

## CHEM105 Section 002, Fall 2009 Course Syllabus

### Course Specifics:

**Instructor:** Dr. Jason C. Hurlbert

Office: Sims 301B

Office hours: TRF 11-12 and by appointment

Phone: 323-4928

E-mail: [hurlbertj@winthrop.edu](mailto:hurlbertj@winthrop.edu)

### Meeting Times:

**Lecture:** Monday and Wednesday, 9:30 – 10:45 AM, Sims 105

Tuesday, 12:30 – 1:20 PM, Sims 111

**Recitation:** Friday, 9:30 – 10:20 AM, Sims 105

**Credit Hours:** 4

### Course Website:

[http://bohr.winthrop.edu/faculty/hurlbert/link\\_to\\_webpages/courses/chem105/chem105home.html](http://bohr.winthrop.edu/faculty/hurlbert/link_to_webpages/courses/chem105/chem105home.html)

**Textbook:** Chemical Principles, 4th ed., Atkins and Jones

### Course Objectives:

- To become familiar with the scientific method
- To gain an understanding of the basic concepts used in chemistry
- To learn how to 'think' like a chemist
- To gain an appreciation for the role chemistry plays in everyday life

### Course Outline:

We will cover the following topics during the semester:

- Chemical concepts
  - Stoichiometry
  - Reactivity
- The basics of atoms and molecules
  - The structure of the atom
  - The periodic table of the elements
  - Chemical bonding
- The states of matter
  - Gas laws
  - Intramolecular forces on liquids
  - Solids and their properties
- Introductory Organic Chemistry
  - Types and naming of alkanes and major functional groups
  - Basic reactions of organic molecules
  - Biologically important organic molecules

**Tentative Course Schedule:** Refer to Course website or see attached

- Study Tips:**
1. Attend class, take good notes, ask questions
  2. Read all assigned material before and after hearing a lecture on it
  3. Review other sources of information (textbooks, online, etc)
  4. Review lecture notes. Often.

### **Grading for the Course**

#### **Homework:**

Assigned homework problems are given in the course calendar. These homework problems will be collected on the dates indicated. Please feel free to work in groups on these problems. However, make sure that you understand how these problems are solved as you may be required to present the solutions to the class during the recitation sections.

#### **Quizzes:**

Four quizzes will be given during the semester during the recitation section. These quizzes will be 50 minutes in duration and will be worth 20 points each. Be prepared! Bonus quizzes may spontaneously appear during any recitation section and the points from these quizzes will be added to your point total for the course.

#### **Tests:**

Test 1 (September 18, Friday)

Test 2 (October 16, Friday)

Test 3 (November 13, Friday)

- Each test will have a value of 100 points

#### **Final Exam - Tuesday December 15, 11:30am**

The final exam is cumulative and you must make at least a 50% on the exam to pass the course.

- The final exam will cover the entire course and will have a value of 200 points

#### **Total Possible Points**

<b>Quizzes</b>	<b>4 @ 20 points each</b>	<b>80</b>
<b>Tests</b>	<b>3 @ 100 points each</b>	<b>300</b>
<b>Final Exam</b>		<b>200</b>
<b>Homework</b>	<b>12 problem sets @ 20 points each</b>	<b>240</b>
<b>Total possible points</b>		<b>820</b>

<b>Grades:</b>	A: 90 - 100%	(738-820 pts)
	B <sup>+</sup> : 86 - 89%	(705-737 pts)
	B: 77 - 85%	(631-704 pts)
	C <sup>+</sup> : 74 - 76%	(533-630 pts)
	C: 66 - 73%	(541-532 pts)
	D: 56 - 65%	(459-540 pts)
	F: <55%	(<458 pts)

**Notes on grading:**

- If you have a question about a grade on an assignment, you must come and see me within a week from the day the assignment is returned. No grades will be changed after this one week period.
- Review the Student Conduct Code found in the Winthrop University Student Handbook and behave accordingly.

**Attendance:** You are expected to be in class every time it is scheduled to meet and will be responsible for anything covered during that meeting. In order to be successful in this course, you must attend the lectures, take notes during the lecture period, REVIEW those notes before the next class meeting, attempt all homework problems and seek out help without hesitation. You must be prepared to put in many hours outside the classroom to earn an 'A' in this course. Absence from a test without a written doctor's excuse is inexcusable and the student will receive a zero for that test. Absence from a test with a doctor's excuse will be accepted and the grade on the final exam will replace that specific grade.

**Technology in the Classroom:**

Out of respect for everyone in the room, please turn your cellular telephones to 'Silent' and (if applicable) mute your laptop computers. Also, laptop computers may only be used for taking notes during the class period, not updating your Facebook page, email, etc. Students failing to adhere to these rules may be asked to leave should their behavior prove disruptive to the class. No telephones or laptops may be used during exams or quizzes.

