

# CHEMISTRY II

## Syllabus

James Clemens High School  
11306 County Line Road  
Madison, AL 35756



Teacher: Emily Harris  
Email: elharris@madisoncity.k12.al.us  
Phone: 256-216-5313

**I. Course Description:** This course focuses on organic chemistry with an emphasis on the IUPAC naming system, organic reactions, and extensive laboratory investigations. The relevance of organic chemistry to everyday life will be explored. This course may also cover solutions, reaction rates, acids and bases, and nuclear chemistry as time permits.

**II. Course Objectives:** Students will:

- work in the laboratory and discuss findings through formal written reports
- utilize scientific inquiry both in the laboratory and in classroom activities
- identify members of each organic family by chemical structure and functional group
- cite examples of common substances from each family and recognize their uses in everyday life
- show proficiency in the use of IUPAC nomenclature for each organic family
- demonstrate an understanding of common organic reactions (i.e. dehydration, hydrogenation, halogenation, hydration, fermentation, saponification, and esterification)
- identify required catalysts for common organic reactions
- use qualitative analysis to identify unknown solids and liquids

*\* As an advanced science course, inquiry or project-based learning will be incorporated.*

**III. Classroom Expectations:**

1. **BE ON TIME.** Tardy means that you are not totally in the room when the bell rings. JCHS policy governs the consequences for tardiness.
2. **BE RESPECTFUL:** Practice courtesy and mutual respect. Treat others as you would like to be treated. The classroom and laboratory is to be regarded as a safe and supportive learning environment.
3. **BE PREPARED:** Mentally focused on reaching your goals and following class expectations; and physically bringing proper materials EVERY DAY.
4. **BE RESOURCEFUL:** Thoroughly review assignments, videos, textbooks, and notes to answer questions before asking me.

### Accommodations:

Requests for accommodations for this course or any school event are welcomed from students and parents.

### Concerning laptop utilization:

1. Student laptops should not be hard wired to the network or have print capabilities.
2. Use of discs, flash drives, jump drives, or other USB devices will not be allowed on Madison City computers.
3. Neither the teacher, nor the school is responsible for broken, stolen, or lost laptops.
4. Laptops and other electronic devices will be used at the discretion of the teacher.

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- IV. Grading Policy:** Test grades will account for 70% of the 9-weeks grade, with the remaining 30% being determined by quiz/daily grades. Tests will include written exams, lab evaluations, projects, other assessments. The grading scale is as follows: A (90-100), B (80-89), C (70-79), D (65-69), and F (below 65). Grades will be a reflection of mastery of the standards. Make sure all absences are excused as class work can be made up and graded for excused absences only. The Final Exam counts for 1/5 of final grade.
- V. Make-up Test Policy:** Make-up tests are only allowed for excused absences. Make-up test times are MONDAYS during REFUEL from 11:20-12:20 in Room A110. A student has two chances to make up a test. In order to provide adequate test time and maintain test integrity, students are responsible for **arriving no later than 11:30 AM** to begin a make-up test.
- VI. Text and Other Required Reading:** **Chemistry for Today: General, Organic, and Biochemistry** 6<sup>th</sup> Edition, Brooks and Cole, 2008  
**Fundamentals of General, Organic, and Biological Chemistry** 8<sup>th</sup> Edition, McMurray, Ballantine, Hoeger, and Peterson, 2016
- VII. Materials and Supplies Needed:**
- **3-RING BINDER (at least 1") dedicated for this class only**
  - loose-leaf, college-ruled paper (I'll provide graph paper.)
  - pencils
  - black or blue pen
  - at least one highlighter
  - **SCIENTIFIC CALCULATOR** – extremely important! (a graphing calculator may also be used if a student already has one)
  - Roll of paper towels (for lab)
  - **Different than Chem I: You will need your own set of gloves. You may either purchase a box of nitrile gloves (found in any pharmacy section of grocery stores) or you may get a re-usable set of dishwashing gloves.**
  - hand sanitizer (optional, but very much appreciated!! 😊)

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# 18 Week Plan: Chemistry II

|     |                                                                       |
|-----|-----------------------------------------------------------------------|
| 1   | Lab Safety, Matter & Measurements Review                              |
| 2-3 | Solutions, Colloids, Chemical Equilibrium                             |
| 3-4 | Acids, Bases and Salts                                                |
| 5   | Intro to Organic Chemistry Functional Groups & Saturated Hydrocarbons |
| 6   | Unsaturated Hydrocarbons                                              |
| 7   | Alcohols, Phenols, Ethers                                             |
| 8   | Research Project                                                      |
| 9   | Aldehydes and Ketones                                                 |
| 10  | Carboxylic Acids and Esters                                           |
| 11  | Amines and Amides                                                     |
| 12  | Polymers                                                              |
| 13  | Biochemistry                                                          |
| 14  | Biochemistry                                                          |
| 15  | Nutrition                                                             |
| 16  | Special Topics: Qualitative Analysis Solids                           |
| 17  | Special Topics: Nuclear Chemistry and Nuclear Processes               |
| 18  | Final Exams                                                           |

\* The syllabus serves as a guide for both the teacher and student; however, during the term it may become necessary to make additions, deletions, or substitutions. Adequate notice will be provided to students of any necessary changes.