Huron Heights Secondary School
SCH 3UI Course Outline – 2020/2021

redhair1971.github.io/MrWhite/Grade11Chem.html

Google Classroom: _____

Quizlet: Grade 11 University Chemistry

Section: 01 / 08
Teacher: Mr. White
Office: room 2002
MSIP/Help: Period / Period
Resources: Online textbook, Website, Schoology, Quizlet

This course enables students to deepen their understanding of chemistry through the study of the properties of chemicals and chemical bonds; chemical reactions and quantitative relationships in those reactions; solutions and solubility; and atmospheric chemistry and the behaviour of gases. Students will further develop their analytical skills and investigate the qualitative and quantitative properties of matter, as well as the impact of some common chemical reactions on society and the environment.

Prerequisite: Science, Grade 10, Academic

Big Ideas:

Matter, Chemical Trends, and Chemical Bonding
- Every element has predictable chemical and physical properties determined by its structure.
- The type of chemical bond in a compound determines the physical and chemical properties of that compound.
- It is important to use chemicals properly to minimize the risks to human health and the environment.

Chemical Reactions
- Chemicals react in predictable ways.
- Chemical reactions and their applications have significant implications for society and the environment.

Quantities in Chemical Reactions
- Relationships in chemical reactions can be described quantitatively.
- The efficiency of chemical reactions can be determined and optimized by applying an understanding of quantitative relationships in such reactions.

Solutions and Solubility
- Properties of solutions can be described qualitatively and quantitatively, and can be predicted.
- Living things depend for their survival on the unique physical and chemical properties of water.
- People have a responsibility to protect the integrity of Earth's water resources.

Gases and Atmospheric Chemistry
- Properties of gases can be described qualitatively and quantitatively, and can be predicted.
- Air quality can be affected by human activities and technology.
- People have a responsibility to protect the integrity of Earth's atmosphere

Overall Expectations:

Matter, Chemical Trends, and Chemical Bonding
- B1. Analyze the properties of commonly used chemical substances and their effects on human health and the environment, and propose ways to lessen their impact;
- B2. Investigate physical and chemical properties of elements and compounds, and use various methods to visually represent them;
- B3. Demonstrate an understanding of periodic trends in the periodic table and how elements combine to form chemical bonds.

Chemical Reactions
- C1. Analyze chemical reactions used in a variety of applications, and assess their impact on society and the environment
- C2. Investigate different types of chemical reactions;
- C3. Demonstrate an understanding of the different types of chemical reactions.

Quantities in Chemical Reactions
- D1. Analyze processes in the home, the workplace, and the environmental sector that use chemical quantities and calculations, and assess the importance of quantitative accuracy in industrial chemical processes;
- D2. Investigate quantitative relationships in chemical reactions, and solve related problems;
- D3. Demonstrate an understanding of the mole concept and its significance to the quantitative analysis of chemical reactions.

Solutions and Solubility
- E1. Analyze the origins and effects of water pollution, and a variety of economic, social, and environmental issues related to drinking water;
- E2. Investigate qualitative and quantitative properties of solutions, and solve related problems;
- E3. Demonstrate an understanding of qualitative and quantitative properties of solutions.

Gases and Atmospheric Chemistry
- F1. Analyze the cumulative effects of human activities and technologies on air quality, and describe some Canadian initiatives to reduce air pollution, including ways to reduce their own carbon footprint;
- F2. Investigate gas laws that explain the behaviour of gases, and solve related problems;
- F3. Demonstrate an understanding of the laws that explain the behaviour of gases.

Major Units of Study and Timeline:

Unit	Topics	Weight Factor	Approx. Class Time
X. Introduction	Review, Chemical Safety		4*
1. Matter, Atoms and Compounds	Periodic table, Trends, Bonding, Intermolecular Forces	15	17
2. Nomenclature	Ionic, Molecular, Acids	10	7
3. Chemical Reactions	Balancing, Types, Predict Products	10	15
4. Quantities in Chemical Reactions	Mole, Molar Mass, Empirical and molecular formula, Stoichiometry	15	20
5. Solutions and Solubility	Concentration, Stoichiometry, Acids Bases	15	20
6. Gases and Atmospheric Chemistry	Gas Laws, Stoichiometry	5	10
7. Final Exam		30	

Assessment and Evaluation:
***Achievement Component*-** The achievement chart that follows identifies four categories of knowledge and skills in science – Knowledge/Understanding, Inquiry, Communication, and Making Connections.
These categories encompass all the curriculum expectations in courses in the discipline. (Detailed information on the achievement levels and on assessment, evaluation, and reporting policy and its implementation is provided in *The Ontario Curriculum, Grades 9 to 12:Program Planning and Assessment, 2000*.)

