CHEMISTRY 1311 A – Fall 2017
Course Information and Syllabus

COURSE WEBSITE: uottawa.brightspace.com

PROFESSOR:
Dr. K.-S. Focsaneanu (Fox)
D'Iorio 119
562-5800 ext. 6894
Email: kfocsane@uottawa.ca

OFFICE HOURS:

Monday	13h00 – 14h30, DRO 119
Tuesday	After class, UCU hall
Wednesday	11h30 – 13h00, DRO 119
Friday	After class, UCU hall

*or by appointment

TEACHING ASSISTANTS (TA's)
To be announced in class…

CLASS SCHEDULE:

Monday	Tuesday	Wednesday	Thursday	Friday
DGD 3 **(with Dr. Fox)** 11:30 – 13:00 MNT 201	**Lecture** 8:30 – 10:00 UCU AUD	**DGD 1** **(with a TA)** 17:30 – 19:00 CBY B205		**Lecture** 10:00 – 11:30 UCU AUD **DGD 2** **(with a TA)** 14:30 – 16:00 MRT 205

LAB SCHEDULE:

Lab Coordinator: Dr. Rashmi Venkateswaran, vrashmi@uottawa.ca

For your lab schedule (including lab tutorials) and other details, consult the separate CHM LAB website on the VirtualCampus (Brightspace). You can download and print what you want/need at your own convenience.

IMPORTANT NOTES ABOUT THE LAB:

- You MUST purchase safety glasses ($4 - $9) and a lab coat ($20 - $30) BEFORE coming to the lab. These are available in various places, including the Kiosk on the 3rd floor of Marion, the Science Students' Association and uOttawa Bookstore.
- You can find out your lab section from your official class timetable. Once you know your lab section, go to the CHM LAB website on to see the schedule. Please bring a printout of your timetable to the lab, to verify that you are in the correct lab section.

MORE INFORMATION ABOUT THE LAB WILL BE GIVEN IN THE FIRST LECTURE

COURSE EVALUATION:

Your mark is based on two parts: the lecture portion and the laboratory portion. The lab portion is fixed at **25%** (a more detailed breakdown of the lab portion is available on the CHM LAB website).

The lecture portion counts for the remaining **75%** of your final grade, but its calculation is flexible, as you may "opt-out" of the online assignments if you wish (but more on that later). Here are the two possible evaluation schemes:

	With homework	Without homework
Online Homework	10%	–
Participation	5%	5%
DGD Quiz (**week of Oct 2nd**)	4%	4%
Midterm 1 (**Oct 14**)	14%	16%
Midterm 2 (**Nov 18**)	14%	16%
Final Exam	28%	34%

Please note: In order to receive a passing grade in this course, you are required to obtain a MINIMUM of 50% in the lecture component AND 50% in the lab component of the course.

CALCULATORS:

You will need a *non-programmable* calculator for the tests and for the final exam. The Faculty of Science has approved the following calculators: Texas TI-30X, TI-30XA, TI-30SLR scientific and non-programmable calculators, and their Casio/Sharp counterparts. You may NOT use cell phones or other electronic devices in place of a calculator during tests or final exams.

Extra note, since I get asked this anyway: "Can I use my X brand name calculator? It's not on the list of Faculty-Approved calculators…" Here's my answer: for assignments and the midterms or anything else done in class, as long as it's not programmable, than it's ok with me (I'm not picky on brand names). **HOWEVER**! I *may or may not* be proctoring your final exam (in other words, it might be another professor administering it) and I can't guarantee that *they* won't be picky – they might be very strict with the rules and confiscate any "unapproved" calculators. So, proceed at your own risk!

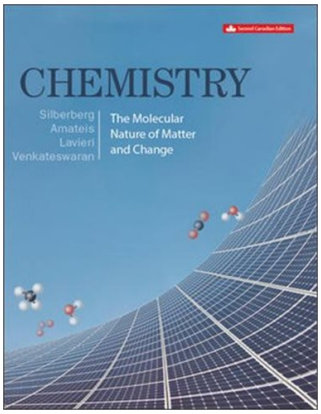
ABSENCE:

If you know in advance that you will be missing a quiz or test **for any reason**, contact me immediately to discuss the situation **BEFORE** the midterm (I will not accept non-medical excuses AFTER the tests have taken place!) If you are ill on the day of a test, please bring me a medical certificate to receive exemption from the test ASAP.

