Chemistry 112  
Fall 2023  
Dr. Heather M. Boyd

Email: hbass1@vols.utk.edu

Office Hours: 10 – 11 am MWF and 9:30 – 10:30 am TR in Bu 516  
***or you may email me to schedule a one-on-one appointment for another time***

Lecture: 11:20 am – 12:35 pm TR in AAB 113

Textbook/Online Homework:

- **Textbook/Online Homework:** Bettelheim et al. *Introduction to General, Organic, and Biochemistry, 12th Edition.* OWLv2 online homework systems is **required** for this course. With your purchase of OWLv2 you receive a built-in electronic copy of the aforementioned textbook. This means that you do not need to purchase a hard copy of the textbook unless you wish to. **OWLv2 and the e-text are included with your Inclusive Access purchase.**

Grading

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Exams (3)</td>
<td>45% (15% each)</td>
</tr>
<tr>
<td>Quizzes</td>
<td>15%</td>
</tr>
<tr>
<td>Online Homework</td>
<td>15%</td>
</tr>
<tr>
<td>Participation (Clicker)</td>
<td>5%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20%</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
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**Grading Scale:** These letter grade assignments are subject to change, but only in the direction beneficial to the students.

- 93.0 and above         A   
- 88.0 – 92.9            A-  
- 84.0 – 87.9            B+  
- 80.0 – 83.9            B   
- 76.0 – 79.9            B-  
- 72.0 – 75.9            C+  
- 68.0 – 71.9            C   
- 64.0 – 67.9            C-   
- 60.0 – 63.9            D+   
- 56.0 – 59.9            D   
- 52.0 – 55.9            D-   
- Below 51.9             F
**Participation:** We will have clicker questions during lectures for participation points. You may use a clicker device or you may use the Turning Technology clicker app on your phone. **Clicker questions will start counting towards your participation grade starting Tuesday, September 5th.** Each clicker question will be worth two points. For each correct answer, you will receive ALL two points. For an incorrect answer, you will receive one point. If you earn half of the day’s points, then you will receive full participation for the day.

***If you miss a lecture due to illness or personal emergency then you can receive participation credit by submitting a written, verifiable excuse to me. I must receive this excuse within a week of your absence or you will not receive credit for the absence.***

**Clicker Registration:** You will need to register your license and clicker app with PointSolutions (Echo 360). You will also need to register your app/device on Canvas. Please use the link on Canvas under the module labeled “Clickers” to complete this registration process. If you registered your license and clicker app with PointSolutions AND Canvas before then you do not need to re-register your device this semester.

**Homework:** We will be using OWLv2 electronic homework systems. Homework can be accessed on Canvas under “Modules” “OWLv2 Homework and Access” “Homework_CHEM112_Boyd_Fall 2023.” Due dates for ALL assignments can be found in the exam, quiz, and homework calendar that is posted on Canvas under the “Getting Started” module, as well as on the course calendar on Canvas. Each homework set is comprised of a set of mastery assignments with three questions apiece. **You just need to answer 2 of the 3 mastery questions correctly in order to master a group. For each mastery group, you get 10 attempts.** Late homework is not accepted unless it is due to an extenuating circumstance and proper documentation is provided.

**Quizzes:** There will be five online quizzes that you will access through OWLv2. You will be able to access these quizzes from 9 am to 9 pm on the day that the quiz is available (see “Homework, Quiz, Exam Calendar_CHEM112_Fall 2023” on Canvas under “Modules” “Getting Started” or the course calendar on Canvas). The quizzes will be timed at 20 minutes and will be comprised of five questions worth 5 pts each. Your lowest quiz grade will be dropped at the end of the semester.

**Exams:** There will be three (3) 90-minute exams and one (1) 2-hour final exam. The first 3 exams will be given on the selected days (see below) from 7:00 – 8:30 pm, while the final exam will be given during the allotted final exam period. If you are ill or have some sort of emergency then you will be able to make up a missed, excused exam (I must be provided with documentation) on Thursday of the same week at a scheduled time. **All exams including the final will be taken in-person. Locations are TBA.** Every student is required to take the cumulative final exam at the end of the term during the scheduled exam period. If the final exam is missed, then that student will receive an incomplete in the course.

<table>
<thead>
<tr>
<th>Exam</th>
<th>Date</th>
<th>Time</th>
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<tbody>
<tr>
<td>Exam 1</td>
<td>Tuesday, September 26th</td>
<td>7:00 – 8:30 pm</td>
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<tr>
<td>Exam 2</td>
<td>Tuesday, October 24th</td>
<td>7:00 – 8:30 pm</td>
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<tr>
<td>Exam 3</td>
<td>Tuesday, November 14th</td>
<td>7:00 – 8:30 pm</td>
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<tr>
<td>Final Exam</td>
<td>Monday, December 11th</td>
<td>1:00 – 3:00 pm</td>
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**If the final exam is a higher grade than the lowest exam grade then the final exam grade will replace the lowest exam grade as long as all 3 regular exams are taken.**
Regrades: Requests for regrades must be received by me within one week of the exam return date. You must fill out the regrade request form and email it to me. Requests for regrades will result in a regrade of the ENTIRE exam. Regrading will be conducted only by the INSTRUCTOR.

