizzes will be allowed if I am notified before an absence (via email or phone) and if **written documentation is provided**. It is your responsibility to schedule a make-up quiz. We may take many quizzes, but only the top 10 scores will count toward your final grade.

### **Sources of Help**

In addition to my office hours listed above, there is departmental tutoring every Monday in room PS-150. Instructors will be available every Monday from 9 am to 5 pm. A schedule will be posted of when each instructor will be available for help. Free tutoring is also available within the department. Schedules are posted in the lecture and lab rooms and in the lobby. The department will also print and distribute a bookmark listing all office hours, CHEM help hours, and tutoring hours for the semester.

### **Special Accommodations**

If you need special accommodations for lecture or testing purposes, please contact the Disability Services and Resources office (TDS building, phone 623-435-3080). Please see me during the first week of classes to discuss appropriate accommodations to meet your needs. If you require special accommodations for exams, please schedule a time to see me as early as possible in the semester.

### **Withdrawing from the course**

The unrestricted withdrawal deadline is **October 3<sup>rd</sup>** (my signature is not needed). The restricted withdrawal deadline is **December 1<sup>st</sup>** (you will need my signature in order to withdraw). You may also elect to receive a “W” at the end of the semester if you submit a written request **up to the last day of class**. Once you elect to withdraw from the course you may no longer attend (see attendance policies). You cannot elect to receive a “W” for the course if you take the final exam – you will receive a letter grade for the course. **If you stop attending after Oct. 31<sup>st</sup> and do not request a “W” in writing to me you will receive an “F” for the course.** If you receive financial aid, please see an advisor before requesting a “W”.

## CHM 151 LECTURE SCHEDULE

(subject to change as necessary to accommodate the needs of this class)

| Week | Date           | Chapter                             | Topic  | Corresponding Lab (North)                                       | HW Due Date (11:30 AM)                        |
|------|----------------|-------------------------------------|--|---|---|
| 1    | 8/26<br>8/28   | 1 (1-13)                            | Introduction; syllabus; technology; Website<br>SI Units; Scientific Notation; Significant Figures;<br>Dimensional Analysis | Introduction;   |   |
| 2    | 9/2<br>9/4     | 1 (1-13)<br>2 (1-8)                 | Dimensional Analysis<br>Atoms, Molecules, Ions;  | Safety  | Intro due 9/4<br>(51 min)                     |
| 3    | 9/9<br>9/11    | 2 (1-8)<br>5 (1-8, 10, 12-15)       | Atoms, Molecules, Ions;<br>Periodicity and Atomic Structure  | Density   | Ch. 1 due 9/9<br>(79 min)                     |
| 4    | 9/16<br>9/18   | 5 (1-8, 10, 12-15)<br>6 (1-6)       | Periodicity and Atomic Structure<br>Ionic Bonds & Main Group Chemistry   | States of Matter  | Ch. 2 due 9/16<br>(74 min)                    |
| 5    | 9/23<br>9/25   | <b>Exam I</b><br>2 (9, 10)          | <b>Exam I – Chapters 1, 2, 5</b><br>Acids/Bases; Nomenclature  | Atomic<br>Theory  | Ch. 5 due 9/23<br>(60 min)                    |
| 6    | 9/30<br>10/2   | 7 (1-7, 9-12)<br>7 (1-7, 9-12)      | Covalent Bonds & Molecular Structure<br>Covalent Bonds & Molecular Structure   | Introduction to<br>Spectroscopy                                 | Ch. 6 & Nom. due<br>9/30<br>(67 min & 73 min) |
| 7    | 10/7<br>10/9   | 10 (1-6, 11)<br>10 (1-6, 11)        | Liquids, Solids, & Phase Changes<br>Liquids, Solids, & Phase Changes   | Geometry of<br>Covalent<br>Compounds                            | Ch. 7 due 10/9<br>(65 min)                    |
| 8    | 10/14<br>10/16 | <b>Exam II</b><br>3 (1-3) part I    | <b>Exam II- Chapters 6, 2, 7, 10</b><br>Formulas, Equations and Moles  | Intermolecular<br>Forces  | Ch. 10 due 10/14<br>(50 min)                  |
| 0    | 10/21<br>10/23 | 3 (1-3) part I<br>4 (1-8)           | Formulas, Equations and Moles<br>Reactions in Aqueous Solution   | Chemical<br>Reactions   |   |
| 10   | 10/28<br>10/30 | 4 (1-8)<br>3 (4-11) part II         | Reactions in Aqueous Solution<br>Stoichiometry   | The Copper Cycle  | Ch. 3 part I due<br>10/28 (100 min)           |
| 11   | 11/4<br>11/6   | 3 (4-11) part II<br>9 (1-6)         | Stoichiometry<br>Gases: Properties & Behavior  | Solubility of Ionic<br>Compounds                                | Ch. 4 due 11/4<br>(105 min)                   |
| 12   | 11/11<br>11/13 | <b>No School</b><br><b>Exam III</b> | <b>No School – Veteran’s day</b><br><b>Exam III – Chapters 3 (part I &amp; II), 4</b>                                      | Limiting Reagent  | Ch. 3 part II due<br>11/13 (229 min)          |
| 13   | 11/18<br>11/20 | 9 (1-6)<br>8 (1, 3, 5-11)           | Gases: Properties & Behavior<br>Thermochemistry  | Ascorbic Acid<br>Titration                                      |   |
| 14   | 11/25<br>11/27 | 8 (1, 3, 5-11)<br><b>No School</b>  | Thermochemistry<br><b>No School – Thanksgiving Break</b>   | <b>No Lab</b>   | Ch. 9 due 11/25<br>(138 min)                  |
| 15   | 12/2<br>12/4   | 11 (1-8)<br>11 (1-8)                | Solutions and their Properties<br>Solutions and their Properties   | Thermochemistry   | Ch. 8 due 12/4<br>(113 min)                   |
| 16   | 12/9<br>12/11  | <b>Exam IV</b><br>Review            | <b>Exam IV – Chapters 9, 8, 11</b><br>Review – Last day to request a “W” in writing to<br>instructor only!                 | <b>Lab Final Exam</b><br><b>Practical and</b><br><b>Written</b> | Ch. 11 due 12/9<br>(36 min)                   |
| 17   | 12/16          | <b>Final Exam</b>                   | <b>Final Exam 11:00 am -12:50 pm</b>   |   |   |

