Necessary Materials


   Note: Softcover Half Text (“Volume 1”) is an option. Do NOT purchase Volume 1 if you will take Chem 112!

2. Green *Spring* Chem 110 Student Packet - Required


4. *Non-text programmable* calculator - Required
Chemistry: The Central Science

Chemistry is the study of matter and its transformations

Which area of study best fits your interests?

1. Chemistry
   Chemical Engineering, Biochemistry

2. Life Sciences
   Biology, Kinesiology, Microbiology
   Health related fields: pre-med, nutrition, nursing

3. Materials
   Material Science, Polymer Science, Fuel Science

4. Environmental
   Forestry, Geoenvironmental Engineering
   Resource management
   Meteorology

5. Agriculture
   Animal Science, Turf grass, Food Science

6. Engineering
   Mechanical, Civil, Architectural, Engineering Science, etc.

7. Other
   Business (economics, management), Liberal Arts, Music

8. Undecided???
Why Study Chemistry?

Chemistry: The study of matter & its transformations

- Learn the Language of Chemistry; gain general knowledge
- Understand how structure affects function (Properties)
- Connect microscopic properties to macroscopic properties
- Learn about modern analytical techniques and instrumentation - How do we know what we know? How can we find out more? What problems need solutions?
- Energy is stored in molecules; how can we use it?
- Develop analytical problem solving skills

Lectures

1. Read the text AND do all Chapter (text book) problems BEFORE the lecture
2. Print lecture notes and try any blank questions before lecture
3. Do supplemental multiple choice problems (packet) after the lecture (due at recitation)
4. Take notes! Ask questions! Be ready to answer questions!
5. Practice in-class problem solving
6. Demos will be on the exams
Chem 110 Lectures

Sections 14-24
MWF at 11:15 - 12:05 PM
in Forum 108

Sections 1-13
MWF at 12:20 - 1:10 PM
in Forum 108
(Dr. Showalter)

Section 901
MW at 5:30 - 7:30 PM
in Osmond 117
(Dr. Jensen)

Online Pre-Quiz

Must finish by ___________ @ midnight

Does NOT count toward Chem 110 grade
provides guidance for correct course placement

Prerequisites for Chem 110
see general course info on website

• Algebra
• High school chemistry
• Chapters 1, 2 in text
• Familiarity with Chapters 3, 4, 10

NOTE: Chem 110 assumes previous exposure to Chemistry—we move very quickly

Chem 108 is 1-credit add-on course to Chem 110 for students needing more help (you can add now during the drop/add period)

No previous chemistry? Chem 101 is a better option; Chem 110 is not appropriate for you

No previous chemistry? Chem 101 is a better option; Chem 110 is not appropriate for you
Course Website

http://courses.chem.psu.edu/chem110/_______/

1. Course and Instructor Information
2. Expected Background
3. Syllabus & schedule of important deadlines
4. Instructions and deadlines for Online Skill Check Tests
5. Lecture Notes and Audio Tapes of lectures
6. Supplemental Homework problems
7. Exam Schedule and Locations
8. Previous Exams for practice
9. Tutorials and Useful Links
10. Grade calculator
11. Help Available

We will post announcements and other supplemental materials as they become available.

Also: Check ANGEL for postings

Homework and Quizzes

- Homework is collected during weekly recitations
- Quizzes during weekly recitation will be based on homework problems
- Homework grades:
  a) correct answer
  b) explanation of work
  c) neatness and completeness
- TA’s will hold office hours weekly (CRC, Whitmore 211)
- Free undergraduate tutors will be available Sunday through Thursday 6:30 PM - 10:30 PM in the CRC.
Online Skill Check Tests

Information and instructions are in the student packet and on the Web

To Take the tests:

Log on to Angel (https://cms.psu.edu)

Choose your course; Chem 110

Choose the correct test (in the Skill Check Test Folder on the lessons tab)

Choose the EXAM button, take the test

1. **Scoring:** You *must* score 100% on each of these to earn credit. You may take these tests as many times as you like prior to the final deadline (_______________ at midnight), but you will only get credit if you score 100% on the test.

2. **Extra Credit Bonus Deadline:** If you score 100% on the test before its corresponding bonus deadline, you earn 0.2 extra credit course points. With 10 tests, up to 2 extra course points are possible.

