

Note to prospective students: This syllabus is intended to provide students who are considering taking this course an idea of what they will be learning. A more detailed syllabus will be available on the course Canvas site for enrolled students and may be more current than this sample syllabus.

CH 121: General Chemistry

Dr. Marita C. Barth

This course combines approximately 150 hours of instruction, online activities, and assignments for 5 credits.

In this course, students will acquire a fundamental understanding of chemical reactions and scientific measurements, and become familiar with the principles, laws, and equations governing our understanding of chemical combination. Each student will be able to competently discuss concepts and solve problems relating to: matter and measurement, the language of chemistry, stoichiometry, solutions and concentration, gases, energy, atomic structure, and electron configuration.

Course Outline:

Chapter 1	Matter, Measurement, and Problem Solving
Chapter 2	Atoms and Elements
Chapter 3	Molecules, Compounds, and Chemical Equations
Chapter 4	Chemical Quantities and Aqueous Reactions
Chapter 5	Gases
Chapter 6	Thermochemistry
Chapter 7	The Quantum Mechanical Model of the Atom

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CH 121e Grade Sheet:

You might want to print out this page to help you keep track of your class requirements.

All times listed are for the Pacific Time zone. If you are in a different time zone, please be sure you've adjusted accordingly. If not otherwise specified, all items are due by 5 PM Pacific Time.

Action Item	Time/Date	Points	Your Score
Exams			
Midterm Exam	Mon - Wed Week 6	100	
Final Exam	Mon - Wed Finals Week	200 or 300	
Homework			
Intro to Mastering Chem	Week 1	5	
Chapter 1	Week 5	10	
Chapter 2	Week 5	10	
Chapter 3	Week 5	10	
Chapter 4	Week 5	10	
Chapter 5	Week 10	10	
Chapter 6	Week 10	10	
Chapter 7	Week 10	10	
Labs			
Lab 1a - Lab Techniques	Week 1	4	
Lab 1b - Error Analysis	Week 2	3	
Lab 1c - Spreadsheets	Week 3	3	
Lab 2 - Combustion	Week 5	10	
Lab 3 - Synthesis	Week 7	10	
Lab 4 - Metals & HCl	Week 8	10	
Lab 5 – Calorimetry	Week 9	10	
Quizzes			
Introductory Quiz	Week 1	4	
CH121 Pre-Quiz	Week 1	21	
Chapter 1 Quiz	Week 5	5	
Chapter 2 Quiz	Week 5	5	
Chapter 3 Quiz	Week 5	5	
Chapter 4 Quiz	Week 5	5	
Chapter 5 Quiz	Week 10	5	
Chapter 6 Quiz	Week 10	5	
Chapter 7 Quiz	Week 10	5	
Final Score		485	

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If you do better on the final (as a percentage score) than on the midterm exam, only the percentage score for the final will be counted. In this case, it will be scaled to a score of 300 points for your "Exams" score. This scoring method rewards improved performance; it will happen automatically without any action from you

Suggested Timeline / Topic Schedule

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Week	Topics/Reading Assignment	Laboratory Assignments
0/1	<p>Examine the CH 121 Canvas site</p> <p>Chapter 1 (<i>Matter, Measurement, and Problem Solving</i>)</p> <p>Textbook Units 1.1 - 1.8</p>	<p>Register for Mastering Chemistry (in Canvas course site)</p> <p>Register at http://www.onlinechemlabs.com/</p> <p>Find a final exam proctor and sign-up at: ecampus.oregonstate.edu/services/proctoring/</p> <p>Lab 1a: <i>Lab Techniques</i></p> <p>Lab 1b: <i>Error Analysis</i></p> <p>Homework: <i>Introduction to Mastering Chemistry</i></p>
2	<p>Chapter 2 (<i>Atoms and Elements</i>)</p> <p>Textbook Units 2.1-2.8</p>	<p>Lab 1c: <i>Spreadsheets</i></p>
3	<p><u>Begin Chapter 3</u> (<i>Molecules, Compounds, and Chemical Equations</i>)</p> <p>Textbook Units 3.1 - 3.11</p>	
4	<p><u>Finish Chapter 3</u> (<i>Molecules, Compounds, and Chemical Equations</i>)</p> <p>Textbook Units 3.1 - 3.11</p> <p><u>Begin Chapter 4</u> (<i>Chemical Quantities and Aqueous Reactions</i>)</p> <p>Textbook Units 4.1-4.7</p>	<p>Lab 2: <i>Combustion</i></p>
5	<p><u>Finish Chapter 4</u> (<i>Chemical Quantities and Aqueous Reactions</i>)</p> <p>Textbook Units 4.1-4.7</p>	<p>Lab 3: <i>Synthesis & TLC</i></p>
Proctored Midterm Exam in Week 6 covers above units!		

