

# ***CHEM 1211 Principles of Chemistry I Fall 2019***

## ***Instructor***

Dr. Sharmistha Basu-Dutt

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Phone: (678) 839-6018

Instructor Office hours:

M, T, W, R 9 – 10 am

T, R 1 – 3 pm

Supplemental Instructor (SI):

Lexus Butler [lbutler4@my.westga.edu](mailto:lbutler4@my.westga.edu)

SI Session: M 9:30 – 10:30 am, W 2 – 3 pm SI Office hours: W 4:30 – 5:30 pm

## ***Purpose***

This is the first course in a two-semester sequence covering the fundamental principles and applications of chemistry for science majors. The course satisfies Core Requirement in Area D. The “**flipped**” **classroom** model will be used in lecture to promote active student learning as well as logical thinking and analytical reasoning in problem solving.

## ***Textbook***

*Chemistry: Structure and Properties* by Nivaldo J. Tro, 2<sup>nd</sup> edition, Pearson is required. Students Solutions Manual accompanying textbook is optional.

## ***Learning Outcomes***

Students will:

- acquire a basic understanding of
  - the structure and properties of matter,
  - modern atomic structure and properties,
  - chemical bonding,
  - types of chemical reactions,
  - stoichiometry,
  - thermochemistry,
  - gas properties.
  
- apply scientific reasoning and methods of inquiry to explain natural phenomena.

## ***Course Policies and Guidelines***

- The class meets on Mondays and Wednesdays from 12:30 – 1:45 pm in TLC 2105.
- Behave **professionally** - your behavior/attitude impacts the classroom learning environment.
  - Come to class on time, and do not leave early.
  - Remember to fill your water bottle or use the restroom before class.
  - Bring your textbook, calculator, notebook, pencil/pen – we will use all of them in class regularly. You cannot share these.
  - Cell phones, laptops and other electronic devices are NOT allowed during class.
  - Book bags and/or purses must be placed on the floor.
- Course materials including the syllabus, class-notes, sample exams, and take-home quizzes (graded) are available through Course Den. A hard copy of the syllabus will be distributed on the first day of class. You will be responsible to print all other course materials.
- No make up exams will be given. In case of an illness or a dire emergency, the instructor must be contacted prior to the examination in-person, via phone or email. Accommodations for missed exams will be handled depending on the severity of the situation between the student and the instructor.
- Refer to the student handbook for information on academic support, honor code, email policy, credit hour policy and HB 280 campus carry policy [https://www.westga.edu/administration/vpaa/assets/docs/faculty-resources/common\\_language\\_for\\_course\\_syllabi\\_v2.pdf](https://www.westga.edu/administration/vpaa/assets/docs/faculty-resources/common_language_for_course_syllabi_v2.pdf)

## ***Examinations and Grades***

There are ten take-home quizzes worth 105 points. I will announce the schedule for quiz submission – typically multiple quizzes (covering content for an exam) will be due at the start of each exam. Collaborative work is allowed on the quizzes and you can check your answers with peers or me before submission. Remember to print a copy of the quiz and turn in a hard copy for a grade.

There will be one project for inclusion in the Honors e-portfolio worth 40 points.

There will be four examinations and a comprehensive final examination during the semester. Each examination will be closed book and notes. You will need to bring a calculator to the tests. If necessary, I will provide the scantron sheets, periodic charts and conversion tables. The final will be a standardized exam from the American Chemical Society.

All exam and quiz grades will be based on your ability to DEMONSTRATE full understanding of the material. Full credit will only be given if you SHOW ALL YOUR WORK, not just for obtaining the correct answer. Your grade will be calculated based on the following components:

Take home quizzes	105 points
Project	45 points
In-class exams (4 @ 100 points each)	400 points
Final (Comprehensive)	100 points
<b>TOTAL</b>	<b>650 points</b>

Grading scale: 90% : A; 80 – 89% : B; 70 – 79% : C; 60 – 69% : D; < 60% : F

*If your grades are borderline, your attitude and effort during class/SI sessions/office hours will be factored into the final grade.*

### *Tentative Schedule for the Course*

<b>WEEK</b>	<b>Monday</b>	<b>Wednesday</b>
1		August 14 – Chapter E
2	August 19 – Chapter E, 1	August 21 – Chapter 1
3	August 26 – Chapter 2	August 28 – Chapter 2
4	<i>Sept 2 – No class</i>	Sept 4 – Chapter 2
5	<b>Sept 9 – EXAM 1</b>	September 11 – Chapter 3
6	September 16 – Chapter 3	September 18 – Chapter 4
7	September 23 – Chapter 4	September 25 – Chapter 5
8	September 30 – Chapter 5	<b>October 2 – EXAM 2</b>
9	October 7 – Chapter 6	October 9 – Chapter 7  <i>(Last day to withdraw with a W)</i>
10	October 14 – Chapter 7	October 16 – Chapter 7
11	October 21 – Chapter 8	October 23 – Chapter 8
12	October 28– Chapter 8	<b>October 30 – EXAM 3</b>
13	November 4 – Chapter 10	November 6 – Chapter 10
14	November 11 – Chapter 10	November 13 – Chapter 9
15	November 18 – Chapter 9	November 20 – Chapter 9
16	<i>November 25– No class</i>	<i>November 27 – No class</i>
17	December 2 – Chapter 9	<b>December 4 – EXAM 4</b>
18	<b>December 9 – ACS Final</b>  <b>11:00 am – 1:00 pm</b>	

Homework is not graded but highly recommended for practice and mastery of content.

**Chapter E** – 21, 23, 29, 31, 33, 37, 41, 43, 45, 47, 49, 53, 57, 59, 65, 67, 71, 73, 75, 79

**Chapter 1** – 35, 37, 39, 41, 45, 47, 49, 51, 53, 55, 67, 69, 71, 73, 77, 79, 81, 85, 91, 93

**Chapter 2** – 35, 39, 41, 43, 45, 51, 55, 57, 59, 61, 63, 65, 67, 69, 71

**Chapter 3** – 41, 43, 45, 47, 49, 51, 55, 57, 59, 61, 63, 67, 73, 75, 77, 79, 81, 83, 87, 89

**Chapter 4** – 29, 31, 35, 39, 43, 45, 49, 55, 59, 65, 69, 77, 81, 85, 87, 89, 93, 95, 97, 101, 103, 105, 107, 109, 111

**Chapter 5** – 23, 27, 29, 31, 35, 37, 41, 43, 45, 47, 49, 51, 57, 59, 61, 63, 67, 69, 71, 73

**Chapter 6** – NO HOMEWORK

**Chapter 7** – 15, 17, 19, 21, 23, 27, 29, 33, 35, 39, 41, 43, 47, 51, 55, 57, 59, 61, 65, 67

**Chapter 8** – 21, 23, 25, 27, 29, 31, 33, 35, 37, 41, 45, 47, 49, 51, 53, 59, 61, 63, 65, 67, 69, 71, 73, 75, 77

**Chapter 9** – 35, 37, 41, 43, 45, 49, 53, 55, 57, 59, 61, 63, 65, 67, 69, 71, 73, 75, 77, 79, 83, 87, 89, 91, 93

**Chapter 10** – 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, 59, 61, 63, 65, 67, 69, 71, 73, 75, 77, 79, 81, 83, 85, 87, 89