

# Introductory Chemistry --- CHM 103

## Course Information and Syllabus

### Fall Semester, 2016

#### Instructor

George W. Dombi, PhD

Phone: (401) 874-2384

Office Hours: 12 noon – 2 pm Monday – Friday or by appointment.

Email: [Gdombi@chm.uri.edu](mailto:Gdombi@chm.uri.edu)

Office: 115A Beaupre Hall

**SI Leader:** Topaz Szewczok

Email: [TopazS@chm.uri.edu](mailto:TopazS@chm.uri.edu)

**SI Meeting:** Wednesday 4:30-6:00 pm, TBA.

Thursday 5:30-7:00 pm, TBA.

#### Required Lecture Materials

1) **Textbook:** Introductory Chemistry for Today (Seager/Slabaugh, 8th edition)

2) **OWLv2** on line web learning system; purchase with text book.

Students of this course need key code:

<https://login.cengagebrain.com/course/E-HY7W3UGH2DR2Q>

3) Turning Technologies **NXT clicker**; purchase in Book Store (**Rebate** available for your clicker). **Register** your clicker ID in Sakai.

4) CHM 103 **Skills Practice book** purchase at Chemistry Stock room, 210 Pastore Hall.

5) Scientific calculator with log and exponent functions.

Calculators will not be provided; student will NOT be allowed to share during exams.

6) Students are expected to print their own copies of course documents.

#### Class Meetings

Section 001: Tuesday and Thursday, 9:30 – 10:45 AM 100A Beaupre

Section 002: Tuesday and Thursday, 3:30 – 4:45 PM 100A Beaupre

Do not miss lecture. We use clickers during lecture to take attendance and answer class related question; the points go towards homework. It is in your best interest to take notes during lecture. Taking notes will aid you in learning the material and doing well on the exams. Please take notes by hand during class and not by computer as I will post a copy of the slides later on Sakai and using the computer will distract you. Your behavior in the lecture hall says a lot about your dedication as a student. Please turn off all cell phones and audible beepers before entering the lecture hall. Please arrive on time and do not walk out early. Please refrain from random computer use and idle chatter in the classroom; it is discourteous and distracting to your classmates.

## Course Learning Objectives

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CHM 103 is a general education science course that serves students from many disciplines including: textiles sciences, nursing, nutrition and dietetics, exercise science, kinesiology, physical education, and physical therapy. The course is designed to advance students' factual scientific knowledge and to also increase their thinking competency and computational skills identified as essential to success in their discipline. These skills include: obtaining and evaluating the data and information required to address a problem, identifying relevant approaches and recognizing an appropriate strategy, correctly implementing a problem-solving process, critically evaluating the outcome of that process, and clearly communicating the final result.

Topics include: matter and measurements; atomic structure; valence electrons and periodic law; inter-particle forces; states of matter; reactions and stoichiometry; solubility and solutions; reaction rates and equilibrium; acids, bases, and pH.

Learning outcomes for these topics are provided in the *CHM 103 Skills Practice Book*.

## Hints for Success - PPP method (Prepare, Participate, Practice)

**PREPARE: - Before class: Read the text material** in preparation for the next class as listed in the syllabus. **Review previous class notes. Prepare a list of questions about unclear topics and bring to class.** Complete and submit the assigned **OWLv2 homework exercises** daily. The OWLv2 system is designed to HELP STUDENTS LEARN. Students will receive credit for a total of **420** Homework problems. OWL assignments include recommended tutorials and problem sets. Try to learn as much as you can with the OWLv2 problems. Students will need to stay on track and on time with the OWLv2 homework. Each assignment will have a due date that corresponds with the timing of each lecture topic. Ample time is provided to complete each assignment. Since the OWLv2 system is intended to be a key learning task in this course, the assignments may be worked in student study groups or with help from a tutor or a friend as open book exercises.

The **Skill Checks** tool in Sakai will probe your pre-lecture understanding of key concepts, and push you to think carefully about the new skills you're learning. Similar to OWL, these will consist of "pooled" questions – a set number of questions will be selected at random from a larger pool each time you open the Skill Check. After you've completed (and received credit for) a Skill Check, you can re-open it to answer a different set of questions, and "skill-drill" until you can answer each question correctly. Completing Skill Check problems earns points towards your **420** Homework problems.

**PARTICIPATE:** - **During class: Take notes, ask questions and respond to my questions.** Feel free to ask any question about the subject even a “stupid” one. If you are unsure what to do or what was said, so are others. Ask the question if not for yourself then for your fellow students. **NXT or QT clickers** will be utilized in class as one of the forms of in-class response. Be sure to register your clicker, in the Turning Technologies section of the CHM 103 SAKAI homepage. I will award 1 point for each correct clicker answer given in class and apply it to your OWLv2 homework account for work there.

**PRACTICE:** - **After class: Reread your notes** within 24 hours of the lecture and **fill-in any blanks.** Make a friend and check their notes to see if you missed anything. Look over the appropriate pages in the Skills Book and read them to fill-in any blanks. **Write a question in the margin** that will summarize each section. Answer these questions as you study the next day. **Do the assigned OWLv2 homework** by Sunday at 11:55 pm.

