Chemistry 2022-2023

Shea Wickelson Room #1140

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**Course Description**

Let’s get small! Chemistry explores the world around us with nano-glasses. We will be exploring familiar things in unfamiliar ways: through the lens of the tiny. This class fulfills all requirements for a lab-based chemistry class outlined in the state curriculum: <https://www.uen.org/core/core.do?courseNum=3621>

We will use the core curriculum to engage in a variety of themed units and real world problem solving. Our units will include:

* **From Alchemy to Chemistry: cooking up some historical recipes.**
* **Down the Drain: an investigation of elements in our water.**
* **Who dunnit?: a Chemistry-based Forensic Science Unit.**
* **Energy and Environment: how should we power our society?**
* **Biodiesel as a student-made alternative fuel.**
* **Individual Student Research.**

**Course Goals and Objectives:**

The goal of this course is to create active, engaged and skilled learners who are curious about the world around them. The course objectives are that students:

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| --- | --- |
| * Ask Questions and Define Problems
* Develop and Use Models
* Plan and Carry out Investigations
* Analyze and Interpret Data
 | * Use Mathematics and Computational Thinking
* Construct Explanations and Design Solutions
* Engage in Argument from Evidence
* Obtain, Evaluate, and Communicate Information
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**Course Materials:**

Students will keep a notebook, their “toolbox”, with class notes, a glossary and sample problems. The toolbox will be their main text for studying. Students are expected to bring their toolbox, school planner, computer and a pen or pencil to class every day. Though we will use sections from textbooks occasionally, students will not be assigned a textbook of their own unless they request one. Please request one if you think it will be helpful to you. A free online textbook is available at <https://www.uen.org/emedia/resources/oer/ChemistrySEEd.pdf>

Parents can make an appointment to come to the school/classroom to view the instructional materials being used in the class. Please contact Shea Wickelson to set up a time if you would like to view materials we are using in class.

**Grading:** Grades will be updated on Canvas weekly and parents can access their students’ grade through Canvas.

**Assessments (50%)-** curriculum assessments including papers, labs, seminar quizzes, exams, presentations and projects. These show your understanding of the skills and concepts.

**Assignments (50%)-** homework and daily assignments that show class participation, responsibility, and organization.

**Citizenship:**

**H**= Honors and High Five! You have perfect or nearly perfect attendance and you participate in class in a way that maximizes your learning and the learning of others.

**S**= Satisfactory. Strong attendance. Staying the course.

**N**= Needs to start coming to class more or more on time, or needs to stop distracting others.

**U=** Unsatisfactory. Uh… please come and meet with me. Got some big problems.

**Course Requirements:**

**Attendance:** This is a lab based class, so regular attendance is very important! There will be many labs, group activities, and projects that cannot be completed outside of class. It is the student’s responsibility to ask for and make up missed work within two days of their return. Come to class ready to do stuff! Accommodations can be made for students out due to illness and/or quarantine. Please make arrangements with your teacher in this scenario.

**Assessment:** Each term there will be 3-5 opportunities to show understanding of the skills and concepts we’ve been studying. Achievement will be measured by exams, papers and projects. For some products students will receive an “M” (100%) when they meet the standard, an “E” (110%) when they exceed the standard, and an “I” (0%) when they are still in the process of fulfilling the standard. Students who are in progress of meeting standards will be supported in continuing to work on it and will need to work outside of school.

**Honors Chemistry**

 Student’s interested in taking Chemistry for honors credit must opt into honors before midterm of the 1st quarter. Honors Chemistry credit can be earned by successfully pursuing and completing one of the two options described below:

* + Option 1: Science Fair Participation- available for students interested in conducting a year-long independent research project and who are not enrolled in the Advanced Science Research Class. Weekly mentor meetings required.
	+ Option 2: Quarterly Enrichment Experiences – engage more deeply in the chemistry concepts being discussed in class and complete the following major assignments:
		- * Quarter 1 – Meet a chemist interview and presentation.
			* Quarter 2 – Chemistry book club, “Stiff” by Mary Roach.
			* Quarter 3 – Enrichment lab and field trip experiences.
			* Quarter 4 – Scientific writing assignment.
* Students choosing to pursue honors credit will be enrolled in honors chemistry throughout the academic year. Failure to complete honors assignments will result in a full letter grade drop, not removal from the honors course nor a change from one honors course option to the other.