RETESTS: Depending on the number of students, make-up midterms may be scheduled for later in the semester. Information regarding a possible make-up midterm will be sent to students with approved midterm absences.

If you miss the final exam due to illness, please bring a medical certificate to the Faculty of Science to have your final exam deferred to the study week in February. (For more information on final exam deferral, go to www.science.uottawa.ca). If you miss a lab due to illness, please obtain a medical certificate, inform your demonstrator and see Dr. Rashmi.

RECOMMENDED TEXT:



The text that I will be using as an official reference for this course is **Chemistry: Molecular Nature of Matter and Change (Silberberg, 2nd Canadian Edition)**. Please note that, while purchasing a textbook is not mandatory, it is *strongly recommended*, especially for students in the Faculty of Science, since you can use it as a reference for multiple courses (for example, I use it when teaching CHM2313: Environmental Chemistry, and you can use it to prepare for CHM1321: Introductory Organic Chemistry and/or CHM2353: Descriptive Inorganic Chemistry). This text is available at the uOttawa Bookstore and the Agora Bookstore. The book also comes with an access code for Connect, an online resource designed to help you study and learn the material more efficiently and effectively.

Please note: other sections of this course are using different textbooks, so please do not make your purchase until you are certain you will be staying in a specific section.

However, I realize that not every student will want or need to invest in a new textbook, and so of course there are alternatives. For example, there will be lots of used textbooks floating around campus (in the past, I used Olmsted, 3rd Canadian Edition, which is a decent book too) that you could pick up instead; or you could use the copies kept on reserve at the library; or you could look into online lending vendors, etc. Finally, I've got a variety of different textbooks in my office, so feel free to drop by and look at them in person in you're curious (or if you're buying a copy online and what to check it out first). *It is up to you to consider the various options and come to a decision that best suits your financial and educational needs.*

IMPORTANT: It's likely you'll find cheaper copies of the ***American*** editions of Silberberg online. If you want to follow along with me in class, I will be referring to pages/problems in the ***2nd Canadian*** edition of Silberberg. So, if you get a copy of an American edition (or any other textbook), that will be fine, *BUT it is up to YOU* to cross-reference topics using its table of contents or index. I should mention that one of the many reasons I chose Silberberg was the quality and number of end-of-chapter questions: there is an excellent range of difficulty, as well as fully integrated problems for each section. So, if you aren't using this specific book, make sure that you choose practice problems that are at the appropriate level.

If you've picked up a copy of Silberberg or Olmsted, I've added pdfs to the course website with suggested readings/problems for each chapter.

COURSE SYLLABUS

Below is a general sequence for the course; for a more detailed syllabus (with specific readings and suggested problems), please consult the relevant textbook pdf's on the course website.

Lecture	Date	Topic
1	Sep 8	Introduction/Stoichiometry and Equations
2	Sep 12	Stoichiometry and Equations
3	Sep 15	Stoichiometry and Equations
4	Sep 19	Stoichiometry and Equations
5	Sep 22	The Behaviour of Gases and KMT
6	Sep 26	The Behaviour of Gases and KMT
7	Sep 29	Energy and Thermochemistry
		Week of Oct 2 – DGD Quiz
8	Oct 3	Energy and Thermochemistry
9	Oct 6	Energy and Thermochemistry
10	Oct 10	Principles of Chemical Equilibrium
11	Oct 13	Principles of Chemical Equilibrium
		Oct 14 – Midterm 1
12	Oct 17	Acid-Base Equilibria
13	Oct 20	Acid-Base Equilibria
14	Oct 31	Acid-Base Equilibria
15	Nov 3	Ionic Equilibria in Aqueous Systems
16	Nov 7	Ionic Equilibria in Aqueous Systems
17	Nov 10	Ionic Equilibria in Aqueous Systems
18	Nov 14	Kinetics: Mechanisms and Rates of Reactions
19	Nov 17	Kinetics: Mechanisms and Rates of Reactions
20	Nov 21	Kinetics: Mechanisms and Rates of Reactions
21	Nov 24	Electrons in Atoms
		Nov 18 – Midterm 2
22	Nov 28	Electrons in Atoms
23	Dec 1	Chemical Bonding
24	Dec 5	Review

**note: dates and ordering of material subject to change*

RE-GRADING REQUESTS

Corrected midterms will be handed back in class as soon as possible after the midterm (usually, about one week). At that time, you will be given instructions on how to submit a re-grade request.