**Note there is a daily request limit of 8 tests per 24 hour period, and all deadlines end at midnight.**

**DO NOT USE YOUR BROWSER BACK BUTTONS!**

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Spring 2010 Chem 110 Grading

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Midterm Exam 1</td>
<td>17%</td>
</tr>
<tr>
<td>Monday February 8, 6:30 PM</td>
<td></td>
</tr>
<tr>
<td>Midterm Exam 2</td>
<td>17%</td>
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<tr>
<td>Monday March 1, 6:30 PM</td>
<td></td>
</tr>
<tr>
<td>Midterm Exam 3</td>
<td>17%</td>
</tr>
<tr>
<td>Monday April 5, 6:30 PM</td>
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<tr>
<td>Final Exam</td>
<td>29%</td>
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<tr>
<td>Scheduled by the Registrar during the week of May 3-7</td>
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**Total Emphasis for Exams:** 80%

**Note the dates of these exams NOW**

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Skill Check Tests</td>
<td>5%</td>
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<tr>
<td>Quizzes</td>
<td>7.5%</td>
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<tr>
<td>Homework</td>
<td>7.5%</td>
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<tr>
<td><strong>Total Coursework Grade</strong></td>
<td><strong>20%</strong></td>
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</table>

**EXTRA CREDIT POSSIBLE** 1%
## How to Succeed in Chem 110:

- **Manage your time**
  Expect to spend ~10 hrs per week outside of class **consistently on Chem 110 alone** (reading, homework, studying, online tests)

- **Come to class, Do the Homework**
  Sounds obvious (?!)

- **Choose your friends wisely**
  Form cooperative study groups
  Do your homework together
  (You must do online tests on your own)

- **Seek help**
  Do not wait to get help!
  If you fall behind in this class, you will be in serious trouble!

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### Chem 110 Spring 2010

**Important Deadlines:** in student packet, posted on Web

**All online deadlines end at midnight at the end of the day listed**

<table>
<thead>
<tr>
<th>Event</th>
<th>Bonus Deadline</th>
<th>Due date for completion</th>
<th>Material Covered (BLB)</th>
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<tbody>
<tr>
<td>Angel PRE-QUIZ DUE</td>
<td>Th Jan 14</td>
<td>M Apr 26</td>
<td>Algebra</td>
</tr>
<tr>
<td>SCT1. Basic Math (no calculator)</td>
<td>Th Jan 14</td>
<td>M Apr 26</td>
<td>Section 6.8-6.9 (atoms), 7.4 (cons)</td>
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<tr>
<td>SCT2. Metric Measurement</td>
<td>Th Jan 14</td>
<td>M Apr 26</td>
<td>Section 1.4</td>
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<tr>
<td>HOLIDAY-NO CLASS</td>
<td>M Jan 18</td>
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<tr>
<td>SCT3. Electronic Structure</td>
<td>Th Jan 28</td>
<td>M Apr 26</td>
<td>Section 6.8-6.9 (atoms), 7.4 (cons)</td>
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<tr>
<td>SCT4. Periodic Table</td>
<td>Th Jan 28</td>
<td>M Apr 26</td>
<td>Section 7.1-7.6</td>
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<tr>
<td>SCT5. Chem. Vocabulary</td>
<td>Th Feb 4</td>
<td>M Apr 26</td>
<td>Section 8.1, 8.3, 8.5-8.7</td>
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<td>SCT6. Lewis Structures</td>
<td>Sunday Feb 7</td>
<td>M Apr 26</td>
<td>Section 2.6-2.8</td>
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<td>Exam 1; Monday, Feb. 8 - 6:30-7:45 PM</td>
<td>Lectures 1-12, SCT 1 - 6</td>
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<td>Exam 2; Monday March 1 - 6:30-7:45 PM</td>
<td>Lectures 13-21, SCT 1 - 7</td>
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<td>SPRING BREAK - NO CLASS</td>
<td>M March 8 - F March 12</td>
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<td>SCT8. Intermolecular Forces and Phase Diagrams</td>
<td>Th Mar 25</td>
<td>M Apr 26</td>
<td>Section 11.2, 11.6</td>
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<td>SCT9. Solutions and Dilution</td>
<td>Th April 1</td>
<td>M Apr 26</td>
<td>Section 4.1-4.4</td>
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<td>Lectures 22-33, SCT 1 - 9</td>
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<td>LATE DROP DEADLINE</td>
<td>F April 9</td>
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<tr>
<td>SCT10. Net Ionic Equations</td>
<td>Th April 15</td>
<td>M Apr 26</td>
<td>Section 4.5</td>
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<tr>
<td>Final Credit Deadline for all Skill Check Tests</td>
<td>M Apr 26</td>
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<td></td>
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<tr>
<td>Final Exam during Finals week May 3-7 (TBA)</td>
<td>Comprehensive</td>
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