North Central State College

MASTER SYLLABUS	2026-2026

A. Academic Division: Health Sciences

B. Discipline: Science

C. Course Number and Title: CHEM1210 Chemistry I

D. Assistant Dean: Heidi Kreglow, PT

E. Credit Hours: 5
Lecture: 4 hours
Laboratory: 3 hours

F. Prerequisites: High School Chemistry (minimum of C- required)
-AND-
MATH1110 (minimum of C- required) or qualifying placement test score

G. Last Course/Curriculum Revision Date: Fall 2023 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	
Communication – Speech	
Intercultural Knowledge and Competence	
Critical Thinking	
Information Literacy	
Quantitative Literacy	

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-1st week Midterm Exam– 4th week Final – 15th week
2. Explain the modern theory of atomic structure and atomic level phenomena	Quiz – 2nd week Mid-Term Exam – 4th week Final – 15th 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 – 2nd week Midterm Exam– 4th week Final Exam – 15th week Formal Written Lab Reports - weekly
4. Demonstrate an understanding of the organization and information conveyed by the periodic table of chemical elements	Quiz – 3rd week Mid-Term Exam – 4th week Formal Written Lab Reports – weekly Final Exam – 15th week
5. Describe and identify selected types of chemical reactions through acids, bases, salts, non-electrolytes and electrolyte, plus oxidation/reduction	Quiz – 5th week Mid-Term Exam – 8th week Written Lab Reports – weekly Final Exam – 15th 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 – 8th week Quiz-9th week Quiz-10th week Mid-Term Exam – 13th week Formal Written Lab Reports - weekly Final Exam – 15th 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 – 4th week Written Lab Reports – weekly Final Exam – 15th week
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- 6th week Mid-Term Exam – 8th week Quiz- 9th week Mid-Term Exam – 13th week Formal Written Lab Reports – weekly Final Exam – 15th 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 – 15th 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	Below Average
67–69	D+	1.33	Below Average
63-66	D	1.00	Below Average
60-62	D-	0.67	Poor
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 1210-01	**Course Title:**	General Chemistry I
Semester / Session:	Fall 2025	**Start / End Date:**	08/11/2025 thru 12/12/2025

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- 12:30 – 2:30, T- 3:30 – 5:30, W- 1:30 – 2:30

I. Topical Timeline / Course Calendar (Subject to Change):

Week	Date	Lecture Topic	Lab Experiment
1	11-Aug	Chapter 1- Matter and Measurements	Safety, Notebooks, Math Review
2	18-Aug	Chapter 2- Atoms, Molecules and Ions	Introduction to Measurements
3	25-Aug	Chapter 3- Electron Structure and Periodic Trends	Atomic Emissions
4	1-Sep	***No Lecture- Labor Day***	***Exam 1***
5	8-Sep	Chapter 4- Chemical Bonding and Molecular Geometry	Elemental Periodicity
6	15-Sep	Chapter 5- Advanced Bonding Theories	Molecular Models and Bonding Theories
7	22-Sep	Chapter 6- Composition of Substances and Solutions	Determination of an Empirical Formula
8	29-Sep	Chapter 7- Stoichiometry	Copper (II) Sulfate Synthesis
9	6-Oct	***No Lecture- Fall Break***	***No Lab- Fall Break***
10	13-Oct	***Exam 2 Review***	***Exam 2***
11	20-Oct	Chapter 8- Gases	Ideal Gas Law
12	27-Oct	Chapter 9- Thermochemistry	Calorimetry
13	3-Nov	Chapter 10- Liquids and Solids	Beer's Law
14	10-Nov	Chapter 11- Solutions and Colloids	Cereal Extraction
15	17-Nov	***Presentations***	***Lab Practical***
16	24-Nov	***Flex Time***	***No Lab***
17	1-Dec	***Exam 3 Review***	***Exam 3***
18	8-Dec	***Final Exam Review***	***Final Exam***

II. Grading and Testing Guidelines:

1. Final Grade Calculation

Activity	Qty	Points	Percentage
Homework (Homework, Plug It In Reflections, Reading Quizzes)	11 Homework 11 PIN Reflections 11 Reading Quizzes	30 5 5	10 %
Laboratory Exercises and Lab Handouts	11 Labs 1 Lab Practical	50 150	25 %
In Class Assignments (Problem Sets, SISI, COW Presentations)	11 Problem Sets 11 SISI 1 COW Presentation	10 10 25	10 %
Participation and Attendance	22 Sessions	5	5 %
Exams & Presentation	3 Midterms 1 Group Presentation	100 100	30 %
Final Exam	1 Final Exam	100	20 %