LECTURES

There is an 80% attendance requirement in the Faculty of Science. If you miss a lecture, it is your responsibility to acquire any notes and assignments for that day from another member of the class. Lecture presentations will be posted to the course website in pdf format; however, we will be solving problems by hand in class, so bring some paper and a pencil. I will be using in-class participation to record attendance.

Lectures will be recorded using Echo360 lecture-capture software so you will be able to go back and re-watch them if you wish. You will receive an invitation to join Echo360 before the semester begins. Please note however, that occasionally there might be technical issues with the recordings; therefore, be prepared to ask a fellow student about any missed material.

DGDs

With one exception (see below), the discussion groups (DGDs) are *optional, but highly recommended*. While you may have been assigned a particular DGD in your timetable, feel free to attend any of the three, or even more than one if you feel the need to do so. In the DGDs, I (or a TA) will answer questions related to course material posed in person or posted on the Message Board on the course website. We will NOT answer questions relating to your lab reports – if you have questions or need help with lab reports, talk to your lab demonstrator or go to the lab tutorials (that's what they are for!).

The Monday DGD (at 11h30, with me) will take place in an Echo360-equipped classroom and the resulting lecture-capture video will be posted to the course website.

PLEASE NOTE: you will be required to attend your assigned DGD once this semester, the week of **October 2nd**, in order to complete the Two-Stage Quiz (see below for more information).

DGDs will begin September 11th.

EVALUATION EXERCISES

Online Homework:

A total of ten homework assignments, which can be worth up to **10%** of your final mark, will be administered online. These exercises will be administered through a program called SAPLING LEARNING. These will be weekly assignments (~60 min long), designed to help you practice solving more complex problems, *after having covered the material in class*. When an assignment is announced in class, login to the website at any time to work on it (you do not have to complete the whole assignment in one sitting; you can save your work at any point).

More information about registering for *Sapling Learning* and completing the assignments will be given in the first lecture. Please wait until our first lecture before joining. Do NOT register and/or pay for any online homework system until you are certain you are staying in a specific section of this course.

I *strongly recommend* that you get a Sapling account and complete the assignments. It is a very valuable learning tool (that was positively reviewed by last year's students), and if you devote the time to using it properly, it will certainly help you learn, understand and master the course material. Also, marks on the online homework portion are generally quite high (many people earn the full 10%+), due to the many hints/help available, the tutorial nature of the programs, the opportunity to earn extra credit/bonus points, and because there is no time limit.

However, if you wish to opt out of *Sapling*: you may do so with no penalty to your course mark. If you let me know at the beginning of the semester that you do not wish to participate in this aspect of the course, I will redistribute your marks as shown in the evaluation scheme on page 3. To be on the "**OPT-OUT LIST**", you must contact me by email no later than **September 30th 2017**. Copy and paste these lines into your email message:

I wish to opt out of completing the online homework assignments.
Name:
Student Number:

Any requests to opt out of made after this date will be denied. Any request to opt back in after asking for an opt-out will also be denied after September 30th, 2017.

In-Class Participation

We will be using Echo360, a free program available everywhere on campus, to record in-class participation. This system uses feedback collected from your cellphone or any web-enabled device when answering questions in class. By bringing your devices to class and participating in the in-class questions, you will earn up to **5%** of your final grade, according to the following table:

Lectures Attended	0 – 7	8 – 9	10 – 12	13 – 15	16 – 18	19 – 24
Score	0/5%	1/5%	2/5%	3/5%	4/5%	5/5%

You will receive an email invitation to join Echo360 before the semester begins. More information about this program will be given in the first lecture.

DGD Two-Stage Quiz

In lieu of traditional evaluation formats, the quiz and midterms will be given as two-stage exercises. In a two-stage exercise, you will be given a small set of questions/problems to solve. The period is divided into two parts: Stage 1 (about 60% of the allotted time period) and Stage 2 (about 40% of the time period). In Stage 1, you work on the problem set individually, and submit your responses individually. During Stage 2, you will be given a similar problem set, and then will work collaboratively in a group (of 3 or 4 students), submitting a single set of responses for the entire group. Your final score on the exercise is a combination of your two results (individual and group work, 75%:25%)

The DGD quiz is meant to give you a feel for the Two-Stage format before the midterms. It will be worth **4%** of your final grade and take place during your assigned DGD period, during the week of **October 2nd**. Therefore, you must attend your assigned DGD that week. As mentioned above, all other DGD periods are optional.

