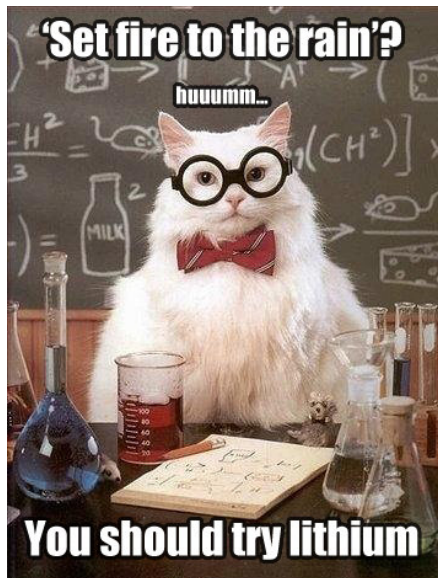


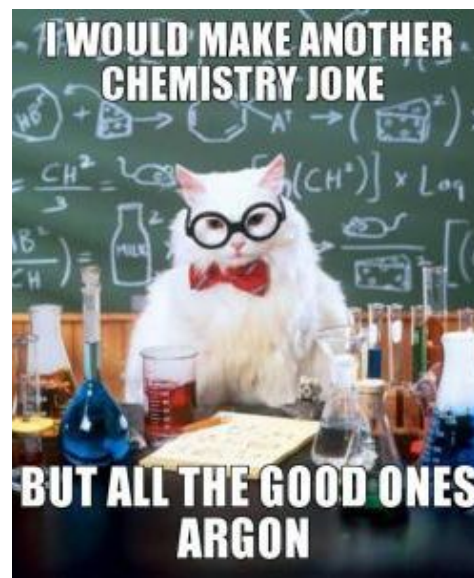
Chemistry 30

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Course Description

A major focus of the course is the study of the role of chemical properties and bonds in determining what makes materials suitable for use in specific applications. Students will actively investigate the nature of equilibrium in chemical reactions. In electrochemistry, students explore oxidation-reduction reactions and the impact of electrochemistry on society and the environment. Other topics include organic compounds and acid-base chemistry. Student inquiry will guide independent investigations of chemistry-related phenomena.



Prerequisite: Physical Science 20 or Chemsirty 20

Outcomes

Student Directed Study:

CH30-SDS1 Create and carry out a plan to explore one or more topics of personal interest relevant to Chemistry 30 in depth.

Materials Science

CH30-MS1 Examine the role of valence electrons in the formation of chemical bonds.

CH30-MS2 Investigate how the properties of materials are dependent on their underlying intermolecular and intramolecular forces.

CH30-MS3 Explore the nature and classification of organic compounds, and their uses in modern materials.

CH30-MS4 Determine the suitability of materials for use in specific applications.

Chemical Equilibria

CH30-EQ1 Consider, qualitatively and quantitatively, the characteristics and applications of equilibrium systems in chemical reactions

CH30-EQ2 Analyze aqueous solution equilibria including solubility product constants.

CH30-EQ3 Observe and analyze phenomena related to acid-base reactions ad equilibrium.

Electrochemistry

CH30-EC1 Investigate the chemistry of oxidation and reduction reactions.

CH30-EC2 Examine applications of electrochemistry and their impact on society and the environment

Assessment

Assignments/homework:

Class time will be given to work on assignments and homework; however students may be required to work at home. Most work can be completed during class time, if time is used appropriately. Assignments and homework should be completed the day they are assigned. All homework from a given unit must be handed in before the unit exam. I do not take off marks for late assignments/homework, however if I do not receive an assignment before the exam date, you will not have the opportunity to rewrite the exam. All assignments and homework must be completed before an exam in order to have an opportunity to rewrite the exam.

Quizzes:

There will be many quizzes throughout the course. The quizzes will usually be 1-5 questions based on the previous day's work. Questions will be taken directly from the previous day's lesson or assignment. This means, if you have completed the previous day's work, the quizzes should be easy. Quizzes are meant to provide feedback to me about how you are doing and will not be used to negatively affect your grade. If you do poorly on the quizzes, your exam grade will replace your quiz grade. This means that quizzes can only improve your grade, they will never bring your grade down.

Exams:

Students will be required to write unit exams on the dates we agree upon as a class. Students who miss the scheduled test date will be required to write the exam at 8:30am on a date scheduled in consultation with Mrs. Appleton. If you miss an exam you will need to submit ALL assignments (complete and correct) for that unit before you can write the exam. You will not be able to rewrite a missed exam unless you handed in all assignments (complete and correct) prior to the scheduled time of the exam.

Students who finish all of their assignments (complete and correct) prior to the scheduled exam date for that unit will be given the opportunity to rewrite exam if they are unhappy with their grade. Exam rewrites will be done at 8:30 am. The exam for the rewrite will not be the exact same as the original exam, but will have similar questions. When a student rewrites an exam, the grade they receive on their rewrite is the grade that will count toward their exam mark, regardless of which test receives the higher grade.

Labs:

Students will complete lab reports throughout the term. Lab reports will be evaluated using a rubric and count towards your unit grade. Students will use feedback from the rubric to improve their lab reports. Students are able to fix their lab reports and hand them in again.

