SURVEY OF CHEMISTRY II
CHEM 1152
SPRING 2019

Instructor: Dr. Donald White  Phone: 770-301-9648  e-mail: dwhite@westga.edu
Lectures:  MW, 5:30pm – 6:50pm
Lab: M, 7-8:50pm
Office Hours:  by appointment


Purpose

This is the second course in a two-semester sequence covering the elementary principles of general, organic and biochemistry for allied health professions and non-science major students. This is the continuation of CHEM1151 in the areas of organic chemistry and biochemistry. Students must have earned a C or higher in CHEM 1151 to attend CHEM 1152, they will be withdrawn from the class if they have not passed CHEM 1151 (or equivalent). This course includes organic structures and functional groups, the chemistry of carbohydrates, lipids, proteins, enzymes, hormones and nucleic acids. A good knowledge of general chemistry (CHEM1151) is assumed.

Under the studio format, the class meets for 1 hour and 20 minutes 2 days per week and workshops will meet an additional 2 hours per week. Laboratory activities will include qualitative and quantitative experiments.

On each examination (closed book), you are supposed to be able to answer questions concerning topics studied previously. Everything that has been taught since the beginning of the class is supposed to be known at any point of time. There will be 4 examinations during the semester plus the final one, which is an American Chemical Society standardized examination. Daily in class quizzes will be given. No make-up quizzes will be given. If you miss an examination, the grade obtained on the final examination will replace the missing grade, if you miss two examinations, the grade obtained on the final examination will replace both of them, etc…

Learning outcomes

Students who complete this course are expected to develop:
• an understanding of the basic concepts covered in the text content,
• an awareness of the role of organic and biochemistry in everyday life,
• a basic comprehension of some applications of organic and biochemistry to the human body,
• the ability to conduct basic experiments related to the course.
Chapters to be covered

- Chapter 12: Introduction to organic chemistry and alkanes.
- Chapter 13: Alcohols, phenols, thiols and ethers.
- Chapter 14: Aldehydes, ketones and chiral molecules.
- Chapter 15: Carbohydrates.
- Chapter 16: Carboxylic acids and esters.
- Chapter 17: Lipids.
- Chapter 18: Amines and amides.
- Chapter 19: Amino acids and proteins.
- Chapter 20: Enzymes, Vitamins.
- Chapter 21: Nucleic acids and protein synthesis.
- Chapter 22: Metabolic pathways for carbohydrates.
- Chapter 23: Metabolism and energy production.
- Chapter 24: Metabolic pathways for lipids and amino acids.

Schedule for the examinations

Examination 1: Wednesday January 30th, Chapters 12 – 14.
Examination 2: Wednesday, February 20th, Chapters 12 – 16.
Examination 3: Wednesday, March 13th, Chapters 12 – 19.
Examination 4: Wednesday, April 24th, Chapters 12-24.
Final Examination: Monday May 6th, 5:30 - 7:30 pm: ACS Exam.

Every exam will cover material seen in class starting from the first day of class. It will follow the order of the material seen in class and workshop. You will be given one hour to complete the exam and no exam will be dropped. No makeup exam will be given. If you miss a test for any reason (illness, death in the family, bad weather conditions, legal events, car problem and so on…), the test score of the exam you missed will be replaced by the score you obtained on the final exam. There will be no exception to this policy. If you happen to miss more than one exam, the final exam score will replace the grade of each exam you missed (for instance, if you missed two exams, the final score will be counted 3 times). Exam will be multiple choice questions only. Please arrive on time, as no extra time will be given if you arrive late.

If there is a conflict with the final examination time, you must provide me the written authorization from the Dean of Arts & Sciences to move your final examination time. This note should be delivered to me at least two weeks prior to the scheduled final examination time. Grades for the examinations will be posted online in a timely manner. Check the course website on a regular basis, as everything posted on it at any time is supposed to be known. For fastest response from me, email dwhite@westga.edu.

SEMESTER GRADES

Grading:  
Workshop  10%
Quizzes  15%
Homework 15%
Exams  60%
Note: All exam, quiz and lab activity grades will be based on your ability to demonstrate full understanding of the material (with full credit given only if you show all of your work, not just for obtaining the correct answer).

<table>
<thead>
<tr>
<th>Course %</th>
<th>Letter Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>90% - 100%</td>
<td>A</td>
</tr>
<tr>
<td>80% - 89%</td>
<td>B</td>
</tr>
<tr>
<td>70% - 79%</td>
<td>C</td>
</tr>
<tr>
<td>60% - 69%</td>
<td>D</td>
</tr>
<tr>
<td>0% - 59%</td>
<td>F</td>
</tr>
</tbody>
</table>

**How to Study Chemistry**

You should start by familiarizing yourself with the textbook. Read the author’s preface to see what is included in the text and what other resources are available for help. Look at the appendices to see what information is contained there for later use.

You should prepare for lecture by skimming ahead in your textbook. You may not understand all the material, but it will familiarize you with new terms and equations and by doing this lecture will become much more beneficial.

As soon as possible after lecture you should review your lecture notes and read the portion of the textbook covered in lecture. While reading the chapter, work the in-chapter problems. Only continue reading when you completely understand the problems. Chemistry builds on itself and if you do not understand a topic now it will only make later topics more difficult. In addition, this chemistry course sets the foundation for later chemistry courses, if you do not learn the material now it will make later courses much more difficult.

When you have completed the portion of the chapter covered by lecture proceed to work the online homework problems immediately. These problems are an excellent barometer to determine whether you understand the material. Treat the homework problems as if they are test questions and do not look elsewhere for help. If you can work the problems without looking anywhere for help then you know and understand the material. If you cannot do the problem without help then you need to stop doing homework and reread the pertinent area of the textbook and lecture notes until you are ready to try the problem again. You will learn more by sticking with a problem to finally solve it then by looking for the solution. Chemistry is best learned by doing, so work as many additional problems as you can.

You must keep up. This course will move quickly and if you are not studying daily then you will find it to be quite difficult. While it will be necessary to memorize some information like equations and formulas, memorization without understanding is useless. You must learn how and when to use equations to be successful. Also, because of the volume of information you will see, you will not find success by “cramming.” If you do not start studying until the week of the test I guarantee you will not be successful. You may also find study groups to be helpful. When you teach and explain topics to your fellow students you will find that you learn those topics even better.
Finally, do not hesitate to set up an appointment with me. We can in person or virtually via Google Hangout. I can also arrange you to meet with other chemistry professors during their office hours.

University Policies

Please refer to the following for academic support, the honor code, email policy, credit hour policy and HB 280 campus carry policy:

https://www.westga.edu/administration/vpaa/common-language-course-syllabi.php