

**Governor's School for Science and Technology
Advanced Chemical Analysis 2022-2023**

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Classroom and Office: Room A-69
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Course Information:

A. Text:

Chemistry, 9th edition, Zumdahl & Zumdahl (2014).

B. Grading Scale: A: 90-100% B: 80-89% C: 70-79% D: 60-69% F: <60%

C. Types of Evaluation:

- Tests: Each test will cover material from lectures, problem sets, text reading and laboratory experiments. Corrected tests will be returned to students to review in class but they will remain on file with the instructor.
- Quizzes: Periodically quizzes will be given to check for understanding of the content covered.
- Laboratory work: The lab is used to reinforce concepts studied in lecture and give some practical experience in laboratory work and data treatment. For each day that a lab report is turned in late, the student will receive a 10% grade reduction. Lab assignments will not be accepted once the reports have been graded and returned to the class.
- Problems Sets: A problem set contains problems for an entire chapter. In order to be successful, the student should work problems nightly. Utilize free time to ask questions about particular problems before their due date. Problem sets are not accepted late.

D. Grade Determination:

Each Quarter: 60% Tests/Quizzes 40% Labs/Problem Sets

E. Academic Integrity Guidelines:

No form of cheating, copying or plagiarizing will be tolerated. Graded homework assignments and lab reports should not be copied. Students will share the lab data within their lab group - lab reporting, research and written assignments are independent. Lab reports are not group work. The level of collaboration will be indicated on each assignment. There will be no determination of who is the "copier" versus the "copy-ee" and all involved individuals will receive the loss in points. Research information that is not referenced properly with the source appropriately cited will not be accepted.

F. Make-up Work:

- There is no way to duplicate the learning that went on in the classroom when a student is absent. The student will discover that a significant amount of material is covered each day and will quickly fall behind if class is missed.
- Students are responsible for requesting all make-up work due to an absence.
- If the absence occurs the day something is due, the student will turn in the assignment on-time by email or the student is subject to the late penalty.
- In the event that a test is missed, the student will take the make-up test on the day of their return to school.
- Missed quizzes will be taken during the next class meeting.
- In most cases, if a lab is missed, the student will use data from the instructor.

G. Laboratory Procedures:

The ability to observe, collect, tabulate and graph data, and draw meaningful conclusions is all part of the laboratory experience and is vital to a science class. Every student must get involved in real laboratory situations in order to understand the underlying principles of science. Because of the importance of experimentation, certain rules and guidelines must be followed. Students must complete and return the Safety Contract to be eligible to participate in any laboratory activity.

Laboratory procedures and descriptions will be provided to students in advance of the lab for the express purpose of reading and understanding the full procedure and objective of the lab prior to entering the laboratory setting.

Students may share the lab data collected within their group however lab reporting, research and written assignments are independent. Lab reports are not group work.

Note about Dual Enrollment with VPCC:

While the Governor's School for Science and Technology (GSST) will do all in its power to secure dual enrollment (DE) status for its courses, dual enrolled course credits are not guaranteed. Since the Virginia Community College System (VCCS) and Virginia Peninsula Community College (VPCC) set the criteria for DE and must approve each course and instructor, unavoidable circumstances that are not within the control of GSST may change the DE eligibility of any given GSST course. Alternative pathways for meeting specialty program requirements (E.g. concurrent Associates Degree) should be discussed in advance with the home high school counselor.

The decision to dual-enroll in a course requires careful consideration. You have options, as you can see from the [DE module](#) on Faculty Advising Canvas course. You may wish to contact your top choice colleges to ask what the impact of taking a dual-enrollment course might be for your goals. Please be aware that you are generating a permanent college transcript with all the courses for which you are dual-enrolled. You can also use the dual-enrollment student guide from [Transfer Virginia](#) to help you determine the potential impact.

If you choose to dual-enroll, you must monitor your course grade. If you find you are not earning grades you want to have on your permanent college transcript, you may consider dropping the dual-enrollment portion prior to the Add/Drop date for the term of the course, or to withdraw from the dual-enrollment portion prior to the Withdrawal date. If you choose to withdraw from dual enrollment for the class, you will still earn high school credit and can plan to be well-prepared for the class in college. Dropping will have no record on your transcript, while withdrawal will leave a note on your college transcript indicating you withdrew, but no grade will be recorded on your college transcript. You can request a decline or withdrawal form from me.

No matter what you choose to do, I will respect your wishes. I want to work with you to support your learning, but I cannot learn the information for you; you will have to invest effort in the course in order to succeed. This may require you to learn new learning strategies that you haven't used in the past. I will do my utmost to support your personal learning in the class and encourage you to pursue your goals.

 [Grade Change Appeals Process.pdf](#)

Outline of the Course**1st Semester:**

Chapter 1: Chemical Foundations
Chapter 2: Atoms, Molecules, and Ions
Chapter 3: Stoichiometry
Chapter 4: Types of Chemical Reactions and Solution Stoichiometry
Chapter 5: Gases
Chapter 6: Thermochemistry
Chapter 7: Atomic Structure and Periodicity
Chapter 8: Bonding: General Concepts
Chapter 9: Covalent Bonding: Orbitals
Chapter 10: Liquids and Solids
Chapter 11: Properties of Solutions

2nd Semester:

Chapter 12: Chemical Kinetics
Chapter 13: Chemical Equilibrium
Chapter 14: Acids and Bases
Chapter 15: Acid-Base Equilibria
Chapter 16: Solubility and Complex Ion Equilibria
Chapter 17: Spontaneity, Entropy and Free Energy
Chapter 18: Electrochemistry
Chapter 19: The Nucleus: A Chemist's View
Chapter 22: Organic and Biological Molecules

I have carefully read the syllabus for the Advanced Chemical Analysis course. I understand and agree to follow the guidelines for this college level course.

Student Signature

Date

Parent/Guardian Signature

Date