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6	<p><u>Begin Chapter 5</u> (Gases)</p> <p>Textbook Units 5.1 - 5.10</p>	
7	<p><u>Finish Chapter 5</u> (Gases)</p> <p>Textbook Units 5.1 - 5.10</p> <p><u>Begin Chapter 6</u> (Thermochemistry)</p> <p>Textbook Units 6.1 – 6.9</p>	Lab 4: <i>Metals & HCl</i>
8	<p><u>Continue Chapter 6</u> (Thermochemistry)</p> <p>Textbook Units 6.1 - 6.9</p>	
9	<p><u>Finish Chapter 6</u> (Thermochemistry)</p> <p>Textbook Units 6.1 - 6.9</p> <p><u>Begin Chapter 7</u> (The Quantum Mechanical Model of the Atom)</p> <p>Textbook Units 7.1 - 7.9</p>	Lab 5: <i>Calorimetry</i>
10	<p><u>Finish Chapter 7</u> (The Electronic Structure of Atoms)</p> <p>Textbook Units 7.1 – 7.9</p>	
Proctored Final Exam in Week 11 (Comprehensive!)		

Course Expectations:

- Completion of Work
 - Students are expected to be aware of all due dates as published in this syllabus, and complete work in a timely fashion. Late labs, quizzes, and exams are not

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accepted; late homework may be completed for partial credit as outlined in the homework section below.

- Students are expected to complete their own work as described in each portion of the “Course Components” section of this syllabus.
- Communications
 - Students are encouraged to communicate with the instructor and teaching assistants as often as questions on the material arise. Please review the Email Guidelines document for this course.
 - Students are expected to regularly check email for communication from their instructor. Students should check their OSU email account daily, or configure their account to forward to an email account that will be regularly checked.
 - Course announcements will be posted at least weekly. Students should either configure Canvas to receive ASAP (or daily) notification of new announcements, or should plan on checking the announcements for the course early each week.
- Technical Aspects
 - As an online course, it is the student’s responsibility to have access to adequate computing resources to utilize course materials and complete course work.
 - Multiple websites are used in completion of course materials. These sites may require students to download (free) plug-ins or otherwise configure their computer in order to function. Students should plan on accessing and configuring these sites as early as possible to allow time to seek technical support if necessary.
 - Technical issues are not considered a valid reason for missing due dates/times. If you do have technical issues, please report the issue to both the relevant site’s technical support *and* to the instructor as soon as possible. Please be as specific as possible when describing the issue, including the text of any error messages and screen captures when appropriate.

Course Components:

- Text
 - *Principles of Chemistry: A Molecular Approach* by Tro (3rd edition). Bundled with solutions manual and Modified Mastering Chemistry access code.

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- If you choose to purchase the book from a source other than the OSU Bookstore, please be aware that you are also likely to need to purchase a code for Modified Mastering Chemistry. Please take this into consideration when considering your purchasing options.
- **Note to prospective students:** Please check with the OSU Bookstore for up-to-date information for the term you enroll ([OSU Bookstore Website](#) or 800-595-0357). If you purchase course materials from other sources, be very careful to obtain the correct ISBN.
- Homework
 - Homework will be completed at the Modified Mastering Chemistry site. Access to the homework site is through the course Canvas site. Instructions for registration are provided in the Start Here - Course information module, on the “Course Information - Homework Registration” page.
 - Due dates are listed on the grade sheet above. Homework that is completed late, but before the start of the final exam window may be submitted for up to half-credit.
 - To earn full credit (10 points) for each Chapter’s assignment, you must get at least 7.5 of the 10 points possible based on Mastering Chemistry’s grading system. If you score less than 7.5 points on a Chapter’s assignment, your grade will be prorated.
 - Students are expected to do their own work on homework assignments. Students are allowed and encouraged to seek assistance in understanding how to approach and/or calculate the answers to homework problems. Students may **not**, however, obtain answers for the homework problems from other sources. Students who complete homework assignments using answers obtained from other sources will be reported to Student Conduct and face penalties on their assignments, as will any student who provided them with answers.
 - Mastering Chemistry provides “Adaptive Follow-Up” assignments that are tailored based on each students’ strengths and weaknesses in their previously submitted work. These follow-ups are available after each Chapter’s assignment has been completed. Assignments marked as Adaptive Follow-Up assignments are **not** mandatory and are **not** graded, but offer valuable practice for students on areas they might need extra practice in.
- Online labs
 - Located at <http://www.onlinechemlabs.com/>
 - Labs are an integral part of the course, and are graded.
 - There are 7 labs (3 introductory and 4 core labs) associated with CH121. The introductory labs (Labs 1a, 1b, and 1c) will be graded on completeness. For a lab

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to be considered complete, a *genuine attempt* must have been made at all of the questions. Answers such as “I don’t know” or strings of characters are not sufficient to for a lab to be considered complete.

