North Central State College

MASTER SYLLABUS	2025-2026

A. Academic Division: Health Sciences

B. Discipline: Science

C. Course Number and Title: CHEM1030 Chemistry

D. Assistant Dean: Heidi Kreglow, PT

E. Credit Hours: 3
Lecture: 2 hours
Laboratory: 3 hours

F. Prerequisites: High school chemistry (minimum grade of C- required) or CHEM1010 (minimum grade of C- required) and completion of MATH0084 with minimum grade of C- qualifying math placement score

G. Last Course/Curriculum Revision Date: Fall 2023 Origin date: 10/20/2010

H. Textbook(s) Title:

Basics of General, Organic, and Biological Chemistry - OER Materials

- Author: David W. Ball, John W. Hill, and Rhonda J. Scott
- Copyright Year: 2011
- ISBN: 9781453311097
- OER link: https://chem.libretexts.org/Bookshelves/Introductory_Chemistry/Basics_of_General_Organic_and_Biological_Chemistry_(Ball_et_al.)

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: None

J. Course Description: The course is to give the Allied Health and Nursing student an appreciation and understanding of general inorganic chemistry. Includes atomic and molecular structure, molecular forces, properties and states of matter, naming of chemical compounds, types and behaviors of solutions, types of reactions, acid base chemistry, carefully chosen organic topics with their applications to specific health problems. Laboratory exercises will enhance and reinforce lecture topics. (OTM for Natural Sciences TMNS)

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	

College-Wide Learning Outcomes	Assessments - - How it is met & When it is met
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. Use and apply the units of the metric system, demonstrate the ability to develop the correct conversion factor to solve dimensional analysis problems	quizzes, laboratory exercises, worksheets, exam 1, final, met at end of semester
2. Predict the chemical behavior of the 1st 30 elements by their arrangement on the periodic table, Compare the characteristics of the subatomic particles making use of the periodic table	quizzes, laboratory exercises, worksheets, exam 1, final, met at end of semester
3. Given the various elements predict the way compounds will form and be able to write the name and write the formula Identify the forces involved in compound formation	quizzes, laboratory exercises, worksheets, exam 1, final, met at end of semester
4. Distinguish between the basic chemical reactions and demonstrate how to balance chemical reactions and determine stoichiometric ratios.	quizzes, laboratory exercises, worksheets, exam 1, final, met at end of semester
5. Be able to compare and contrast the differences between the states of matter how changes of state occur, and energy balances involved in these changes. Solve problems involving heat of fusion and heat of vaporization of water	quizzes, laboratory exercises, worksheets, exam 1, final, met at end of semester
6. Apply the Kinetic Molecular Theory of Gasses to analyze the behavior of gasses, explain the difference between directly and indirectly proportional gas property behaviors, choose the appropriate gas law to solve a problem	quizzes, laboratory exercises, worksheets, exam 1, final, met at end of semester
7. Describe the nature of aqueous solutions, how they are prepared, and their characteristics, predict their behavior upon erythrocytes	quizzes, laboratory exercises, worksheets, exam 2, final, met at end of semester
8. Categorize the properties of a solution and distinguish between various types of solutions demonstrate the ability to perform calculations involving concentrations	quizzes, laboratory exercises, worksheets, exam 2 , final met at end of semester
9. Be able to classify the differences between acids and bases, given the molarity of an acid or base calculate the pH, predict the results of an acid -base reaction, understand the bicarbonate blood buffering system, from given blood results be able the tell patient's acid- base status	quizzes, laboratory exercises, worksheets, final, met at end of semester

Outcomes	Assessments – How it is met & When it is met
10. Explain chirality ,D and L isomers and their effects on the behavior and of amino acids ,sugars, predict how cis and trans isomers affect fatty acid behavior, explain the effects of hydrogen bonding on DNA function, understand the structure of proteins, explain the similarities and differences between steroid hormones, identify the central functional area of a drug Introductory Naming of organic compounds	quizzes, laboratory exercises, worksheets, final, met at end of semester
11. Current issues in chemistry will be discussed.	Throughout the semester.
12. Have completed laboratory experiments that test basic chemistry principles adapted from corresponding lecture topics	laboratory exercises, exams, final, met at end of semester

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 Sciences	**Discipline:**	Chemistry
Course Coordinator:	Travis Green		
Course Number:	CHEM 1030	**Course Title:**	General, Organic, Biological Chemistry
Semester / Session:	Summer 2026	**Start / End Date:**	05/26/2026 – 07/16/2026

Instructor Information:

Name:	Travis Green	**Phone Number:**	419-755-4556
		E-Mail Address:	tgreen@ncstatecollege.edu
Office Location:	Health Science 322	**Office Hours:**	

I. Topical Timeline (Subject to Change):

Weeks	Date	Monday Lab	Tuesday Lecture	Wednesday Lab	Thursday Lecture
1	**25-May**	***Memorial Day – No Lab***	Chapter 1	Safety, Math Review	Chapter 2
2	**1-Jun**	Introduction to Measurements	Chapter 3	Ion Conductivity	Chapter 4
3	**8-Jun**	Functional Groups (Online)	***No Lecture***	***Exam 1***	Chapter 5 & 6
4	**15-Jun**	Copper Sulfate Synthesis	Chapter 8	Gas Law Investigations	Chapter 7
5	**22-Jun**	Gas Law Investigations	Chapter 9 & 10	Solutions and Dilutions	***Exam 2 Review***
6	**29-Jun**	***Exam 2***	Chapter 11 & 12	Vinegar Titration	Lipids
7	**6-Jul**	IR Imaging Lab	Biomolecules 1	Banana Extraction	Biomolecules 2
8	**13-Jul**	***Lab Practical***	***Exam 3 Review***	***Exam 3***	***Final Exam***

II. Course Assignments:

1. **Concept Check In Quizzes**
   a. The concept check in quizzes (CCI's) are short 5-10 question assignments meant to test your understanding of the material after watching the micro-lecture videos. They should be completed prior to coming to lecture. The results of these CCI's will determine what we talk about during our weekly zoom meeting. They can be completed multiple times before the due date.
2. **Chapter Homework Assignments**
   a. 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.
3. **Lab Experiments**
   a. 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.
4. **Writing Assignments**
   a. There will be three writing assignments throughout the semester designed to develop your written communication skills. Each will feature a writing prompt related to a lecture topic and you will apply the topic to your choice of subject.
5. **Exams**
   a. 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. There will also be an exam revision option that can be found in the useful documents module on canvas.

III. Grading and Testing Guidelines:

1. **Grading Weights**

Activity	Qty	Points	Percentage
Homework (Homework, Plug It In Reflections, Writing Assignments)	12 Homework 12 PIN Reflections 3 Writing Assignments	30 10 25	10 %
Laboratory Exercises and Lab Handouts	11 Labs 1 Lab Practical	30 90	25 %
Concept Check Ins	11 Quizzes	10	10 %
Participation and Attendance	22 Sessions	5	5 %
Exams	3 Midterms	100	30 %
Final Exam	1 Final Exam	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 two weeks after the due date. If the assignment is late it will be docked 20% 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 two-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:
        1. Personal or Family Illness (doctor's excuse required)
        2. Hospitalization (with documented verification)
        3. Death in the family (with documented verification)
        4. Mandated work (documentation required)

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 2 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

VI. Classroom 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. I expect you to watch all of the micro-lecture videos and complete the weekly quizzes on time. This is very important as I will use your responses from the weekly concept check in quizzes to guide our weekly live sessions.
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 NCState 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.