*Note: The 151LL North schedule is different from the Main schedule.*

### **Academic Integrity**

Cheating will absolutely not be tolerated. Cheating is bad! This includes (but is not limited to) any form of inter-student collaboration on exams or external assignments that is not specifically sanctioned by the professor, use of prohibited materials or devices during exams, copying or distribution of quiz or exam answers prior to the test, and plagiarism. See the student handbook for statements about student responsibility regarding cheating and academic integrity (<http://www.gc.maricopa.edu/catalog/scholastic.htm>). You may receive an “F” for the course if you are caught cheating.

### **Taping Policy**

Lectures may be audio-taped for personal use only. No video-taping is allowed unless you receive my permission before each use.

### **Cell Phone/Pager Policy**

Cell phone use during class is not permitted. Turn all ringers off before entering the classroom. Take all **vital** calls **outside the classroom. If your cell phone rings, beeps, vibrates, or otherwise makes noise during an exam, your exam will be taken up at that point.**

**My Fall 2008 Schedule:** Block off the times during which you will be in classes (mark with “C”), at work (“W”), and dedicated time (“O”). Then indicate the blocks of time you can dedicate to studying (“S”) or indicate your study times below each column (i.e., if you study early in the morning or late at night).

| Hour        | Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|-------------|--------|--------|---------|-----------|----------|--------|----------|
| 8 – 9 am    |        |        |         |           |          |        |          |
| 9 – 10 am   |        |        |         |           |          |        |          |
| 10 – 11 am  |        |        |         |           |          |        |          |
| 11am – 12pm |        |        |         |           |          |        |          |
| 12 – 1 pm   |        |        |         |           |          |        |          |
| 1 – 2 pm    |        |        |         |           |          |        |          |
| 2 – 3 pm    |        |        |         |           |          |        |          |
| 3 – 4 pm    |        |        |         |           |          |        |          |
| 4 – 5 pm    |        |        |         |           |          |        |          |
| 5 – 6 pm    |        |        |         |           |          |        |          |
| 6 – 7 pm    |        |        |         |           |          |        |          |
| 7 – 8 pm    |        |        |         |           |          |        |          |
| 8 – 9 pm    |        |        |         |           |          |        |          |
| 9 – 10 pm   |        |        |         |           |          |        |          |
| 10 – 11 pm  |        |        |         |           |          |        |          |

Extra hours of study:

**Tear this sheet on the line below and turn in the contract once you have read and understand the policies outlined in this syllabus.**

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### Syllabus Contract

I (print name), \_\_\_\_\_, acknowledge that I have received and understand the attached course policies for CHM 151 lecture.

I will not cheat, nor will I encourage or allow others to do so. \_\_\_\_\_ (initial)

I understand that this course will require considerable time and effort on my part and that I need to allow an appropriate amount of time for studying the material outside of class, work, and family obligations.  
(initial)\_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_