



North Central State College

MASTER SYLLABUS

2026-2027

- A. Academic Division: Health Sciences
- B. Discipline: Science
- C. Course Number and Title: CHEM1210 Chemistry I
- D. Assistant Dean: Dr. Jason Tucker, Ph.D.
- E. Credit Hours: 5
Lecture: 4 hours
Laboratory: 3 hours
- F. Prerequisites: : MATH 1110 (minimum of C- required) or qualifying placement test score
- G. Last Course/Curriculum Revision Date: Fall 2025 Origin date: 11/15/2013
- H. Textbook(s) Title:

Chemistry: Atoms First - OER Materials

- Publisher: OpenStax
- Copyright Year: 2019
- ISBN: 9781947172630
- OER LINK: <https://openstax.org/books> - then search for book

Our textbook is an open education resource (OER). This means that it is a free textbook which can be accessed in the link above. If you wish, a hard copy of the book can be purchased. Contact instructor for more information.

- I. Workbook(s) and/or Lab Manual:
- J. Course Description: This is the first semester of chemistry for science majors or pre-professional students. A quantitative introduction to dimensional analysis with significant figures, atomic structure, the molecule, principles of ionic bonding, stoichiometry, chemical solutions, thermochemistry, classification of elements including periodicity, electron configuration, gases, liquids, and solids. Student will be exposed to applications of chemistry in society. (TAG # OSC008; If combined with CHEM1220 TAG # OSC023)

K. College-Wide Learning Outcomes

College-Wide Learning Outcomes	Assessments - - How it is met & When it is met
Communication – Written	Weekly lab reports detailing procedures, conclusions and discussion. Assessed at the beginning, middle and end of the course.
Communication – Speech	Presentation of analytical techniques. Met at the end of the course
Intercultural Knowledge and Competence	
Critical Thinking	
Information Literacy	
Quantitative Literacy	Weekly lab reports detailing reaction yields and experimental calculations. Assessed at the middle and end of the course

L. Course Outcomes and Assessment Methods:

Upon successful completion of this course, the student shall:

Outcomes	Assessments – How it is met & When it is met
1. Define the fundamentals of the properties of matter, measurement, and uncertainty.	Quiz-1 st week Midterm Exam– 4 th week Final – 15 th week
2. Explain the modern theory of atomic structure and atomic level phenomena	Quiz – 2 nd week Mid-Term Exam – 4 th week Final – 15 th week Formal Written Lab Report – weekly
3. Utilize the symbolism and language of chemistry by converting chemical elements, ionic and binary covalent compounds from chemical formulas.	Quiz – 2 nd week Midterm Exam– 4 th week Final Exam – 15 th week Formal Written Lab Reports - weekly
4. Demonstrate an understanding of the organization and information conveyed by the periodic table of chemical elements	Quiz – 3 rd week Mid-Term Exam – 4 th week Formal Written Lab Reports – weekly Final Exam – 15 th week
5. Describe and identify selected types of chemical reactions through acids, bases, salts, non-electrolytes and electrolyte, plus oxidation/reduction	Quiz – 5 th week Mid-Term Exam – 8 th week Written Lab Reports – weekly Final Exam – 15 th week
6. Explain modern chemical bonding theories and their implications related to ionic, covalent, Lewis structures, atomic orbital overlap, and molecular orbital theories	Mid-Term Exam – 8 th week Quiz-9 th week Quiz-10 th week Mid-Term Exam – 13 th week Formal Written Lab Reports - weekly Final Exam – 15 th week
7. Explain the quantitative implications of chemical formulas and chemical reactions including processes occurring in solutions using Avogadro's number and mole concept	Mid-Term Exam – 4 th week Written Lab Reports – weekly Final Exam – 15 th week

Outcomes	Assessments – How it is met & When it is met
8. Describe the various forms of energy and the various roles energy plays in physical processes and chemical systems and reactions including electromagnetic radiation, combustion reactions, thermodynamics, and Hess law	Quiz- 6 th week Mid-Term Exam – 8 th week Quiz- 9 th week Mid-Term Exam – 13 th week Formal Written Lab Reports – weekly Final Exam – 15 th week
9. Explain the social and philosophical implications of scientific discoveries and understand the potential of science and technology to address problems of the contemporary world.	Final Exam – 15 th week

M. Recommended Grading Scale:

NUMERIC	GRADE	POINTS	DEFINITION
93–100	A	4.00	Superior
90–92	A-	3.67	Superior
87–89	B+	3.33	Above Average
83–86	B	3.00	Above Average
80–82	B-	2.67	Above Average
77–79	C+	2.33	Average
73–76	C	2.00	Average
70–72	C-	1.67	Average
67–69	D+	1.33	Below Average
63–66	D	1.00	Below Average
60–62	D-	0.67	Below Average
00--59	F	0.00	Failure

N. College Procedures/Policies:

North Central State College believes that every student is a valued and equal member of the community.* Every student brings different experiences to the College, and all are important in enriching academic life and developing greater understanding and appreciation of one another. Therefore, NC State College creates an inclusive culture in which students feel comfortable sharing their experiences. Discrimination and prejudice have no place on the campus, and the College takes any complaint in this regard seriously. Students encountering aspects of the instruction that result in barriers to their sense of being included and respected should contact the instructor, assistant dean, or dean without fear of reprisal.