## On-Line Technology

**SAKAI:** Sakai is the University of Rhode Island, campus-wide class-room management tool. Nearly all classes at URI have a web site on Sakai as does CHM 103. Students should see a course tab for CHM 103 Introductory Chemistry Lecture when the main portal of Sakai <https://sakai.uri.edu/portal> is opened with your campus user-name and password. The CHM 103 website on Sakai will be the main communication tool for class-wide announcements generated by me. Grades will be kept on Sakai. Students will be able to download old quizzes, and relevant videos from the Lessons section of Sakai.

Students will have to register their NXT or QT clickers on Sakai using the ResponseCard tab, which is found under the Turning Technologies button on the left-hand edge of the website. Students should register their clicker using the 6 character clicker ID number, please note that 0 is a zero and not an O, otherwise a bad format error will ensue. The clicker will be used in CHM 103 class daily and during exams. You should bring it to all our classes.

**OWLv2 usage:** On-line Web Learning, OWLv2, is a product of Cengage Company, who makes our text book. Homework assignments for CHM 103 will be completed in OWLv2. Students will need to register in OWL using the registration card, that came inside the textbook. It is possible to purchase a card alone from the bookstore or on-line if you already have a text book. OWLv2 will be the main communication tool for homework related questions from students to me using my email address listed above. Students can get to the main portal of OWLv2 at: <http://www.cengagenow.com> At this website students choose my class CHM 103, Fall 2016.

## Cheating

All forms of academic dishonesty are a violation of the University Honor Code and are strictly forbidden. You must NOT cheat during exams and Not even give the appearance of cheating. During an exam, I may ask a student to move to another seat. You should just move; someone else may be looking at your test answers. You must not change test answers for regrading. But you may ask me to check an exam if you think I have made an error it totaling the sums of the grade. A student who commits academic dishonesty will receive a failing letter grade for the exam and a possible failing grade for the course. Further sanctions may be imposed by the College Dean.

## Grading Policy

Each student's lecture course grade will be assigned by me based on:

4 Cumulative Mid-Term Exams (15 % each)	= 60 %	(480 pts)
OWL Homework, Skill Checks and Clicker Usage	= 15 %	(120 pts)
1 Cumulative Final Exam (25 %)	= 25 %	(200 pts)
<b>Total</b>	<b>= 100 %.</b>	<b>(800 pts)</b>

Grading will be as follows:

- at least 90% guarantees an A-, 93% for an A
- at least 80% guarantees a B-, 83% for a B, 87% for a B+
- at least 70% guarantees a C-, 73% for a C, 77% for a C+
- at least 60% guarantees a D, (there is no D-), 67% for a D+
- less than 60% guarantees an F.

Students with valid permission: including a written document concerning a medical or URI team or club related sports event or military leave, can apply to me to make up a missed Mid-term exam. In valid permission cases, I may arrange for an alternate testing date or I may replace the missing grade with the Final Exam grade. No student may just drop an exam and expect me to replace the grade by averaging other scores without a valid permission. If a student misses two or more Mid-term exams, you will need to repeat the course. All students must take the Final Exam.

Alternate testing is available for students with a documented disability. These students should contact me as early as possible in the semester to make arrangements for reasonable accommodations, as indicated by the Disability Services for Students Office. Students can anticipate that their graded exam papers will be returned in class *at least one full week after* the exam date. In the interim, students should not inquire as to the status of their test papers. Exam scores will also be communicated to students at the earliest opportunity through the Sakai Gradebook.

There are **NO extra credit** assignments given, but there are more than 550 OWL problems from which to select in order to get **420** in case you miss some. Students need to successfully complete **420** Homework points, which are a combination of OWLv2, Clicker and pre-class Skill check points. This will be divided by 3.5 to get the 120 Homework points mentioned above. If a student successfully completes more than **420** Homework points that is good, but it will still be limited to 120 maximum Homework points.

#### Important Fall Semester Deadlines:

- Last day of eCampus open add period: Tuesday, September 13th.
- Last day of eCampus add with permission number: Tuesday, September 20nd.
- Last day for students to drop courses via eCampus with no transcript designation: Wednesday, September 28th
- Last day for students to drop courses via eCampus (with drop designated on transcript): Wednesday, October 19th
- Freshman mid-term grades posted in eCampus: Tuesday, October 25th

CHM 105 Lab grades are separate and will be determined by the lab instructor.