- The core labs will be graded on a combination of completeness, correctness in numerical answers, and correctness in short essay answers.
 - Late labs will not be accepted.
 - Students are expected to do their own work on laboratory assignments. Students are allowed and encouraged to seek assistance in understanding how to approach and/or calculate the answers to questions on the labs. Students may **not**, however, obtain answers for the laboratories from other sources. Students who complete laboratory assignments using answers obtained from other sources will be reported to Student Conduct and face penalties on their assignments, as will any student who provided them with answers.
- Study aids (study guides, video, worksheets, practice exams)
 - *Study guides* break down each chapter into sections, and are intended to help you group the different course components together in a coherent fashion. Study guides include a checklist of items to do while studying a particular portion of the test, provide questions to think about during study of the material to help focus on important topics, and suggest problems from the book to work through for practice.
 - *Video modules* provide short video tutorials or demos on numerous topics. We cannot anticipate or solve all technical access issues, as local computer configurations and internet access vary greatly. If you have trouble viewing the videos, here are a few tips that may help:
 - Paste the video page link directly in your browser address bar, rather than opening the access page inside of the Canvas window.
 - Be sure that you have upgraded to the most recent version of the browser software you are using.
 - *Practice worksheets* are available and are keyed.
 - Practice *midterm and final exams* will be posted on Canvas. These provide excellent practice, and we strongly recommend that you take a practice exam under test conditions before your actual, proctored exam.
 - Study aids (study guides, worksheets, video modules, and practice exams) are important tools to help you understand the material in the course, but will not be collected or graded.
 - Quizzes
 - Quizzes are assigned and graded.
 - The Introductory Quiz is located in the Week One Quizzes module. Chapter Quizzes are located within each Chapter’s module.

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- The pre-quiz for the course is located in the Week One Quizzes module. The pre-quiz consists of 21 questions on material throughout the course; credit is awarded based on completion. The chapter module for Chapter 1 will become available after the pre-quiz has been completed. Since credit on the pre-quiz is based solely on completion, please answer the questions to the best of your ability **without** reading the material in advance or referring to any other materials.
- Quizzes can be located in the individual chapter modules. Quizzes for each chapter consist of five questions and are graded based on correctness. You have one attempt at each quiz, so please be sure that you're prepared to take each quiz before you open it.
- Quizzes will become unavailable after the due date. Please see the grade sheet above for due dates.
- It is strongly recommended that you record your calculations for the quiz questions, and be sure that you understand *how* to arrive at the correct answer for each quiz question.
- Students are expected to do their own work on quizzes. Students may **not**, obtain answers for the quiz questions from other sources. Students who complete quizzes using answers obtained from other sources will be reported to Student Conduct and face penalties on their quizzes, as will any student who provides another student with answers.
- Midterm Exam
 - The midterm exam *requires a proctor*. Your proctor must be registered with ECampus; you should set this up as soon as possible, or you will not be able to take your midterm. Your professor cannot do this for you. Info about acceptable proctors and a proctor registration form can be found at: <http://ecampus.oregonstate.edu/services/proctoring/>
 - The midterm exam is taken via the Canvas interface. You will need to take the exam on a computer with reliable internet access.
 - The midterm exam **must** be taken during the time period specified on page 2 of this syllabus.
 - The midterm exam *cannot be retaken, and cannot be stopped once started*.
 - The midterm exam consists of 25 multiple-choice questions and is worth 100 points (i.e., each question is worth four points).
 - The midterm exam must be completed within 80 minutes. The exam will autosubmit at the end of this 80 minute period.
 - Failure to arrange for an approved proctor is not a valid excuse for not taking the midterm exam.
 - A missed exam will receive a score of zero.
 - Allowed materials:
 - A scientific calculator (programmable calculators, graphing calculators, and cell phone-based calculators will *not* be allowed)