* *Inclusive of race, color, religion, gender, gender identity or expression, national origin (ancestry), military status (past, present or future), disability, age (40 years or older), status as a parent during pregnancy and immediately after the birth of a child, status as a parent of a young child, status as a foster parent, genetic information, or sexual orientation*

Important information regarding College Procedures and Policies can be found on the syllabus supplement located at

<https://ncstatecollege.edu/documents/President/PoliciesProcedures/PolicyManual/Final%20PDFs/14-081b.pdf>



North Central State College
SYLLABUS ADDENDUM

Academic Division:	Health Science	Discipline:	Chemistry
Course Coordinator:	Travis Green		
Course Number:	CHEM 1210	Course Title:	General Chemistry I
Semester / Session:	Fall 2026	Start / End Date:	08/17/2026 thru 12/11/2026

Instructor Information

Name:	Travis Green	Credentials:	PhD, Photochemical Sciences
Phone Number:	419-755-4556	E-Mail Address:	tgreen@ncstatecollege.edu
Office Location:	Health Science 322	Office Hours:	M- 1:00 - 4:00 PM, Tues 10:00 AM – 12:00 PM, Th 2:00 – 3:00 PM

I. Topical Timeline (Subject to Change):

Week	Date	Lecture Topic	Lab Experiment	Closures
1	17-Aug	Chapter 1- Matter and Measurements	Safety, Notebooks, Math Review	
2	24-Aug	Chapter 2- Atoms, Molecules and Ions	Introduction to Measurements	
3	31-Aug	Chapter 3- Electron Structure and Periodic Trends	Atomic Emissions	
4	7-Sep	<i>No Lecture- Labor Day</i>	<i>Exam 1</i>	<i>No Monday 9/7/26</i>
5	14-Sep	Chapter 4- Chemical Bonding and Molecular Geometry	Elemental Periodicity	
6	21-Sep	Chapter 5- Advanced Bonding Theories	Molecular Models and Bonding Theories	
7	28-Sep	Chapter 6- Composition of Substances and Solutions	Determination of an Empirical Formula	
8	5-Oct	Chapter 7- Stoichiometry	Copper (II) Sulfate Synthesis	
9	12-Oct	<i>No Lecture- Fall Break</i>	<i>No Lab- Fall Break</i>	<i>Fall Break</i>
10	19-Oct	<i>No Lecture-Travel</i>	<i>Exam 2</i>	
11	26-Oct	Chapter 8- Gases	Ideal Gas Law	
12	2-Nov	Chapter 9- Thermochemistry	Calorimetry	
13	9-Nov	Chapter 10- Liquids and Solids	Beer's Law	<i>No Wednesday 11/11/26</i>
14	16-Nov	Chapter 11- Solutions and Colloids	Cereal Extraction	
15	23-Nov	<i>Presentations</i>	<i>Lab Practical</i>	
16	30-Nov	<i>Exam 3 Review</i>	<i>Exam 3</i>	<i>No Thursday 11/26</i>
17	7-Dec	<i>Final Exam Review</i>	<i>Final Exam</i>	

Course Number: CHEM 1210
Semester / Session: Fall 2024

Course Title: General Chemistry I
Start / End Date: 08/12/24 – 12/13/2024

II. Course Assignments:

1. In Class Assignments
 - a. In class assignments are meant to be done in class to give you a chance to work through the material before you start the homework assignments. They will be due on Monday evenings after lecture by 11:59 pm.
 - i. NOTE: Regardless of if you were in lecture or not the assignment is still to be completed. Please bring it to the next class meeting or turn it in on canvas.
2. SISI
 - a. The SISI sessions will be on Wednesdays in between the two lab sessions. These will primarily feature active learning assignments and review assignments to assist with lecture material.
3. Lab Experiments
 - a. We will have weekly lab experiments designed to support our lecture topics. You will turn in pre and post lab assignments as well as the lab notebook pages from the experiment. They will be due one week after the completion of lab. Some of the longer labs may also have formal lab reports. These will be designated well in advance. We will also have a lab practical at the end of the semester.
4. Homework
 - a. These will be problem sets from the back of the textbook. These will be approximately 20 questions long and will be due on Monday evenings at 11:59 pm.
5. Exams
 - a. There will be 4 exams total. Three exams will be throughout the semester and cover 3-4 chapters each. There will also be a cumulative final exam at the end of the semester. There will also be an exam revision option that can be found in the useful documents module on canvas.
6. Presentation
 - a. There will be one group presentation at the end of the semester on the topic of analytical chemistry techniques. We will discuss this during the first month of class.
 - b. There will also be weekly Chemist of the Week Presentations.

