

# Course Outline for Chemistry 40S

Chemistry Lab  
Mrs Johnson 2019 – 2020

Units	Approximate Timeline
Unit 1: Reactions in Aqueous Solutions	18 classes
Unit 2: Atomic Structure	10 classes
Unit 3: Chemical Kinetics	10 classes
Unit 4: Chemical Equilibrium	17 classes
Unit 5: Acid-Base Equilibrium	12 classes
Unit 6: Oxidation-Reduction	12 classes

## Objectives

<b>Unit:</b>	Reaction in Aqueous Solutions
Topics:	Solubility rules, acid base reactions, qualitative analysis, oxidation-reduction reactions, oxidation states.
<b>Unit:</b>	Atomic Structure
Topics:	Electromagnetic spectrum, quantum mechanical development of the atom, electron configurations, electronegativity & ionization energy, Lewis diagrams
<b>Unit:</b>	Chemical Kinetics
Topics:	Rate of reactions, collision theory, factors affecting reaction rates, energy in reactions, rate laws and mechanisms.
<b>Unit:</b>	Chemical Equilibrium
Topics:	Physical and chemical equilibria, the equilibrium constant, the mass action expression, Le Chatelier's Principle, solubility equilibrium.
<b>Unit:</b>	Acid-Base Equilibrium
	Acid base definitions, pH, Strong and weak acids and bases, titrations, salt pH.
<b>Unit:</b>	Oxidation-Reduction
	Oxidation reduction reactions, predicting reactions, electrochemical cells, electrolytic cells, applications

## Evaluation

Task	Weighting
Knowledge and Understanding	70%
Scientific Skills and Inquiry	25%
Science, Technology, Society and the Environment	5%
<b>Final Exam</b>	<b>25% (not included in the above weighting)</b>

## Materials

Bring the following materials to **every** class: your Chemistry binder, red and blue pens, pencil, eraser, a scientific calculator and a ruler. You may also be asked to bring other materials for specific activities or assignments. You will not be signing out a textbook. You will use one in class from time to time and will be able to sign it out if necessary.

### A Few Things You Need to Know About Me....

#### Who...

- I graduated from university in 2006 with majors in biology and mathematics and started my first teaching job that fall.
- I have been at Stonewall Collegiate since 2010.

#### Where...

- I can be found in the Chemistry Lab.
- The classes I teach are scheduled in the morning only. There will be some days that I am in the building all day, but you may not be able to find me in the afternoon. I will be in the building for at least part, if not all, of the lunch hour.
- Our class will be set up on Edmodo. I will put all class notes, assignments and answer keys on there. I update at the end of each teaching day.

#### When...

- Drop by the Chem Lab in the morning or at lunch if you need help, have a question or want to chat. In the afternoon, it is best to message me on Edmodo.
- I am happy to help you out before school or at lunch. Please set up an appointment with me.
- If you miss a day, please check Edmodo before our next class. Do not wait to ask me for what you missed when you return. This will help you to not fall behind.

#### What...

- In order to make the most of our time together, I have a few important rules:
  - 1. The Golden Rule**
    - Treat others as you wish to be treated. In this classroom, we treat each other kindly and with respect. We listen to what other people are saying, we use our manners and we cooperate with one another.
    - Using manners includes...
      - knocking on the door if you are late and wish to come in
      - saying please and thank you
      - appropriate use of cell phones
        - Cell phones are a major disruption to our learning. They will not be permitted during class time unless I give you permission to use it for an educational purpose (access Edmodo, research a topic being discussed in class, etc). Please keep your cell phone in your pocket, purse, backpack, etc. Also, please remember that you must never take photos or videos of people without their permission.
  - 2. Set Yourself Up to Succeed**
    - Come to class regularly and participate. Chemistry is a tough and fast paced course and it is really hard to catch up. Always do your homework and do not hesitate to ask for help.
  - 3. Take Responsibility**
    - Let me know ahead of time if you will be missing a test.
    - Schedule a time to make up missed tests and labs within 1 week.

- Don't allow yourself to fall behind. Set up a time with me if you are having difficulty before it affects your mark.

#### **4. Safety First**

- The science lab is a potentially dangerous place. Always follow lab safety rules and treat every chemical as though it were hazardous.
- No food or drink in the lab, other than bottled water.

### **The Assessment Policy at S.C.I.:**

#### **Creating the Grade:**

- Grades will be based only on the demonstration of an individual student's knowledge and skills of the outcomes for each course:
  - Only items marked by the teacher will determine a student's grade
  - Grades are based on individual student achievement, not group achievement
- When determining a grade, the teacher will decide whether there is sufficient evidence of achievement. If not, the mark can be reported as an "IN" (incomplete). Teachers will determine with students and parents/guardians a plan for completion of work.

#### **Establish, communicate, and apply consequences for late and missing work:**

Students must understand that there will be consequences for not completing assignments that provide evidence of learning or for submitting those assignments late. If, after establishing and clearly communicating expectations regarding assignments, setting and communicating timelines for assignments, and supporting student learning using the strategies provided above, student work is still late or missing; teachers will apply the following strategies:

- confer with the student and, where appropriate, with the student's parent/guardians about the reasons for not completing the assignment, and consider the legitimacy of reasons;
- develop an agreement with the student to complete the work;
- require the student to complete missing work during lunch by attending the Assessment Completion Centre (ACC).

If, after completing the steps above, the student does not hand in the assessment by the agreed upon deadline, a zero may be used as a mark as the student has not demonstrated any knowledge or skill of the outcome.

The consequence for not completing work is to complete the work. Late marks will not be subtracted from an assignment as it is purely punitive and doesn't measure learning. The assignment will either be completed or given a zero.

The full policy is available on the SCI website under "Student Handbook".