**Drop Policy:** As described in the Winthrop University Undergraduate catalog

**Student code of conduct**

As noted in the Student Conduct Code: "Responsibility for good conduct rests with students as adult individuals." The policy on student academic misconduct is outlined in the "Student Conduct Code Academic Misconduct Policy" in the online *Student Handbook* (<http://www2.winthrop.edu/studentaffairs/handbook/StudentHandbook.pdf>).

**Students with Disabilities:** Winthrop University is dedicated to providing access to education. If you have a disability and require specific accommodations to complete this course, contact Services for Students with Disabilities, at 323-3290. Once you have your official notice of accommodations from Services for Students with Disabilities, please inform me as early as possible in the semester.

**CHEM105 Section 002 Fall 2009 Tentative Course Schedule  
(Modified 17 August, 2009)**

**Note: This schedule will change as necessary.**

<b>Week</b>	<b>Day</b>	<b>Chapter(s) Covered</b>	<b>Homework Problems Due</b>
<b>1</b> <b>L1-2</b>	<b>T</b> Aug 25	Discussion of Course Objectives and Expectations, <b>Fundamentals</b> A1 – A3	
	<b>W</b> Aug 26	<b>Fundamentals</b> B1 – D5	(A.1, A.9, A.11, A.13, A.15, A.17, A.21, A.25, A.27, A.29)
	<b>F</b> Aug 28	<b>Fundamentals</b> E1 – J3	(B.1, B.3, B.5, B.7, B.15, B.19, C.5, C.11, C.13, C.17, D.1, D.3, D.5, D.9, D.11, D.15)
<b>2</b> <b>L3-5</b>	<b>M</b> Aug 31	K1 – M3	(E.1, E.5, E.7, E.15, E.19, E.25, F.1, F.5, F.9, F.15, G.7, G.11, G.13, G.17, G.23)
	<b>T</b> Sept 1	<b>Fundamentals Review</b>	(H.5, H.7, H.13, H.21, I.5, I.13, I.15, I.19, J.1, J.3, J.7, J.11, K.1, K.7, K.13)
	<b>W</b> Sept 2	<b>Review for Quiz</b>	(L.1, L.3, L.7, L.25, L.31, M.1, M.5, M.11, M.17, M.19, M.21)
	<b>F</b> Sept 4	<b>Quiz 1</b>	<b>HW 1: All assigned Fundamentals Problems Due</b>
<b>3</b> <b>L6-8</b>	<b>M</b> Sept 7	<b>Chapter 1</b> 1.1-1.5	(Ch 1: 3, 4, 5, 6, 7, 9, 11, 15, 17)
	<b>T</b> Sept 8	1.7-1.11	(Ch 1: 21, 31, 33, 49, 59, 109)
	<b>W</b> Sept 9	1.12-1.14	(Ch 1: 63, 69, 71, 75, 79)
	<b>F</b> Sept 11	1.15-1.22	(Ch 1: 85, 87, 91, 93, 99, 101) <b>HW2: All assigned Chapter 1 problems due</b>
<b>4</b> <b>L9-11</b>	<b>M</b> Sept 14	<b>Chapter 2</b> 2.1-2.6	(Ch 2: 1, 3, 9, 19, 29, 33, 35)
	<b>T</b> Sept 15	2.7-2.16	(Ch 2: 41, 45, 49, 63, 73, 77)
	<b>W</b> Sept 16	<b>Review for Test 1</b>	<b>HW3: All assigned Chapter 2 problems due</b>
	<b>F</b> Sept 18	<b>Test 1</b> <b>Fundamentals, Chapter 1 and Chapter 2</b>	