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- A printed exam cover sheet and periodic table (located in the “Course Documents” module on Canvas).
 - Blank scratch paper, pens and/or pencil
 - One 3” by 5” card with handwritten or typed notes on one side only
 - Any use of materials not on this list (including accessing of websites or other online resources) will result in a non-replaceable score of 0 on the exam, and will be reported to student conduct as an incident of academic dishonesty.
- The multi-day exam window is intended to accommodate a wide range of student schedules. Please schedule your exam as early as possible in this window to allow yourself time to address any technical or proctoring issues that might arise.
 - For the duration of the exam window, students may not communicate contents of the exam or exam answers to any other individual in any format. Students also may not receive such information prior to taking their exam. Any violations of this will be reported to Student Conduct and result in exam penalties.
- Final
 - The final exam *requires a proctor*. Your proctor must be registered with ECampus; you should set this up as soon as possible, or you will not be able to take your final. Your professor cannot do this for you. Info about acceptable proctors and a proctor registration form can be found at: <http://ecampus.oregonstate.edu/services/proctoring/>
 - The midterm exam is taken via the Canvas interface. You will need to take the exam on a computer with reliable internet access.
 - The final exam **must** be taken during the time period specified on page 2 of this syllabus. The final will only be available on the course website during this time period; there are no make-up exams or alternate test times.
 - The final exam is cumulative, consists of 40 multiple-choice questions, and is worth 200 points. It will be weighted more heavily toward material covered after the midterm.
 - You will have 1 hour and 50 minutes (110 minutes) to take the exam. The exam will autosubmit at the end of this period.
 - Failure to arrange for an approved proctor is not a valid excuse for not taking the final exam.
 - A missed exam will receive a score of zero.
 - Allowed materials:
 - A calculator (programmable calculators, graphing calculators, and cell phone-based calculators will *not* be allowed)
 - A printed exam cover sheet and periodic table (located under the “Course Documents” module on Canvas).
 - Blank scratch paper, pens and/or pencil
 - One 3” by 5” card with handwritten or typed notes on both sides
 - Any use of materials not on this list (including accessing of websites or other online resources) will result in a non-replaceable score of 0 on the

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exam, and will be reported to student conduct as an incident of academic dishonesty.

- The multi-day exam window is intended to accommodate a wide range of student schedules. Please schedule your exam as early as possible in this window to allow yourself time to address any technical or proctoring issues that might arise.
- For the duration of the exam window, students may not communicate contents of the exam or exam answers to any other individual in any format. Students also may not receive such information prior to taking their exam. Any violations of this will be reported to Student Conduct and result in exam penalties.
- If you do better on the final (as a percentage score) than on the midterm exam, only the percentage score for the final will be counted. In this case, it will be scaled to a score of 300 points for your "Exams" score. This scoring method rewards improved performance; it will happen automatically without any action from you.

Grading :

Success in this course often depends on the amount of time devoted to studying the material. This is a 5-credit course, and each credit is meant to reflect about 30 hours of effort over the course of the term (this works out to ~15 hours *per week* in a 10-week term). We recommend that you prepare to devote ample time to the study of this course while it is in progress. Good luck!

- Your point total is obtained by adding points from the exams, online homework, quizzes, and labs. These component point totals are indicated in the following table:

Component	Points
Midterm Exam	100
Final	200
Homework	75
Quizzes	60
Labs	50
Total	485

Remember that the midterm may be counted or not, depending on your final exam score.

- Your course grade is determined entirely from the total number of points accumulated. The following table provides the minimum number of points required to earn specific letter grades.

Grade	Points /485	%
A	446	92%
A-	432	89%
B+	417	86%
B	398	82%
B-	383	79%
C+	369	76%
C	349	72%

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C-	335	69%
D+	320	66%
D	301	62%
D-	291	60%
F	Less than 291	<60%

Instructor Contact Information:

Instructor: Dr. Marita C. Barth marita.barth@oregonstate.edu

ECampus Support: Chemistry.Ecampus@oregonstate.edu

Incompletes and Withdrawals:

- No incomplete grades are awarded in this course.
- Please note the deadlines for dropping courses and for course withdrawals (see <http://catalog.oregonstate.edu/ChapterDetail.aspx?Key=148>).
- The instructors and TAs are willing and eager to help you succeed in this course, and can also discuss your likely grade outcomes and options during the appropriate time window. Since enrollment space is limited, and course materials and assistance are available to all students throughout the term, late requests for drops or withdrawals will not be approved.

Accommodations for Students with Disabilities:

Accommodations for students with disabilities are determined and approved by Disability Access Services (DAS). If you, as a student, believe you are eligible for accommodations but have not obtained approval please contact DAS immediately at 541-737-4098 or at <http://ds.oregonstate.edu>. DAS notifies students and faculty members of approved academic accommodations and coordinates implementation of those accommodations. While not required, students and faculty members are encouraged to discuss details of the implementation of individual accommodations.

Academic Dishonesty:

You will be expected to conduct yourself in a professional manner. Academic dishonesty such as plagiarism and cheating will not be tolerated. Therefore, students are expected to be honest and ethical in their academic work. Academic dishonesty is defined as an intentional act of deception in one of the following areas:

- * cheating- use or attempted use of unauthorized materials, information or study aids,
- * fabrication- falsification or invention of any information,

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- * assisting- helping another commit an act of academic dishonesty,
- * tampering- altering or interfering with evaluation instruments and documents, or
- * plagiarism- representing the words or ideas of another person as one's own.

For more information about academic integrity and the University's policies and procedures in this area, please refer to the Student Conduct website at:

<http://studentlife.oregonstate.edu/studentconduct/offenses-0>

This syllabus is subject to change with notice. Please bring any errors to the instructor's attention.