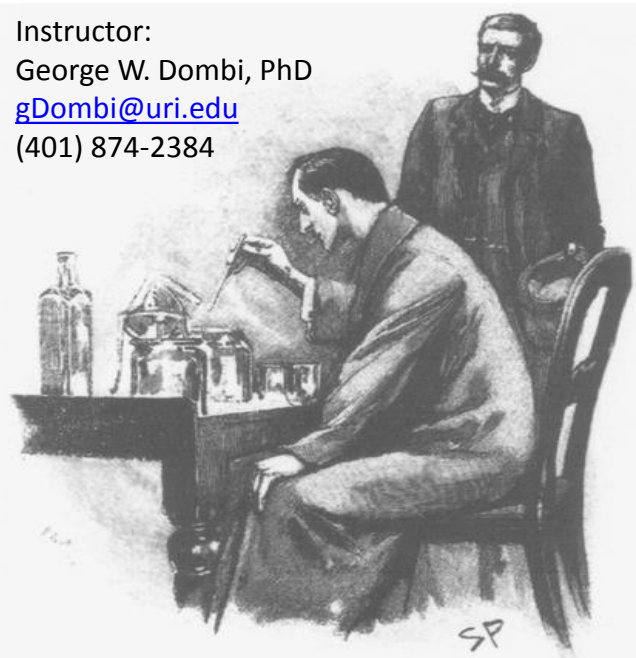


CHM-100x Learning to Learn Chemistry



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Course Objectives and Outcomes:

CHM-100x is designed to be a one credit, Chemistry review, Learning to Learn, knowledge outcomes based course.

CHM-100x is tailored for students to take just before the start of a new chemistry course or when they want a review of chemistry fundamentals from a previous high school chemistry course.

Students in CHM-100x will refresh, renew and revitalized their chemistry skills and learning skills as they approach their next chemistry course.

CHM-100x is a vehicle to launch you on the path of self-growth; to help you say “YES!” to your own success. We will show you how to achieve mastery of the tools need to learn college chemistry. Your efforts to succeed in chemistry will grow your self-confidence and will improve the quality of your learning. Please make the most of it!

Chemistry Objectives:

We will work on and review ten areas of chemistry. CHM 100x is a Chemistry review, Learning to Learn, science knowledge outcomes course tailored for students who want to refresh, renew and revitalized their chemistry and life skills as they approach their next chemistry course.

Chemistry Topics include:

- 1) Matter of Measurements;
- 2) Unit Analysis;
- 3) Significant Figures;
- 4) Atoms, Isotopes and Ions;
- 5) Periodic Law;
- 6) Naming Compounds;
- 7) Moles and Molar Mass
- 8) Balanced Chemical Equations;
- 9) Limiting Reactants;
- 10) Solution Stoichiometry.

Learning to Learning Objectives:

Learn powerful strategies to achieve better grades in chemistry, to become an effective life-long learner, and to develop your unlimited potential as a learner. Learn how to identify and change self-defeating habits. Learn effective techniques for managing your life while emotions go up and down thus increasing your inner peace and compassion.

Learning to Learn Topics include:

- 1) Take charge of your learning;
- 2) Increase self-motivation;
- 3) Improve self-management;
- 4) Develop mutually supportive relationships;
- 5) Create powerful new behaviors and beliefs;
- 6) Maximize your learning;
- 7) Develop greater emotional maturity;
- 8) Raise your self-esteem;
- 9) Write and Read more effectively;
- 10) Improve creative and critical thinking skills.



Required Learning Materials

- 1) *CHM 100x site within the Brightspace platform:* which will contain: Lessons, Skills Checks (Quizzes), Assignments, Discussions
- 2) *Text book: Foundations of Chemistry: Applying POGIL Principles*, Hanson, Goodwin, and Philips,

5th Edition;” purchase from Pacific Crest.com about \$55.

<http://www.pcrest2.com/portal/index.html>

- 3) *Scientific calculator:* Logarithm and exponent functions needed for pH calculations.
- 4) *Note book and pens.*

Technology Requirements

To successfully complete this course, each student will need access to a computer with a reliable, high-speed internet connection and appropriate system and software to support the Brightspace

learning platform. (One can use computers in the URI Library as well.)