<b>5</b> <b>L12-14</b>	<b>M</b> Sept 21	<b>Chapter 3</b> 3.1 - 3.3	
	<b>T</b> Sept 22	3.4 - 3.7	(Ch 3: 9, 11, 25)
	<b>W</b> Sept 23	<b>Chapter 4</b> 4.1 - 4.3	(Ch 3: 33, 35, 41)
	<b>F</b> Sept 25	<b>Review</b>	<b>HW4: All assigned Chapter 3 problems due</b>
<b>6</b> <b>L15-17</b>	<b>M</b> Sept 28	4.4 - 4.8	(Ch 4: 1, 25, 29, 39, 47, 51, 57)
	<b>T</b> Sept 29	4.9 - 4.14	(Ch 4: 69, 71, 77, 81, 87, 97, 101, 115)
	<b>W</b> Sept 30	<b>Quiz 2 Review</b>	
	<b>F</b> Oct 2	<b>Quiz 2</b>	<b>HW5: All assigned Chapter 4 problems due</b>
<b>7</b> <b>L18-20</b>	<b>M</b> Oct 5	<b>Chapter 5</b> 5.1 - 5.7	(Ch 5: 1, 3, 7, 11, 13, 17, 21, 23, 28)
	<b>T</b> Oct 6	5.8 - 5.17	(Ch 5: 31, 33, 39, 49, 63)
	<b>W</b> Oct 7	<b>Chapter 6</b> 6.1 - 6.7	(Ch 5: 3, 7, 17, 21)
	<b>F</b> Oct 9	<b>Review</b>	<b>HW6: All assigned Chapter 5 problems due</b>
<b>8</b> <b>L21-23</b>	<b>M</b> Oct 12	6.8-6.12	(Ch 6: 25, 31, 35, 39)
	<b>T</b> Oct 13	6.13-6.21	(Ch 6: 45, 67, 73, 85)
	<b>W</b> Oct 14	<b>Review for Test 2</b>	<b>HW7: All assigned Chapter 6 problems due</b>
	<b>F</b> Oct 16	<b>Test 2: Chapters 3, 4, 5 and 6</b>	
<b>9</b> <b>L24,25</b>	<b>M</b> Oct 19	<b>Fall Break</b>	
	<b>T</b> Oct 20		
	<b>W</b> Oct 21	<b>Chapter 7</b> 7.1-7.8	(Ch 7: 1, 3, 7, 11, 15, 23, 25)
	<b>F</b> Oct 23	7.9-7.11 <small>Last Day to Withdraw from Course with a Grade of 'N'</small>	(Ch 7: 41, 45)
<b>10</b> <b>L26-28</b>	<b>M</b> Oct 26	7.12-7.16	(Ch 7: 51, 53, 63, 65)
	<b>T</b> Oct 27	<b>Chapter 8</b> 8.1-8.7	(Ch 8: 1, 5, 7, 9)
	<b>W</b> Oct 28	8.8-8.13	(Ch 8: 19, 25, 27, 31)
	<b>F</b> Oct 30	<b>Quiz 3</b>	<b>HW8: All assigned Chapter 7 problems due</b>

<b>11</b> <b>L29-31</b>	<b>M</b> Nov 2	8.14-8.22	(Ch 8: 35, 47, 53, 65, 71)
	<b>T</b> Nov 3	<b>Chapter 9</b> 9.1-9.5	
	<b>W</b> Nov 4	9.6-9.8	(Ch 9: 7, 11, 17, 25, 33, 49, 53)
	<b>F</b> Nov 6	9.9-9.13	<b>HW9: All assigned Chapter 8 problems due</b>
<b>12</b> <b>L32-34</b>	<b>M</b> Nov 9	<b>Chapter 10</b> 10.1-10.6	(Ch 9: 63, 67, 75, 87 101, 113 and Ch 10: 3, 17, 23, 25)
	<b>T</b> Nov 10	10.7-10.10	(Ch 10: 27, 31, 33, 45, 53, 55, 63)
	<b>W</b> Nov 11	<b>Review for Test 3</b>	<b>HW10: All assigned Chapter 9 problems due</b>
	<b>F</b> Nov 13	<b>Test 3: Chapters 7, 8, 9 and 10</b>	
<b>13</b> <b>L35-37</b>	<b>M</b> Nov 16	<b>Chapter 11</b> 11.1-11.5	
	<b>T</b> Nov 17	<b>Chapter 13</b> 13.1-13.3	(Ch 11: 3, 9, 15, 23, 33, 35)
	<b>W</b> Nov 18	13.4-13.6	(Ch 13: 1, 5, 7, 13, 19, 23, 33)
	<b>F</b> Nov 20	13.7-13.10	(Ch 13: 43, 45, 51, 53)
<b>14</b> <b>L38</b>	<b>M</b> Nov 23	13.11-13.14	(Ch 13: 55, 59, 65, 89)
	<b>T</b> Nov 24	<b>Quiz 4</b>	<b>HW11: All assigned Chapter 11 and 13 problems due</b>
	<b>W</b> Nov 25	<b>Thanksgiving Break</b>	
	<b>R</b> Nov 27		
<b>15</b> <b>L39-41</b>	<b>M</b> Nov 30	<b>Chapter 18</b> 18.1 – 18.5	
	<b>T</b> Dec 1	18.6 – 18-8	(Ch 18: 3, 13, 21, 29, 35, 43, 51)
	<b>W</b> Dec 2	<b>Chapter 19</b> 19.1 – 19.8	(Ch 19: 1, 5, 13, 19, 23)
	<b>F</b> Dec 4	Class Evaluations / Review for Final	<b>HW12: All assigned Chapter 18 and 19 problems due</b>
<b>16</b>	<b>M</b> Dec 7	<b>Review for Final</b>	
<b>Final Exam: 11:30 a.m. Tuesday, December 15</b>			