Category	Description
1.Knowledge/Understanding	understanding of concepts, principles, laws, and theories knowledge of facts and terms transfer of concepts to new contexts understanding of relationships between concepts
2. Inquiry	application of the skills and strategies of scientific inquiry application of technical skills and procedures use of tools, equipment, and materials
3. Communication / Making Connections	communication of information and ideas use of scientific terminology, symbols, conventions, and standard SI units understanding of connections among science, technology, society, and the environment

The purpose of this component is the generation of a numerical mark for the report card for Term 1 and Term 2. The weights and percentages suggested in this section are tentative; flexibility exists to recognize variations within the curriculum for individual school boards, departments, teachers and students needs. The Culminating Performance Task and Final Exam comprise the 30% Ministry mandated weight of a Summative Performance Task. A *sample* achievement component evaluation breakdown is as follows:

Determination of the Final mark - the Final Mark for this course is calculated as follows:

Term work (will include quizzes, unit tests, lab reports – both formal and informal-, assignments) **70%**
Final Exam (a summative evaluation of all of the semester's learning goals that allows students to demonstrate comprehensive achievement of the curriculum expectations) **30%**

Evidence of student achievement will be collected throughout the course and include teacher observations, teacher-student conversations, and student products.

Course credit is earned upon successful demonstration of essential learnings, which are derived from the Ministry of Education course strands and overall expectations. Final marks are calculated based on the teachers assessment, evaluation and professional judgement as these relate to the body of evidence produced by the student. A passing mark on the final exam and/or course culminating activities does not guarantee a passing mark for that course. For this reason, it is of utmost importance that students complete and submit all work that is to be assessed and/or evaluated.

All courses at Huron Heights conform to the assessment, evaluation and reporting policies and procedures of the Waterloo Region District School Board. Please visit our website (hrh.wrdsb.ca) for more information

MSIP is an integral component of this course. Students can expect that the teacher has designed this course to reflect the fact that course- specific student learning will take place during both class and MSIP time. As such, students are required to:

- Attend MSIP every day to meet the essential learning requirements of the course.
- Effectively use MSIP to complete course work. Effective uses of MSIP time may include: completing homework, working collaboratively, studying for tests or exams, working ahead on course projects or assigned readings, travelling to meet with teachers for extra help, or other activities as determined by the assigning teacher.

Academic Standards

It is your responsibility to provide evidence of your learning within established timelines. Due dates for assignments and the scheduling of tests will be communicated well in advance to allow you to schedule your time. If you aren't going to be able to follow an agreed upon timeline you should demonstrate your responsibility and organizational skills by discussing with your teacher the challenges you're facing as far in advance of the deadline as possible.

It is your responsibility to be academically honest in all aspects of your schoolwork so that the marks you receive are a true reflection of your achievement.

Plagiarism is using the words, ideas or work of someone else without giving appropriate credit to the original creator. This is a form of cheating.

Consequences for not meeting these academic standards may include:

- Requiring you to complete the original or alternative work after school or during your lunch hour;
- Assigning an "incomplete" for an assignment not completed prior to an agreed upon closure date. This may result in "insufficient evidence of learning" and may result in a failing grade.

Learning Skills

The teacher assesses the learning skills throughout the day-to-day completion of coursework. The learning skill assessments of student performance appear as letter grades on the report card using the following letter codes*: E= excellent, G= good, S= satisfactory, N= needs improvement*. It is important that students understand learning skills are excellent indicators of student success, and that improvement in these skills will translate into improvement in overall grades.

Learning Skills and Work Habits	E – Excellent G – Good S – Satisfactory N – Needs Improvement
Responsibility	**Organization**
▪ Fulfils responsibilities and commitments within the learning environment. ▪ Completes and submits class work, homework, and assignments according to agreed-upon timelines. ▪ Takes responsibility for and manages own behaviour.	▪ Devises and follows a plan and process for completing work and tasks. ▪ Establishes priorities and manages time to complete tasks and achieve goals. ▪ Identifies, gathers, evaluates, and uses information, technology, and resources to complete tasks.
Independent Work	**Collaboration**
▪ Independently monitors, assesses, and revises plans to complete tasks and meet goals. ▪ Uses class time appropriately to complete tasks. ▪ Follows instructions with minimal supervision.	▪ Accepts various roles and an equitable share of work in a group. ▪ Responds positively to the ideas, opinions, values, and traditions of others. ▪ Builds healthy peer-to-peer relationships through personal and media-assisted interactions. ▪ Works with others to resolve conflicts and build consensus to achieve group goals. ▪ Shares information, resources, and expertise, and promotes critical thinking to solve problems and make decisions.
Initiative	**Self-Regulation**
▪ Looks for and acts on new ideas and opportunities for learning. ▪ Demonstrates the capacity for innovation and a willingness to take risks. ▪ Demonstrates curiosity and interest in learning. ▪ Approaches new tasks with a positive attitude. ▪ Recognizes and advocates appropriately for the rights of self and others.	▪ Sets own individual goals and monitors progress towards achieving them. ▪ Seeks clarification or assistance when needed. ▪ Assesses and reflects critically on own strengths, needs, and interests. ▪ Identifies learning opportunities, choices, and strategies to meet personal needs and achieve goals. ▪ Perseveres and makes an effort when responding to challenges.