More details on two-stage exercises will be given during the first lecture. For students registered with Access Service, we will discuss at the beginning of the semester the various options for accommodating two-stage exercises.

Two-Stage Saturday Midterms and the Final Exam

There will be two midterms (**Saturday October 14th and Saturday November 18th**), each worth **14% – 16%** of your final mark. The content and location of each test will be mentioned in class. Tests are *not* cumulative. Data sheets, containing formulae, the periodic table etc. will be provided for all tests and for the final exam. Copies of these sheets are available on the course website.

Final exam dates and locations will be posted later in the term. Your final exam will be a *traditional cumulative exam* and will be worth **28% – 34%** of your final mark. More information about the final exam will be given later in the semester.

To assist you in studying, tests from previous years are also posted on the course website. However, please note that the material covered on a given test may vary from one year to the next.

Academic Integrity:

If you are caught cheating or allowing someone else to copy your work during a test or exam, you will be removed from the examination room and reported to the faculty. Penalties range from failure of the course to expulsion from the University. Don't risk it – your whole future could be affected! Keep your paper covered so others cannot copy your work, otherwise you may be accused of cheating by allowing them to copy!

Grading System:

The University of Ottawa uses a 10-point grading system. This means that you will obtain a final letter grade, based on the sum of your scores in the evaluation scheme.

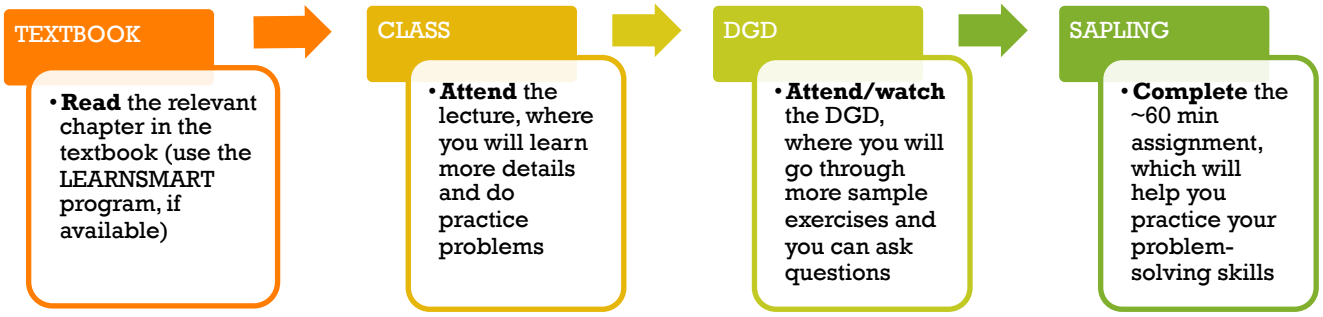
Overall Percent	>90%	85 – 89%	80 – 84%	75 – 79%	70 – 74%	65 – 69%	60 – 64%	55 – 59%	50 - 54%	40 – 49%	< 39%
Letter Grade	A+	A	A–	B+	B	C+	C	D+	D	E	F
Grade Point	10	9	8	7	6	5	4	3	2	1	0

www.uottawa.ca/administration-and-governance/academic-regulation-10-grading-system

It is important to take a moment here to emphasize the relative weights of the different components of the course. You will realize, for example, that a single question on an assignment is perhaps worth 0.1%, whereas a single question on the final exam may represent 1 – 2% of your overall grade. Therefore, budget your time (and your effort) appropriately!

Studying:

Each week's material can be covered following a 4-part schedule:



Additionally, I will be recommending practice problems (not graded) from each Chapter we will cover. Feel free to work through these problems at any point in the schedule. Remember that the key to doing well in chemistry is to PRACTICE SOLVING PROBLEMS. Do NOT focus on memorization – you will be given all of the relevant data and equations anyway! Instead, be sure you *understand* the chemistry concepts behind the problems.

More tips on succeeding in CHM1311 are available on the course website under "Study Tips".