2. Course Assignments

a. Reading Quizzes
   i. The reading quizzes are 5 multiple choice questions designed to activate your prior knowledge and get you thinking about the material prior to coming to class. The reading quizzes are due Monday mornings by 9:30 am.

b. Plug It in Reflections
   i. Reflections that are assigned weekly that encourage you to think about how you can plug the course content into other areas of your life. This includes other courses and your future careers. These will be due weekly on Sunday evenings at 11:59 pm.

c. Chapter Homework Assignments
   i. The chapter homework assignments will be 15-20 question assignments to give you a chance to practice the material. These will tend to be more difficult to the CCI's and will give you an idea of how questions on the exams will be formatted and what you will be expected to know. These will be due on Monday evenings by 11:59 PM each week.

d. Lab Experiments
   i. We will have weekly lab experiments designed to support our lecture topics. They will be due one week after the completion of lab. We will also have a lab practical at the end of the semester. On the lab practical you will be expected to replicate one of the procedures from earlier in the semester in a new context.

e. In-Class Assignments
   i. The in-class assignments are short assignments meant to hit the most important concepts and problem types of each lecture. These assignments are to give you practice with the content before you are on your own. These assignments are due by 11:59 PM on Mondays if you do not finish them before leaving lecture.

f. SISI
   i. These are very similar to the in class assignments with the exception that the formatting is more similar to an exam. These allow you to see what kind of exam questions you can expect for the content. These are due before you leave SISI on Wednesdays.

g. Presentations
   i. You will have two presentations this semester. One is a short 5 minute presentation on an active chemist and their work. The other is a longer 15 min group presentation on a topic of your choice. The requirements for these are found in the assignment details on canvas. A schedule for the presentations will be decided on during week 3's lecture.

h. Exams
   i. There will be 4 exams total. Three exams will be throughout the semester and cover around 5 chapters each. There will also be a cumulative final exam at the end of the semester. All exams take place during our normal lab time in person.

III. Examination Policy:

1. The reasons for which a student will be excused from taking an examination:
   a. Death in the immediate family (with documented verification)
   b. Personal illness or illness in immediate family (doctor's excuse required)
   c. Personal or Family Emergency (with documented verification)
   d. 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
      - This includes providing documentation
   b. Scheduling a make up if applicable as soon as possible
3. No makeup opportunity will be given for absences of unscheduled quizzes.

IV. Class Attendance and Homework Make-Up Policy:

1. **Class attendance is necessary** to acquire the knowledge required to be able to apply the concepts of chemistry in your chosen field
   - To receive full attendance and participation points you must attend 70% of all lecture sessions and miss no more than two labs provided you make up one lab..
2. **Late Assignment Policy**
   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 20% automatically. NOTE: If an assignment is more than a few days 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

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:
      - Due to the dropping of one lab assignment at the end of the semester there will no makeup opportunities unless there is documentation showing evidence that you were unable to attend lab for more than two weeks.

4. **General Turn Around Time for Work Being Graded**
   a. In general, you can expect your graded work to be returned to you one week 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 1 week feel free to email me about your grade.

V. Classroom Expectations:

1. Interactions with Dr. Green
   - I expect that you will come to Dr. Green with any questions, comments or concerns you may have!

2. 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. I expect you to watch all of the micro-lecture

videos and complete the weekly quizzes on time. I also expect that you will attend our zoom sessions with your cameras on and that you will be focused and participate in lecture.

3. 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 48 hours of a business day.

4. 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.
   b. Academic Integrity is an important issue. Any student caught cheating or plagiarizing will receive a 0 on the assignment and will be reported to the your program director and the Dean of your division. This could result in failure of the assignment, failure of the class, dismissal from your program, and or dismissal from the college.
      - If you ever find yourself in a situation where you are considering academic dishonesty STOP and contact Dr. Green. I would much rather you turn in an assignment late instead of possibly being dismissed from the college.

VI. Important Dates and Information

1. Testing Accommodations
   a. Accommodations are available for students with learning disabilities or health conditions. If you think you may qualify or have qualified in the past for accommodations you need to reach out to Doug Heestand at NCSC's disability services office. Dr. Green can refer you if needed.
   b. You must initiate this process and send Dr. Green the form to sign so it can be taken care of ASAP. There is no retroactive accommodations for exams or assignments completed before the forms are signed.
2. Withdrawal and Drop Deadlines
   a. Last Day to Withdraw: November 4th, 2025