Submission of Late Assessments

The Science Department at Huron Heights is committed to ensuring fairness in our evaluation procedures. The WRDSB has determined policy relating to the submission of late/missing assessments. The Assessment, evaluation and reporting handbook grades 9 to 12: WRDSB, c2013 informs:

Many experts in the field of assessment and evaluation discourage deducting marks or giving zeros for late and missed assignments, arguing that such measures do not motivate students to change their behaviour. Students must understand that there may be consequences for not completing assignments for evaluation or for submitting those assignments late. Lateness is an issue of student responsibility and time management, as well as academic fairness. It must be made clear to students early in the school year that they are responsible for providing evidence of their achievement of the overall expectations within a time frame negotiated with the teacher. Marks may not be deducted for assignments that are handed in late; rather, instances of lateness can be reflected in the student's Learning Skills and Work Habits.

This has lead to the development of the following expectations by the HHSS Science Department:

1. *All work will be assigned a "Due Date". This is the date that student work is to be submitted. The advantage for the student who meets the "Due date" will be the opportunity of their work to receive feedback from their teacher as well as receiving a grade.*

2. *If a student misses the "Due Date" then they will be given a 1-week extension in which they may still submit the work. This work <u>may</u> receive feedback and will be assigned a grade.*

3. *If the 1-week extension is missed, the student is still required to submit the work. They will receive no feedback and no grade. The teacher will record the work as "complete". The student has missed an opportunity to earn a mark through demonstrating their knowledge.*

Student Work Expectations

At Huron Heights we are committed to ensuring fairness in our evaluation procedures. Your son/daughter will, on occasion, have the opportunity to work collaboratively with other students on activities and assignments within the context of their Science class. In order to ensure fairness for all, we will apply the following expectations for work submitted by our students.

1. *All submitted work must be entirely produced by the student who earns credit/marks for that work.*

2. *When completing assignments, research, and laboratory reports students must work from the premise that their submitted work reflects their <u>own</u> thoughts, ideas, words, designs, products, images, shapes, or intellectual property. Failure to do so may result in an academic consequence.*

3. *If students use material from another source, it must be clearly cited/referenced.*

Note: During laboratory activities students will share the performance of the lab duties and the collection of data. It is expected that students independently complete the interpretation, analysis, conclusions, and final writing of their laboratory reports.

Student Signature:_____ Parent Signature:_____

Huron Heights Secondary School

Academic Integrity Policy

Some students will knowingly or unknowingly commit academic offences. These offences are sometimes accidental but still have serious implications.

Misunderstood Academic Offences

Excessive collaboration
» Discussing an assignment in significant detail with peers or splitting up work
» Using a classmate's assignment as the basis or as a reference for your own or allowing someone else to do this with your assignment
» Each assignment may have different requirements related to collaboration; be sure to confirm these expectations with your teacher

Plagiarism
» Copying code, ideas, images, direct quotations, etc. without proper citation
» *citationmachine.net* is a citation generator that can help you avoid plagiarism – there is also one on Microsoft Word under the References tab
» Self-plagiarism, re-submitting an assignment for another class, is an offence

Unauthorized use of previous term's assignments, tests, solutions
» It is unacceptable to have unauthorized access to this information or to accept it if it is offered to you
» Even if it was not you who obtained it, this is still an offence

Use of another student's previous assignment, test, solution
» You may not work off of, or refer to in any way, a copy of an assignment a student submitted in a previous semester or year
» Even though students may have finished a course, their submitted documents may be kept for reference

Theft of another student's intellectual property
» Looking at another individual's assignment, test or exam without their permission or submitting another individual's assignment as your own are very serious offences and under no circumstances is this excusable

Adapted with permission from the "The Academic Integrity Fact Sheet for Students", University of Waterloo, Office of Academic Integrity, May 2018.

If a student is suspected of committing an academic offence, the teacher will inform administration and will meet with the student to determine the nature and extent of the incident and the student's understanding of the situation and intent.

Students who commit an academic offence will face one or more of the following consequences:
➢ Redoing part or all of the assessment under direct supervision, or completing an alternate assignment.
➢ Limited access to academic recognition, school awards and scholarships.
➢ Additional consequences related to the student's behavior, including community service hours, detentions and/or suspensions.

All consequences will be progressive in nature and take into consideration the number and frequency of incidents and the grade level, maturity and individual circumstances of the student. In all cases, parents or guardians will be informed and a report of the incident will be kept on file. Incidents of academic dishonesty will be communicated in the Learning Skills and Work Habits section of the report card.