



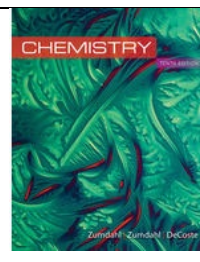
## COURSE SYLLABUS

### AP Chemistry 2022-2023 School Year Saint Paul Diocesan Jr/Sr High School

**Instructor:** Mr. Thomas Ronan Jr., AP Chemistry & Biotechnology  
**Lecture Location:** Pham Biotechnology Lab, 3<sup>rd</sup> Floor  
**Office Hours:** Daily 2-2:30pm, Pham Lab  
*alternatively, by appointment*  
**E-mail:** [tronan@saintpaulknights.org](mailto:tronan@saintpaulknights.org)  
**Schoology Code:** **BFQ4-X5TM-MMKV2**

#### Materials Required:

- Chemistry - AP Edition, Zumdahl, Zumdahl, DeCoste, 9th or 10th  
ISBN: 978-1-305-95773-2 (10th) or 978-1-133-61110-3 (9th)
- Student Lab Notebook Chemistry ISBN: 978-1-930882-23-2
- Notebook / Binder for loose materials and handouts.
- [Lab Notebook Link](#)
- **CALCULATOR**, Ruler, Pens, Pencils, Graph Paper
- Used or New copies of the text are totally fine.



#### Course Description:

The purpose of this College Board Advanced Placement Chemistry course is to engage students in collegiate level coursework and encourage the development of a broad and sophisticated understanding of Chemistry, and the skills necessary to succeed on the AP Chemistry exam. Coursework involves a depth of understanding of fundamentals and a reasonable competence in dealing with chemistry problems with an emphasis on chemical calculations and the mathematical formulation of principles, and on intensive hands-on laboratory work done by students. Lab reports and problem solving using dimensional analysis are stressed throughout the program. Topics of study include: chemical elements, chemical and physical properties of materials, changes in matter, rates of chemical reactions, laws of thermodynamics, chemical bonds and intermolecular attraction. Students enrolled in this course are required to take the AP Chemistry exam at the end of the academic year. Prerequisites include the recommendation of the student's most recent science teacher and department chair approval.

#### Instructional Methodology:

The use of the Internet, Microsoft Meets and Zoom, Schoology, Saint Paul Knights email and Student Facts LMS through Renweb is required for this course. There are assigned weekly discussions and readings from the textbook and lab manual, and a variety of self-directed online activities to help deepen understanding of course topics. Additionally, an



*emphasis is placed on classroom active learning strategies, laboratory skills practice with collaboration, and online participation, communication and teamwork.* Students are encouraged to ask questions during in-person and remote classes and to actively participate during both platforms.

#### **Classroom Rules:**

RESPECT YOUR TEACHER, RESPECT YOUR CLASSMATES, and RESPECT YOURSELF!

This means all of the following:

- Be in your seat when the bell rings at the beginning of class. **TARDINESS WILL NOT BE ACCEPTED.** Expect to receive an infraction if you are late without a pass or have prior permission.
- Raise your hand and wait to be called on before asking or answering a question. Refrain from talking when others are talking.
- Please come to class prepared to participate. **YOU SHOULD BRING ALL REQUIRED MATERIALS TO ALL CLASSES.** Lab Notebook, Binder, Writing Utensil etc....
- If you are absent on the day of a scheduled test or quiz, and it is an **excused** absence then **YOU MUST MAKE IT UP ON THE FIRST OR SECOND DAY THAT YOU RETURN** unless the schedule cannot be accommodated. **If your absence is unexcused then you will receive a zero.**
- All laboratory experiments must be completed in your **Student Lab Notebook**. If you are absent on the day of a lab it **MUST** be made up as soon as possible. AP Chemistry is a very lab heavy class.

**Detentions:** This is an AP Course and detentions will be assigned if you are not following the classroom rules. (**including tardiness, missing homework, etc.** ) Detentions will be held on Mondays immediately after school.

#### **Summer Assignment:**

The Summer Assignment will be due on Tuesday September 7<sup>th</sup> during class. It will be on material covered in Honors Chemistry and include Chapters 1, 2, 3, 5 and a small portion of Chapter 10.

#### **Grading Policy:**

Your grade each quarter will be allocated as follows:

<b>PART A:</b>	Tests	40%
	Quizzes/ Homework, Class Participation	25%
	Laboratory Reports/Special Projects	35%

#### **PART B:**

- Grading will be done on a total point basis and above items will be used to assess your learning progress. Each of the above items will be assigned a number of points and of course it will vary based upon the number of questions on the exams or the complexity of the laboratory write up. Your grade will be a fraction equal to: **GRADE = Number of points EARNED / Number of points POSSIBLE.**



## PART B

- Homework must be COMPLETE and will be evaluated as missing, complete, or partial. At the end of each quarter the number of homework assignments missing will be tallied and the appropriate number of points will be subtracted from your homework grade. If you do all homework, then you will receive ALL AVAILABLE POINTS.
- Late HOMEWORK will not be accepted unless communication ahead of time is established.
- Expect to serve a detention if you miss more than 1 homework assignment per quarter.
- Class participation includes work completed during group time, appropriate interaction during lessons and remotely, and general attentiveness.

### Lab Safety:

- As with any lab based course **safety is paramount!**
- Horseplay and failure to abide by all class and OSHA safety guidelines will result in a zero and a written referral to the school disciplinary dean.
- During Formal Labs all safety equipment including: GOGGLES, MASKS, GLOVES and LAB APRONS must be worn as per OSHA Guidelines.

### Course Objectives:

This AP Chemistry course is designed to be rigorous and will mimic a general chemistry course typically taken during the first year of college. All students in this class will have taken a general high school chemistry class prior to enrolling in the AP Chemistry Course. This course is structured around the 6 Big Ideas and 177 Learning Objectives of the AP Chemistry Framework.

Big Idea 1: All matter is composed of Atoms.

Big Idea 2: Chemical bonding and intermolecular forces explain the chemical and physical properties of matter.

Big Idea 3: Chemical reactions involve the rearrangement of atoms and describe how matter changes.

Big Idea 4: Molecular collisions determine the rates of chemical reactions.

Big Idea 5: Thermodynamics describes the role energy plays in both physical and chemical changes.

Big Idea 6: Equilibrium represents a balance between enthalpy and entropy for reversible physical and chemical changes.

### Students will:

- Learn how to conduct a scientific investigation by conducting background research and carrying out scientific experiments in accordance with the scientific method.
- Apply mathematical skills to solving a variety of problems involving stoichiometry of reactions, gas laws, kinetics, solution chemistry, and thermodynamics.
- Use laboratory equipment including Vernier probes and software.
- Gain an understanding of the six big ideas in the AP Chemistry Curriculum Framework.

**A WORD OF ADVICE:** This is an AP Class. Form a study group with your classmates. Read the textbook and look at the example problems. Do ALL the homework and study every day. Don't fall behind! A significant effort on your part will be required to get a 4 on the Chemistry AP exam. It is not a gift given to you on exam day.