Brightspace Help

- LMS Platform Access: <https://brightspace.uri.edu>
- Resource Page: <https://web.uri.edu/brightspace/>.

Class Protocol

The Brightspace Learning Management System (LMS) is the University of Rhode Island, campus-wide, class-room management tool. Enrolled students should see a course tab for CHM 100x Learning to Learn Chemistry when they open Brightspace with their campus user-name and password, <https://brightspace.uri.edu/d2l/home>.

The CHM 100x Brightspace website will serve as our classroom for this fully-online course. Grades will be kept on Brightspace. Students may wish to refer to URI's [Brightspace tutorials](#) before starting.

CHM 100x is scheduled to meet in the J-term from 9:00 am to noon M,T,W,Th and from 10:00 am to noon

on F. These classes will be held on line in a synchronous format using Zoom channel 267-844-1472. Two – three activities will be available each week in Brightspace.

Students should take notes during the class meetings. This will aid your learning and help you to do well on exams. There will be 2, one-hour, mid-term exams and a cumulative final. In this online learning environment, regular log-ins and active participation in Brightspace will be monitored as homework points are generated. The Schedule below gives suggested dates to do those activities. Following those suggestions, you will keep up with the class in a timely manner.



Course Work Items

Brightspace LMS Skill Checks

1. Boot Camp exercises in Brightspace precede each lecture during this j-term class. Boot Camp activities will help you to review your chemistry skills and introduce you to the class culture. Each Boot Camp activity will contain a 200-300 word lesson, followed by 1 or 2 video lessons, then a quiz called a Skill Check. Skill Checks will probe your understanding of key concepts, and push you to think carefully about the review skills you're learning. Each quiz is randomly generated from a

pooled set of questions, each time you open the Skill Check. Each Skill Check can be taken up to seven times. Feedback is provided for any questions that was missed or incorrectly answered. After studying the feedback, you should re-take the Skills Check until you're confident you've maximized your learning, and can answer each question correctly. These points, and a capstone practice exam, will be part of the grade in this course.

2. Text book Key Questions and Exercises precede follow each lecture during this J-term class and make-up part of your homework points. These Key Questions and Exercise activities will also probe your understanding of key concepts, and push you to think carefully about new skills. You can work collaboratively to answer these questions. Fill them out in the *Foundations of Chemistry* text

book and send a copy to me using your cell phone. I may send so back if I want more work done on them, which you can then resubmit. Many students record notes on these questions in their Text Book since they are very similar to those types of problems included in both the multiple-choice parts of exams and the problem solving questions part of the same exams during the semester.

3. Learning to Learn activities includes:

- 1) A written set of Self-growth goals, Week 1. What you want to carry away from this experience both in chemistry and in your life.
- 2) A Reading Log with critical thinking questions from *Foundation of Chemistry* text book covering: Units of Measurement, Unit Analysis, Significant Figures, Atoms, Isotopes, and Ions, The Periodic Table, Naming Compounds, Moles and Molar Mass, Balanced Chemical Equations, Limiting Reactants and Solution Stoichiometry.

- 3) A set of Addressing and Avoiding Errors forms for each of the two exams taken in this class.
- 4) A 5-page, typed Life Vision Portfolio, Week 2. this will include a self assessment of your academic strengths and concerns. While classes previously have troubled you and why.
- 5) Create 2 exam question for Exam 2 and Exam 3.
- 6) A Success Plan Portfolio, Week 3. What you have learned by using these methods in Chemistry and how you will carry those into other courses and beyond into the next 5 years.



Hints for Success – PPP method (Prepare, Participate, Practice)

PREPARE - Before class: Read the text material in preparation for the class as listed in the syllabus. Review previous class notes. Record questions about unclear topics. Complete and submit the assigned pre-lecture Boot Camp activities found in each daily Brightspace based Lessons. Boot Camp quiz in Brightspace Lessons will probe your pre-lecture understanding of key concepts, and push you to think carefully about the

new skills learning. Try to learn as much as you can with these pre-lecture Boot Camp quizzes. There are 7 questions before each lecture and they consist of “pooled” questions – selected at random from a larger pool each time you open a Boot Camp quiz Skill Checks. After you’ve completed (and received credit for) a quiz, you can re-open it to answer a different set of questions, and “skill-drill” until you can answer each question correctly.