How to properly Reference a Lab for Materials and Procedure:

Appleton, E. (2017). Chem 30 Materials Science. *Lab one: identifying solids* (pp. 9-11). Saskatoon, SK: Nutana Collegiate.

Overall:

I want you to be successful in this class. I believe in second chances and offer many. If there is something I can do to help you to succeed please let me know.

****To rewrite an exam you must hand in all of your assignments for that unit (complete and correct) prior to the time of the SCHEDULED exam.****

Behaviour Expectations

- No Eating or Drinking during lab periods.
- Students are expected to attend all classes. If a student misses class, they must let the school know the reason (**call 683-7580, email nciattendance@gmail.com or text 260-2118**). If a student misses class he/she will have to make up the missed work. There will be a homework binder in class where students will be able to find extra copies of missed handouts, however, it will be the student's responsibility to copy missed notes. If you have access to a computer, you may email me to get missed work. My email address is appletone@spsd.sk.ca .
- All students must be on time for class. There will be quizzes at the beginning of many of our classes which you will miss if you are late. If you miss a quiz, you will be required to make up the quiz during work time in class, or on your own time. If the quiz is not written before the exam, you will receive a zero for that quiz. If you are late and the door is closed, please knock on the door and wait outside until someone comes to let you in. If the door is open, please join the class as quietly as possible.
- Talking will be allowed during most work time but it must not disturb other students. You may listen to your iPod/mp3/Walkman while working on assignments; however headphones should never be used while I am speaking or during quizzes/exams.
- Assignments will be due on the day of the unit exam (which will usually be negotiated as a class). If you feel that you will be unable to finish an assignment by its due date, please contact me ahead of time and, in most cases, an extension will be granted.
- Students should not leave the class without talking to me first. I need to know where you are.

Extra Help:

Extra help will be offered every morning at 9:00am (I can arrange for earlier if it becomes necessary). I will be here everyday around 8:15am working so if you need a space to work, feel free to come work in my room. You need to let me know you have a question or need help when you come in the morning. There will also be free tutoring at noon in room _____. If you feel there is a concept you do not fully understand, you NEED to come for extra help to ensure you do not fall behind.

Materials Required: You will need to purchase for this class a scientific calculator, pen or pencil, binder or folder and looseleaf paper. You will be given a booklet for each unit and will need to bring that booklet to class every day of that unit. Additional copies will not be handed out unless in extreme circumstance.

References:

The sample bibliography below is to help you learn APA formatting. You will need to use APA format for sources used in your final project, as well as when citing the materials and procedure for your lab reports. Take note of the capitalization, page numbers, and when there is no author. Notice where the indents are and that a new line starts when the line above reaches the end of the page. The sources are also in alphabetical order. See the fourth reference for how to reference a website containing no author, no date and no page number.

Online Encyclopædias and Dictionaries: Often encyclopaedias and dictionaries do not provide authors' names. When no author is present, move the entry name to the front of the citation. Provide publication dates if present or specify (n.d.) if no date is present in the entry. When listing the URL, give only the home or index root as opposed to the URL for the entry.

Sample Bibliography:

- Bernstein, M. (2002). 10 tips on writing the living web. *A list apart: for people who make websites*. Retrieved May 2, 2006, from <http://www.alistapart.com/articles/writeliving>
- Feminism. (n.d.) *Encyclopædia britannica online*. Retrieved March 16, 2008, from <http://www.britannica.com>
- Marais, P., Jordaan, F. (2000). Are we taking symbolic language for granted?. *Journal of chemical education*, 77, 1355-1356.
- Style list for references*. (n.d.). Retrieved January 1, 2001, from <http://www.apa.org>
- Woolfolk, A. (1996). Educational psychology. *Vygotsky's alternative to Piaget* (pp. 47-51). Englewood Cliffs, NJ: Prentice-Hall.
- Vygotsky, L. (1978). Interaction between learning and development. *Mind in society: the development of higher psychological processes* (pp. 79-139). Cambridge, MA: Harvard University Press.

Example of Lab Reference (for materials and procedure):

- Appleton, E. (2010). Chem 20 unit one: introduction to chemistry. *Lab one: physical and chemical changes* (pp. 9-11). Saskatoon, SK: Nutana Collegiate.

A great website to use for help is <http://owl.english.purdue.edu/owl/resource/560/01/> and an APA generator is found at <http://citationmachine.net/index2.php?start=&reqstyleid=99>

Tell me a bit about you:

Name: _____

Other Class: _____

1. What is the best way for me to contact you?

 Text _____ Phone _____ Email _____

2. What was the last math class that you completed? When did you take it? What mark did you receive?

Math _____, I took it _____ and received a mark of _____%

3. What are your reasons for taking Chemistry 30 (i.e. high school graduation, post-secondary courses, interest, etc.)?

4. Do you enjoy Science? Why?

5. Do you have a job? About how many hours do you work each week?

6. What are some of the big responsibilities other than school that you have in your life (children, caring for a family member, volunteering, etc.)?

7. Chemistry 30 is a fast-paced and demanding course. Is there any reason that you will not be able to attend class **every day** this quarter? Please explain.

