

**2016 – 2017
Syllabus**

Course: Chemistry - Honors

Credit: 1

Instructor: Ms. Mac Donald

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Course description:

This course is designed for students going into fields in which *chemistry will be required in college*. It is also important for students considering selective colleges, regardless of the area of interest. Concepts covered include: atomic structure, bonding, reactions, energy, gas behavior, reaction rates and other topics. Experimentation is an integral part of the examination of these concepts. Students should *complete algebra 2 with at least a B before taking this course*.

Course Competencies:

Science Competency Statements (from NH State Board of Education)

1. Patterns – Students will demonstrate the ability to observe and describe patterns in natural and human designed phenomena and use those patterns to support claims about the observation or predicted relationships among phenomena.
2. Cause and Effect - Students will demonstrate the ability to investigate, explain, and evaluate potential causal relationships by using evidence to support claims and predictions about the mechanisms that drive those relationships.
3. Scale, Proportion, and Quantity - Students will demonstrate the ability to describe and represent the significance of changes in observable and non-observable phenomena in terms of relative scale, proportion, and quantity.
4. Systems and Systems Models - Students will demonstrate the ability to investigate and analyze a natural or human designed system in terms of its boundaries, inputs, outputs, interactions, and behaviors and use this information to develop a system model that can be used to understand and empirically evaluate the accuracy of models in terms of representing the underlying system.
5. Energy and Matter in Systems - Students will demonstrate the ability to analyze evidence from a variety of sources (investigations, models) to protect, connect and/or evaluate the cycling of matter and flow of energy within and between systems in order to understand, describe, or predict possibilities and limitations of systems.
6. Structure and Function - Students will demonstrate the ability to use evidence to support claims about the relationship among structure and function of natural and human designed objects.
7. Stability and Change of Systems - Students will demonstrate the ability to investigate and analyze static and dynamic conditions of natural and human designed systems in order to explain and predict changes over time.
8. Nature of science - Students will demonstrate the ability to work collaboratively and individually to generate testable questions or define problems, plan and conduct investigations using a variety of research methods in various settings, analyze and interpret data, reason with evidence to construct explanations in light of existing theory

and previous research, and effectively communicate the research processes and conclusions.

Student expectations focus:

- #3. The student demonstrates effective written and verbal expression across the curriculum.
- #4. The student demonstrates the ability to acquire information, reason effectively, and draw conclusions.

Students will be **evaluated** on the following

Homework/classwork	15%
Tests	40%
Quiz	15%
Lab reports	30%

Full Lab reports, Tests and Research Projects are considered “Critical required assignments”. You cannot pass the course without turning them all in.

Course units: - may include the following-

Matter and change, measurement, atomic structure, Periodic Table, chemical quantities, stoichiometry, states of matter, thermo chemistry, gases, liquids and solids, bonding, chemical reactions, rates of reactions and equilibrium, acids and bases, oxidation and reduction, and electrochemistry.

Instructional strategies:

This course involves rapid acquisition of knowledge and applications of the knowledge. A suitable math background is assumed. New information is presented by textbook readings, lecture and demonstrations. Problem solving is emphasized and provoked through class discussion and lab investigations. Reinforcement is through visual presentation, worksheets and review. *Evaluation by tests requires analytical thinking and adequate preparation for passing grades.*

Competencies:

The State of New Hampshire requires that all courses establish assessment activities that indicate that students can ably demonstrate their learning. These assessments will emphasize the application of course content and skills in a variety of ways. Therefore, students will need to achieve an overall passing average of 65% or better on these competencies over the course of the semester, as well as a course average of 65% or better. Failure to achieve a passing average on these assessments will prevent the student from gaining credit for the course. Students may recover credit for competencies previously failed, though their overall averages may not be adjusted.

In this course, course assessments and competency assessments are combined.