PARTICIPATE - During video lecture: Take notes and email any of your questions to me. Feel free to email any question about a chemistry 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. The Text Book Exercises and Questions

and the Boot Camp questions are part of your Homework. I will keep a running account of your total score. Your job is to get to a semester total of 600 total, combined Homework points. Boot Camp points and Learning to learn points will be added together in order to help you reach 600 total points. You should try to gain 200 points a week from all sources.

PRACTICE: - After video lecture: Reread your notes within 24 hours of the lecture and fill-in any blanks. Re-watch the video and look over the appropriate pages in the Text Book 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 daily Boot Camp activities in Brightspace and the Text book chemistry and Learning to learn activities. All are

due by 11:50 pm daily. Activities may be worked in student study groups and/or with help from a tutor, or as open book exercises.

Students will need to receive credit for a total of 600 Homework problems from a combination of Boot Camp pre-lecture quizzes in Brightspace, and post-class text book points as well as Learning to learn assignments. There are over 700 points in these combined sources, so student do not need to do every problem.

Academic Honesty

All forms of academic dishonesty, like cheating and plagiarism, are serious academic offenses and violations of the University Honor Code and are strictly forbidden. You must NOT cheat during exams and you must Not even give the appearance of cheating. Students should expect that disciplinary action will be taken. URI policy on academic honesty is detailed in the University Student Handbook, and is summarized here: Students are expected to be honest in all academic work. A student's name on ANY written work shall be regarded as assurance that the work is the result of the student's own thought and study. Work should be stated in the student's own words, and produced without assistance or properly attributed to its source. The following are examples of academic dishonesty:

- Unauthorized possession or access to exams.
- Unauthorized communication during exams.
- Unauthorized use of another's work or preparing work for another student.
- Taking an exam for another student.
- Altering or attempting to alter grades.
- The use of notes or electronic devices such as computers, or cell phones to gain an unauthorized advantage during exams.
- Facilitating or aiding another's academic dishonesty.

When there is an allegation of academic dishonesty, the instructor may: Fail the student for the assignment, request conduct action, or recommend that the student fail the course. 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:

2 Cumulative Mid-Term Exams (20 % each).....	= 40 %	(200 pts)
Homework Score (Boot Camp, Text book, Learning to Learn).....	= 20 %	(100 pts)
1 Cumulative Final Exam (40 %).....	= 40 %	(200 pts)
Total.....	= 100 %.	(500 pts)

Grading will be as follows:

- at least 90% guarantees an A (A- or A)
- at least 80% guarantees a B (B-, B or B+)
- at least 70% guarantees a C (C-, C or C+)
- at least 60% guarantees a D (D or D+)
- less than 60% guarantees an F.

There are NO extra credit assignments. Completion of the full **600** Homework points will be scaled to 100 point in order to equal an exam. Students with valid permission can apply to me to make up a missed Mid-term exams. In some valid permission cases, I may replace the missing grade with the average of your remaining mid-terms or

final exam . No student may just drop an exam and expect me to replace the grade by averaging without a valid, written medical, military or URI team or club related sports event. If you miss two or more Mid-term exams, you will need to repeat the course. All students must take the Final Exam.

Students need to successfully complete **600** Homework points using a combination of Boot Camp, Learning to learn and Text Book points. This will be divided by 6 to get the 100 Homework Score mentioned above. If a student successfully completes more than **600** Homework points that is good, but it will be limited to 100 maximum Homework Score.

Important J-term, 2022, Semester Deadlines.

- Classes begin:Monday, Jan 03.
- Classes do not meet, Offices are closed:Monday, Jan 17.
- Last Day of Classes:Friday, Jan 21.
- Final Grades due in eCampus by 12:00 noon:Monday, Jan 24.

Lab There is NO LAB attached to this course.

