Chem 231 – Brief Organic Chemistry Course

Dr. John H Penn
Google “John Penn WVU”
John.Howard.Penn@gmail.com
Instructor Contact Information

• Office
  – 561 CRL (next to 559, NOT next to 560)
  – Take the elevator, do NOT take the stairs
  – Appointments through the website

• Website
  – http://www.as.wvu.edu/~jpenn
  – Google “John Penn WVU” and take the first hit
Teaching Web Page

Make an appointment

Find Penn’s Office
### Chem 233

<table>
<thead>
<tr>
<th>Exam 1</th>
<th>Exam 2</th>
<th>Exam 3</th>
<th>Final Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thursday, May 28, 2015 @ 5:00 PM</td>
<td>Monday, June 8, 2015 @ 5:00 PM</td>
<td>Tuesday, June 16, 2015 @ 5:00 PM</td>
<td>Friday, June 26, 2015 @ 5:00 PM</td>
</tr>
</tbody>
</table>

**Laboratory Schedule**
- Monday, May 18, 2015
- Tuesday, May 19, 2015
- Wednesday, May 20, 2015
- Thursday, May 21, 2015
- Friday, May 22, 2015
- Monday, May 25, 2015 - No Class
- Tuesday, May 26, 2015
- Wednesday, May 27, 2015

**Final Exam**
- Friday, June 26, 2015 @ 5:00 PM

### Chem 235

**Course Syllabus**

### Chem 231

<table>
<thead>
<tr>
<th>Exam 1 - Chapters 1, 2, 3</th>
<th>Exam 2 - Chapters 3, 4, 5</th>
<th>Exam 3 - Chapters 6, 7</th>
<th>Exam 4 - Chapters 8, 9</th>
<th>Exam 5 - Chapters 10, 11, 12, 13</th>
</tr>
</thead>
</table>

**Lecture Notes**
- Monday, June 29, 2015
- Tuesday, June 30, 2015
- Wednesday, July 1, 2015
- Thursday, July 2, 2015
- Friday, July 3, 2015 - No Class (University Recess)

**Exam Notes**

**Laboratory Schedule**
- Tuesday, May 22, 2015 - No Class
- Wednesday, May 27, 2015
- Thursday, June 11, 2015
- Friday, June 12, 2015
- Tuesday, June 16, 2015

**Final Exam**
- Friday, June 26, 2015

**Final Exam**
- Friday, June 26, 2015

**Final Exam**
- Friday, June 26, 2015
Instructor Contact Information

• Phone
  – 304-293-0915 (NOTE: Text messages do not go through this number)
  – Cell phone number will be provided in class

• Email
  – John.Howard.Penn@gmail.com is fastest
  – John.Penn@mail.wvu.edu is next fastest
  – jpenn@we-learn-horizon.com gets slow service
Chem 231 – Brief Organic Chemistry

• 3 parts of lecture and textbook knowledge
  – Textbook
  – Lecture
    • In-class Participation
  – Homework
  – Exams

• 1 part of laboratory work and knowledge
  – Weekly Quizzes
  – Experiment Reports
  – Laboratory Final Exam
Lecture Materials

- Textbook
- Study Guide
Lecture – 12:30 PM MTWRF

• Textbook
  – *Essential Organic Chemistry by Paula Bruice (2nd Edition)*

• Class Participation
  – Obtain an account from TopHat.com

• Homework
  – Assigned problems from the textbook. Answers can be found in the Study Guide/Solutions Manual

• Exams (see the next slide)
Exam Schedule

- Monday, July 6, 2015 – Room 104 Clark
- Monday, July 13, 2015 – Room 104 Clark
- Monday, July 20, 2015 – Room 104 Clark
- Monday, July 27, 2015 – Room 104 Clark
- Thursday, August 6, 2015 – Room 104 Clark
Exam Grade Determination

- Distribution will be plotted
- Grades will be assigned, hopefully to a Gaussian distribution
- Letter grades will be posted to eCampus.
Class Participation

• Get an account from TopHat.com
  – PLEASE choose an account name such as your MIX name
  – Cost ~$20 (Cost is in Canadian dollars, not USD)
  – TopHat 6 digit code is 251470

• Four (4) class periods will be dropped
  – First class period will be automatically dropped
  – Four (4) questions/class
  – Each question is usually graded on 50% participation and 50% correctness
Laboratory Portion of the Course

• Textbook
  – Laboratory Manual for Organic Chemistry 231
  – Available for sale before and after class
    • Thursday, July 2, 2015
    • Tuesday, July 7, 2015
  – Model set
    • From the bookstore? From friends?
• Safety Goggles, Laboratory Apron

• If you have credit from Chem 235 or from a previous Chem 231 course that can be verified, you do not have to retake the laboratory
Grading of Each Lab Experiment

• Pre-Lab Reports (15 Points)
• Weekly Lab Quiz (10 Points)
• Notebook Evaluation (20 Points)
• Data Report Sheet (50 Points)
• Attendance (on-time?) (5 points)
• Total for each Lab (100 Points)

There are no make-up labs. Attendance at each lab is required.
Lab Grade Determination

• The lowest individual lab grade is dropped.
• Teaching Assistants bring me a list of grades sorted with the final numerical score arranged from high to low
• Letter grades are assigned and breaks in the numerical score are attempted to be made for grade change lines.
• A grade of <50% on the laboratory final may drop your letter grade from the lab.
Final Grade Determination

• The lowest exam letter grade from the first four exams will be dropped from the averaging process.
• Each letter grade will be converted to a numerical score.
• Therefore, 4 exams, 1 lab grade, and 0.5 class participation grade will be averaged
What have I missed?
How many valence electrons does bromine have? Give a number.

Problem 1.5

2015-06-29 Q2

The correct answer is 7. Br is in column 7 on the periodic table.
electronegativity - desire of an atom to gain electrons
electropositivity - desire to get rid of electrons.

\[ \text{H} - \text{C} - \text{C} - \text{H} \quad \text{H} - \text{C} - \text{H} \]

ethane

Covalent bonds (equal sharing)

NaF

NaCl (\(\text{Na}^+ \text{Cl}^-\))

Ionic bonding

Complete unequal sharing

\[ \text{H} - \text{C} - \text{C} - \text{O} - \text{Si} \]

H H

Polar covalent bonding (unequal sharing)

\[ \text{H} - \text{C} - \text{C} - \text{O} - \text{Si} \]

H H