III. Grading and Testing Guidelines:

1. Grading Weights

Assignment Type	Qty	Points	Percentage
Homework (Homework, Plug It In Reflections, Reading Quizzes)	11 Homework	20	10%
	11 PIN Reflections	10	
	11 Reading Quizzes	5	
Laboratory Exercises and Lab Reports	10 Labs	30	25%
	1 Lab Practical	100	
	5 Partial Lab Reports	20	
	1 Full Lab Report	100	
In Class Assignments & Presentations	11 In Class	10	10%
	1 Chemist of the Week	10	
	50	50	
	1 Group Presentation	10	
	11 SISI		
Participation and Attendance	22 sessions	5	5%
Exams (3)	3	100	30%
Final Exam	1	100	20%

NOTE: No extra credit will be granted at the end of the semester. If your grade is above .5 below the next grade up it will be rounded. For example, if your course grade is a 76.5 or higher it will be rounded up to a 77. This is a hard cut off meaning if your score is a 76.49 it will not be rounded. Please refrain from asking for extra points if this applies to you at the end of the semester.

2. Late Assignment Policy

- a. All assignments (except exams and presentations) can be turned up to one week after the due date. If the assignment is late it will be docked 30% automatically. NOTE: If an assignment is more than a week late a 0 will be put in the gradebook with a note reminding you that it can be turned in for partial credit. This does not mean you cannot turn the assignment in this is just to make sure your grade is as up to date as possible.
- NOTE: Technical malfunctions will not be accepted as an automatic excuse for late work. Part of success online and as a professional is to be prepared
 - NOTE: For Dr. Green to reopen an assignment after the assignment closes you must provide documentation that shows and explains why you were unable to complete the assignment within the two-week grace period.

3. Make-Up Assignments

- a. Lecture Assignments:
- With the flexible late policy there will be no makeup opportunities granted for class assignments unless documentation is provided that shows and explains why you were unable to complete the assignment within the one week grace period.
- b. Lab Assignments:
- In general, there will be no make up labs scheduled. This is due to space and time constraints. One lab will be dropped at the end of the course. If you miss a lab that will be the one that will be dropped at the end of the course. If you miss more than one lab and have documentation that shows a valid excuse a make-up can be arranged.
 - Valid Excuses Include:
 - a) Personal or Family Illness (doctor's excuse required)
 - b) Hospitalization (with documented verification)
 - c) Death in the family (with documented verification)
 - d) Mandated work (documentation required)

4. General Turn Around Time for Work Being Graded

In general, you can expect your graded work to be returned to you two weeks after it has been turned in.. I will do my best to enter all grades into the canvas gradebook in a timely manner. If you see that I have not entered a grade into canvas and it has been turned in for 3 weeks feel free to email me about your grade.

IV. Examination Policy:

1. The reasons for which a student will be excused from taking an examination:
 - a. Hospitalization (with documented verification)
 - b. Death in the immediate family (with documented verification)
 - c. Personal illness or illness in immediate family (doctor's excuse required)
 - d. Personal or Family Emergency (with documented verification)
 - e. Mandated work (documentation required)
2. A student who misses an examination for any reason is responsible for:
 - a. Contacting Dr. Green as soon as possible
 - b. If a valid excuse and documentation is given you are responsible for scheduling a make-up exam with testing services
 - c. In an extreme circumstance where a make-up cannot be scheduled the student may opt to take an incomplete in the course or take an average of the other exams in place of the exam.
3. No make-up opportunity will be given for absences of unscheduled exams or quizzes.
 - Barring an extreme circumstance with documented verification

V. Class Expectations

1. Classmate Interactions
 - I expect that you will treat other classmates with respect. This includes:
 1. Pulling your weight in group activities
 2. Communicating in a respectful way avoiding inappropriate, sexist, racist or discriminatory remarks
 3. Respecting their personal space and belongings
 - I expect that you will support each other and check in with one another.
2. Interactions with Dr. Green
 - I expect that you will come to Dr. Green with any questions, comments or concerns you may have!
3. Online Expectations
 - a. I expect you to read through the weekly checklists and look ahead for due dates. This class moves at a fast pace and it is easy to get behind if you are not on top of everything.
4. Lab Expectations
 - a. I expect that while in lab you will follow all directions
 - b. I expect that while in lab you will work safely and wear the appropriate clothing
 - NOTE: If you are not wearing the proper clothing you will be sent home to change and return if time permits
 - c. I expect that you will take lab seriously. This is a class that you are committing to and should be treated as such.
5. Attendance Requirements
 - a. I expect that you will make every effort to attend class. This class moves at a fast pace and it is easy to get behind if you do not attend class. You must attend at least 70% of the classes and participate in class when necessary to be awarded the participation points for the course. 5% of the final grade comes from these participation points.
6. Email Policy
 - a. You need to check your NCSC emails and Canvas Inbox announcements daily. Any emails to the instructor must be from your NCSC email account or from the student to the faculty using the canvas system. They must have a subject, be written in full sentences, and be signed with your name. Do not send an email written like a text message. Your email will be answered within 24 hours of a business day.
7. Student Misconduct
 - a. Misconduct is disorderly or disruptive conduct that interferes with the normal operations of the College or infringes on the rights of others. You will be told to leave the classroom or lab if you violate this policy. See Student Handbook for more information.