Learning to Learn Chemistry --- CHM 100x

Schedule: J-term 2022

Week #	Monday	Tuesday	Wednesday	Thursday	Friday
1	<p>1/03: Lesson 1 – Units of Measurement. Read “Start Here” Brightspace. Do pp 01-05 in text book. Start L2L activity 1 - A written set of Self-growth goals Start L2L activity 2 – Reading Log. Do Boot Camp lesson -9.</p>	<p>1/04: Lesson 2 - Unit Analysis. Do pp 06-11 in text book. Continue L2L activity 1 - A written set of Self-growth goals. Continue L2L activity 2 – Reading Log make vocabulary list. Do Boot Camp lesson -8.</p>	<p>1/05: Lesson 3 - Significant Figures. Do pp 12-16 in text book. Continue L2L activity 1 - Self-growth goals. Continue L2L activity 2 – Reading Log, make a vocabulary list. Do Boot Camp lesson -7.</p>	<p>1/06: Lesson 4 – Atoms, Isotopes, and Ions. Do pp 17-22 in text. Continue L2L activity 1 - Self-growth goals. Continue L2L activity 2 – Reading Log, make a vocabulary list. Do Boot Camp lesson -6.</p>	<p>1/07: EXAM 1 – on Lessons 1 – 4 Lesson 5 – Share work on Self-growth goals in class. Finish work on Reading log by creating a vocabulary matching exam to pass around and do a quiz bowl.</p>
2	<p>1/10: Lesson 6 - The Periodic Table Do pp 28-31 in text Start L2L activity 4 – Make Life Vision Portfolio. Do L2L activity 3 - Addressing and Avoiding Errors form for Exam 1, for extra credit. Do Boot Camp lesson -5.</p>	<p>1/11: Lesson 7 – Naming Compounds Do pp 32-36 in text. Continue L2L activity 4 - Life Vision Portfolio. Start L2L activity 5 – Write 2 exam questions. Continue L2L activity 2 – Reading Log, vocabulary list. Do Boot Camp lesson -4.</p>	<p>1/12: Lesson 8 - Moles & Molar Mass Do pp 44-50 in text. Continue L2L activity 4 - Life Vision Portfolio. Continue L2L activity 5 – Write 2 exam questions. Continue L2L activity 2 – Reading Log, vocabulary list. Do Boot Camp lesson -3.</p>	<p>1/13: Lesson 10 - Balanced Chemical Equations Do pp 58-65 in text book. Continue L2L activity 4 - Life Vision Portfolio. Continue L2L activity 5 – Write 2 exam questions. Continue L2L activity 2 – Reading Log, vocabulary list.</p>	<p>1/14: EXAM 2 - on Lessons 6 - 8 Lesson 9 – Share work on 5-page Life Vision Portfolio in class. Finish work on Reading log create a vocabulary matching exam to pass around and do a quiz bowl. Finish work on exam questions</p>
3	<p>1/17: NO CLASS Do L2L activity 3 - Addressing and Avoiding Errors form for Exam 2, for extra credit.</p>	<p>1/18: Lesson 11 – Limiting Reactants – part 1 Do pp 66-69 in text book. Continue L2L activity 2 – Reading Log with vocabulary list. Start L2L activity 6 – Write a Success Plan Portfolio. Boot Camp lesson -2.</p>	<p>1/19: Lesson 12 - Limiting Reactants – part 2, Solution Stoichiometry– pt 1 Do pp 70-72 and 77-80 in text book. Continue L2L activity 2 – Reading Log with vocabulary list. Continue L2L activity 6 – Write a Success Plan Portfolio. Boot Camp lesson -1.</p>	<p>1/20: Lesson 13 – Sol’n Stoichiometry – part 2 Do pp 81-83 in text book. Continue L2L activity 2 – Reading Log with vocabulary list. Continue L2L activity 6 – Write a Success Plan Portfolio. Do Boot Camp lesson -0.</p>	<p>1/21: FINAL EXAM On ALL Lessons Lesson 14 – Share work on Success Plan Portfolio in class. Finish work on Reading log create a vocabulary matching exam to pass around and do a quiz bowl.</p>