## Introductory Chemistry 103 - Course Schedule for Fall Semester, 2016

Week #	Tuesday	Thursday
1	<b>9/06</b> <b>No Classes – Advising Day</b> <b>HW:</b> Register Clicker, Do OWLv2 Intro	<b>9/08 - Lesson 1 - Gen Course information</b> <b>Ch 1: Matter, Measurements, Calculations</b> <b>HW:</b> Math 1-2 and EOC 1.1
2	<b>9/13 - Lesson 2</b> <b>Ch 1: Matter Measurements Calculations</b> <b>HW:</b> Math 3, and 1.2, 1.4, 1.6, and 1.7	<b>9/15 - Lesson 3</b> <b>Ch 1: Matter Measurements Calculations</b> <b>HW:</b> 1.8, 1.9, 1.11 and EOC 1.2
3	<b>9/20 - Lesson 4</b> <b>Ch 1: Matter Measurements Calculations</b> <b>HW:</b> Additional and EOC 1.3	<b>9/22 - Lesson 5</b> <b>Ch 2: Atoms and Molecules</b> <b>HW:</b> Math 4, and 2.1, 2.2, 2.3, 2.4 and EOC 2.1
4	<b>9/27 - Last Day to Drop Class - 9/28.</b> <b>Ch 2: Lesson 6 - Atoms and Molecules</b> <b>HW:</b> 2.5, 2.6, 2.7, Additional and EOC 2.2	<b>9/29 - Lesson 7</b> <b>EXAM 1 Chapters 1-2</b> <b>HW:</b> Finish what you got open.
5	<b>10/04 - Lesson 8</b> <b>Ch 3: Electronic Structure, Periodic Law</b> <b>HW:</b> 3.1, 3.2, 3.3 and EOC 3.1	<b>10/06 - Lesson 9</b> <b>Ch 3: Electronic Structure Periodic Law</b> <b>HW:</b> 3.4, 3.5, 3.6 and EOC 3.2
6	<b>10/11 - Lesson 10</b> <b>Ch 4: Forces Between Particles</b> <b>HW:</b> 4.1, 4.2, 4.3 and EOC 4.1	<b>10/13 - Lesson 11</b> <b>Ch 4: Forces Between Particles</b> <b>HW:</b> 4.4, 4.5, 4.6, 4.8 and EOC 4.2
7	<b>10/18 - Lesson 12 Last Day to Withdrawal</b> <b>Ch 4: Forces Between Particles</b> <b>HW:</b> Math 5 and 4.9, 4.10, 4.11 and EOC 4.3	<b>10/20 - Lesson 13</b> <b>Ch 5: Chemical Reactions</b> <b>HW:</b> 5.1, 5.3, 5.4, 5.5, 5.6 and EOC 5.1
8	<b>10/25 - Lesson 14</b> <b>Ch 5: Chemical Reactions</b> <b>HW:</b> 5.8, 5.9, 5.10, 5.11 and EOC 5.2	<b>10/27 - Lesson 15</b> <b>EXAM 2 Chapters 3-5</b> <b>HW:</b> Finish what you got open.
9	<b>11/01 - Lesson 16</b> <b>Ch 6: States of Matter</b> <b>HW:</b> Math 6, and 6.1, 6.2, 6.6, 6.7,6.8, EOC 6.1	<b>11/03 - Lesson 17</b> <b>Ch 6: States of Matter</b> <b>HW:</b> 6.9, 6.12, 6.13, 6.15 Additional, EOC 6.2
10	<b>11/08 - Lesson 18</b> <b>Ch 7: Solutions and Colloids</b> <b>HW:</b> 7.1, 7.2, 7.3 and EOC 7.1	<b>11/10 - Lesson 19</b> <b>Ch 7: Solutions and Colloids</b> <b>HW:</b> 7.4, 7.5, 7.6 and EOC 7.2
11	<b>11/15 - Lesson 20</b> <b>Ch 7: Solutions and Colloids</b> <b>HW:</b> 7.7, 7.8 and Additional and EOC 7.3	<b>11/17- Lesson 21</b> <b>EXAM 3 Chapters 6-7</b> <b>HW:</b> Finish what you got open.
12	<b>11/22 - Lesson 22</b> <b>Ch 8: Reaction Rates and Equilibrium</b> <b>HW:</b> 8.1, 8.2, 8.3, 8.4, 8.5, 8.6 and EOC 8.1	<b>11/24 - Lesson 23</b> <b>No Classes – Thanksgiving Day Holiday</b> <b>HW:</b> Finish what you got.
13	<b>11/29 - Lesson 24</b> <b>Ch 8: Reaction Rates and Equilibrium</b> <b>HW:</b> Math 7, 8.7, 8.8, Additional, EOC 8.2	<b>12/01 - Lesson 25</b> <b>Ch 9: Acids, Bases and Salts</b> <b>HW:</b> 9.2, 9.3, 9.4, 9.5, 9.9 and EOC 9.1
14	<b>12/06 - Lesson 26</b> <b>Ch 9: Acids, Bases and Salts</b> <b>HW:</b> 9.11, 9.12, 9.13, Additional, EOC 9.2, 9.3	<b>12/08 - Lesson 27</b> <b>EXAM 4 Chapters 8-9</b> <b>HW:</b> Finish what you got open.
15	<b>12/13 – Reading Day</b> <b>Review session,</b> Come to your normal class period. <b>HW: Finish OWL problems.</b>	<b>12/15 - FINAL EXAM</b> <b>Section 001: 8:00-11:00 am, 110A Beaupre</b> <b>Section 002: 3:00 - 6:00 pm, 110A Beaupre</b> <b>HW: Finish OWL problems.</b>