Expectations and other information

1. Come to class with a **positive attitude**, and strive for our **core values** – respect, integrity, citizenship and responsibility.
2. **Be prepared.** Bring to class everyday: -
 1. A **3 ring binder** - The first page in the binder will be the Lab Safety contract. This will be followed by the expectations and your work. Some labs and topics are not covered in the textbook so it is important to take and keep notes. Save all tests returned to you, as some questions on the final exam will be taken from these tests. You need to keep track of work covered each day and any classwork and homework for the day. I expect you to organize your binder to suit your study methods. You are responsible. I will not be giving you a binder grade.
 2. **Paper and writing utensil** - Pencil, blue or black ink only! If I cannot read your assignments you will not get a grade. The appearance of your work is my first impression of the effort you put into it.
 3. **Covered textbook.**
 4. **Calculator.**
 5. **School issued computer.** Must be used for some lab work and class assignments.
3. **Lab Safety Rules** must be obeyed at all times. Before lab activities the relevant safety rules will be reviewed. If you are unable or unwilling to follow good safety practices to ensure the safety of those in the room, you will be removed. You will take a zero for participation and the lab and for the labs that follow until you can convince me that you can work safely in the lab. To do this you will need to retake a safety quiz and write a paper on safety and its importance in the lab. If you need to be removed a second time you will need to convince the Assistant Principal that you can work safely in the lab. A third removal will result in a zero for the semester and you will be removed from the lab for the remaining part of the semester. Deliberate refusal to follow safety rules may result in removal at the first violation. It is a science department policy that no food or drink is brought into or consumed in any science room. No exceptions. Food and drink must be in your backpack out of sight.
4. **Late work** – Assignments will be due at the beginning of the block on particular day. If you hand them in on that day, you will get credit for the assignment based on how well it is completed. *If you do not turn it in on the date it is due, you will receive no credit for the assignment.*
5. If you **miss class for whatever excused reason**, you will need to be sure to see me as soon as you return to school to get assignments missed. You will be given two days for each day you were absent to make up the assignments. If you miss a lab, you must come and make it up during TEAM or after school on the next available lab day (Tuesdays only). A week later is too late. If you have a job after school, please make sure you can make arrangements for make-up labs after school.
6. **Integrity** – act in a manner that is trustworthy, virtuous and dedicated. **Honestly** complete your own work. I encourage working together and helping each other to understand concepts, but you must do the work yourself, write answers in your own words, etc. Show all work if you want a grade. If you don't understand the difference between cheating and helping, ask. Academic dishonesty will at minimum result in a zero for the assignment- see your student handbook.

7. **Respect** - Treat yourself and others with patience, understanding and honor at all times. You will be held responsible for classroom materials that are damaged or destroyed because of negligence. Cover your textbook. Common courtesy should be exercised at all times.
8. **Be on time for class.** Be seated and ready when the bell rings. Bathroom needs should be taken care of between blocks. Tardiness is in accordance with the school policy.
9. Phone calls and school store visits will not normally be allowed during class time. Make sure that your **cell phone is switched off and out of sight in back pack or classroom basket, not in your pocket**, or stored in accordance with school policy. Cell phones may not be used as calculators. No personal electronic devices except calculators may be used.
10. All **questions** that demonstrate interest and involvement in class are welcome and encouraged. If you are not clear or the answer does not help you understand, ask again.
11. Please refer to your Student Handbook for additional school policies.

Rules

1. Follow all directions.
2. Bring all needed materials everyday.
3. Keep hands, feet and objects to yourself.
4. No food, drink, personal grooming, headgear, cell phones, headphones etc.
5. No name-calling, put-downs, harassment or bullying.

Discipline procedure

1. Students will be given a warning for the first offence.
2. For the second offence student will be written up on the log.
3. Third offence – student will be written up on a referral form and given a teacher detention and/or parent contact.
4. Fourth offence will result in either a teacher detention or office referral.
5. All following offences will be referred immediately to the assistant principal.

The following will also result in immediate removal from class:

Failure to follow safety rules, fighting, vandalism, overt defiance, stopping the class from functioning.

I look forward to having you in my chemistry class this semester and hope that you have an enjoyable and successful semester.

Please remember- There is homework, and missed labs need to be made up during TEAM or after school on the next available Tuesday only. Most students find chemistry one of the more difficult subjects so you will need to keep up, work hard and study continually to pass chemistry. Each section studied depends on a full understanding on the previous section so you cannot skip sections and hope to catch up later.

I have read and understand the expectations for Chemistry honors and know chemistry will take hard work to pass.

Please sign here:-

Student (Print name) _____

(sign) _____

Parent/ guardian (Print name) _____

(sign) _____

Preferred Contact?

phone numbers H _____ W _____

e-mail address _____

Does your son/daughter have internet access at home? _____

If yes, dial up, or high speed? _____

Any further comments from parent / guardian or student that would be helpful at this stage.