Calculator policy: Calculators are NOT allowed on exams.

Student Disabilities: The University of Tennessee, Knoxville, is committed to providing an inclusive learning environment for all students. If you anticipate or experience a barrier in this course due to a chronic health condition, a learning, hearing, neurological, mental health, vision, physical, or other kind of disability, or a temporary injury, you are encouraged to contact Student Disability Services (SDS) at 865-974-6087 or sds@utk.edu. An SDS Coordinator will meet with you to develop a plan to ensure you have equitable access to this course. If you are already registered with SDS, please contact me (the instructor) to discuss implementing accommodations included in your course access letter.

Academic Honesty: The Honor Statement as printed in Hilltopics encourages each student to make a personal commitment to academic integrity.

***Cheating will not be tolerated. Cheating on an exam will result in a 0 on that exam and you will forfeit having your final replace your lowest exam grade. Cheating on the final exam will result in an F in the class regardless of your standing. Any instance of cheating will also result in that person being written up to Student Conduct.***

Generative AI Tools: In this course, it is expected that all submitted work is produced by the students themselves. Students must not seek the assistance of Generative AI Tools like ChatGPT. Use of a Generative AI Tool to complete an assignment constitutes academic dishonesty.

Extra Help: Two resources that the University of Tennessee offers are the Chemistry Learning Center (Buehler Hall 513) and the Student Success Center. The Chemistry Learning Center is free to all students and is staffed by TAs from Monday to Friday. A Supplemental Instruction (SI) component is provided free for all students who want to improve their understanding of the material taught in this course. A student who has already mastered the course and who has been trained to facilitate group sessions serves as the SI leader. For information about the program, session schedule/updates, and additional office hour times visit http://studentsuccess.utk.edu/

Communication: ALL course material and announcements will be posted on Canvas. This means you should check Canvas on a daily basis. If Canvas does not answer a particular question, then you may your TA or me.

Emails: In the subject line of your emails, please write CHEM112. All emails will be answered within 24 hours of being received.

The instructor reserves the right to make changes in the syllabus when necessary to meet learning objectives, to compensate for missed classes, or for similar reasons. Any changes made will be announced during class.
<table>
<thead>
<tr>
<th>Week</th>
<th>Lecture/Exams</th>
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| August 21 – August 25| (T) *No Classes*  
(R) Class Intro/Chapter 10: Organic Chemistry |
| August 28 – September 1| (T) Chapter 10: Organic Chemistry  
(R) Chapter 11: Alkanes |
| September 4 – September 8| (T) Chapter 11: Alkanes  
(R) Chapter 11: Alkanes |
| September 11 – September 15| (T) Chapter 12: Alkenes and Alkynes  
(R) Chapter 12: Alkenes and Alkynes |
| September 18 – September 22| (T) Chapter 13: Benzene and Its Derivatives  
(R) Chapter 13: Benzene and Its Derivatives |
| September 25 – September 29| (T) In-Class Exam 1 Review  
(T) **EXAM 1**  
(R) Chapter 14: Alcohols, Ethers, and Thiols |
| October 2 – October 6| (T) Chapter 14: Alcohols, Ethers, and Thiols  
(R) Chapter 15: Chirality |
| October 9 – October 13| (T) **Fall Break – No Classes**  
(R) Chapter 15: Chirality |
| October 16 – October 20| (T) Chapter 16: Amines  
(R) Chapter 17: Aldehydes and Ketones |
| October 23 – October 27| (T) In-Class Exam 2 Review  
(T) **EXAM 2**  
(R) Chapter 17: Aldehydes and Ketones |
| October 30 – November 3| (T) Chapter 18: Carboxylic Acids  
(R) Chapter 18: Carboxylic Acids |
| November 6 – November 10| (T) Chapter 19: Carboxylic Anhydrides, Esters, and Amides  
(R) Chapter 19: Carboxylic Anhydrides, Esters, and Amides |
| November 13 – November 17| (T) In-Class Exam 3 Review  
(T) **EXAM 3**  
(R) Chapter 20: Carbohydrates |
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<tr>
<th>Date Range</th>
<th>Topic</th>
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<tr>
<td>November 20 – 24</td>
<td>(T) Chapter 20: Carbohydrates (R) Thanksgiving Break – No Classes</td>
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<tr>
<td>Dec. 4 – Dec. 8</td>
<td>(T) In-Class Final Exam Review (R) Study Day – No Classes</td>
</tr>
<tr>
<td>Dec. 11 – Dec. 15</td>
<td>(M) FINAL EXAM</td>
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**Learning Objectives for Chemistry 112:**

1. Be introduced to organic chemistry and understand what organic chemistry encompasses.
2. Learn how to identify and name different functional groups on organic compounds, as well as learn the IUPAC system for naming organic compounds.
4. Learn the basics of biochemistry.
5. Be able to identify and name monosaccharides and oxidation reactions of saccharides.
6. Learn how to classify lipids based on structures and properties.
7. Identify and name amino acids. Understand the properties and characteristics of amino acids.
8. Understand the structure of proteins and the role that amino acids play in proteins.
9. Learn how to study and not just memorize material, but instead be able to apply it and gain a sound understanding of the material.