CHEM1151 SURVEY OF CHEMISTRY– SECTION DD

University of North Georgia – Dahlonega campus – Department of Chemistry and Biochemistry

FALL 2023

INSTRUCTOR INFORMATION

Instructor	Email information	Preferred Contact methods
Dr. Kaylee Todd	kaylee.todd@ung.edu	Email is for non-homework questions Office hour times/locations are provided below for Homework/Content questions

COURSE DELIVERY/MEETING TIMES

Lecture – M/W/F 11:00am – 11:50am

Rogers Hall, room 204

OFFICE HOURS

The course is primarily face-to-face with a D2L/online component for delivery of materials and assignments. No appointment needed if during posted office hours. Please suggest a date/time for any necessary appts.

Office hours in **Dahlonega – Rogers Hall 205A**

Schedule here: *Please understand that Lab Manager duties may unintentionally overlap with office hours. Just ask other faculty for help in locating Dr. Todd or look for a note on my door.*

Monday	Tuesday	Wednesday	Thursday	Friday

ALTERNATIVE SYLLABUS FORMAT

If you need this document in an alternate format for accessibility purposes (e.g., Braille, large print, audio, etc.), please contact Ashley.Garrett@ung.edu or call 706-864-1505

SUPPLEMENTAL SYLLABUS INFORMATION

https://ung.edu/academic-affairs/policies-and-guidelines/supplemental-syllabus.php

UNIVERSITY STATEMENTS

UNIVERSITY POLICY ON ACCOMMODATING STUDENTS WITH DISABILITIES

The University of North Georgia is committed to equal access to its programs, services, and activities and welcomes otherwise qualified students with disabilities. (Disabilities include but are not limited to: learning barriers, medical concerns, or mobility concerns). Students who require accommodations and services must register with Student Accessibility Services. Student Accessibility Services provides accommodation memos for eligible students to give to their instructors. Students are responsible for providing the "Accommodations Letter" to the instructors and must give reasonable prior notice of the need for accommodation.

ACADEMIC HONESTY AND OUR LEARNING ENVIRONMENT

Our academic relationship is built upon mutual trust and so our actions must maintain and develop that trust. Acts of academic dishonesty erode the trust that is an essential component of the educational relationship.

Students are encouraged to work and study together to further their mastery of the coursework. For any work on which you will put your name, you are responsible for what is submitted. Responsible means that you worked equitably towards the solution to the problem, understand the process by which the answer was obtained, and, if applicable, have written the answer using your own words. This will help ensure that the grade you receive accurately reflects your efforts and understanding. Conversely, getting, giving, or copying answers from another person is a form of academic dishonesty.

Plagiarism is a serious academic offense, the scholarly equivalent of theft with no moral justification. Any act of cheating or plagiarism will not be tolerated. Your Student Handbook discusses the ramifications of academic dishonesty which can be dire.

Simply, academic dishonesty will not be tolerated. Any violation OR attempted violation will result in an F for the course AND will be reported to the Judicial Council under the UNG academic integrity code. The complete academic integrity code can be found in the UNG Student Handbook or at http://ung.edu/dean-of-students/student-code-of-conduct/article-3-proscribed-conduct.php

FIRE DRILL PROCEDURES

In the event of a fire signal students will exit the building in a quick and orderly manner through the nearest hallway exit. Learn the floor plan and exits of this building. Do not use elevators. Crawl on the floor if you encounter heavy smoke. Assist disabled persons and others if possible without endangering your own life.

UNG CHEMICAL HYGENE PLAN

UNG has a Chemical Hygiene Plan (CHP) that is intended to protect faculty, staff and students from harm due to exposure to hazardous chemicals while they are working in UNG laboratories. The CHP contains Standard Operating Procedures (SOP), standard laboratory safe handling and storage requirements that ensures the safety of our faculty, staff and students.

https://my.ung.edu/departments/EHS/Regulatory%20Documents/UNG%202.2.1%20Chemical%20Hygiene%20Plan.pdf

GENERAL INFORMATION

COREQUISITES

Chem 1151L is a corequisite, it is the laboratory component of this course. Concepts addressed in the lab pertain to what we are learning in lecture (and vice-versa). You are responsible and may be held accountable for understanding the subject matter addressed in the laboratory, which may include the conceptual bases for the techniques used, and data analysis.

Co-requisite → 1151 Lab

DESCRIPTION

This is the first course -designed for allied health professions majors- in a two-semester sequence covering basic principles of general chemistry. Topics to be addressed include: atomic structure; elements and compounds; chemical reactions, quantities and equations; molecular geometry; mixtures and solutions; and acid/base chemistry.

COURSE PHILOSOPHY AND EXPECTATIONS

- The student will learn basic concepts of chemistry including: elements and atoms, the periodic table, chemical bonds, energy, states of matter, chemical reactions, acids and bases, and nuclear chemistry.
- The student will demonstrate skills to solve problems both qualitatively and quantitatively.
- The student will identify unifying concepts and processes that run across science disciplines.
- The student will learn about the inextricable link between chemistry and medicine.
- The student will address how chemistry impacts other fields of study.
- The student will recognize that science and society influence each other.
- The student will begin to learn how knowledge is produced and refined in science

COURSE MATERIALS

1. **Textbook (recommended, not required):** General, Organic, and Biological Chemistry: Version 2.0, By David W. Ball, John W. Hill, and Rhonda J. Scott. Published: 2020, ISBN (Digital): 978-1-4533-9807-4. The textbook will be references frequently for pre-lecture readings, extra practice problems, and Focus on the Human Body sections. I refer you to the syllabus supplement to learn more. **I have a couple of copies available for short-term check out.**

2. **Additional reading and assignments:** Accessed via D2L. These include downloaded pages for completion outside of D2L and assignments within D2L.

3. **Calculators:** Only non-programmable calculators are permitted for the exams. You may use others when practicing and such but be sure you are comfortable with your non-programmable one. Dr. T's recommendation – TI-30X IIS (about $13).

4. **Optional:** Molecular Model Kit: 2. Molecular Model Kit: There are a number of good kits designed for organic chemistry that have been well received by recent 1151/2 students (good quality, reasonably

priced). The links below show a couple. You don't have to buy from Amazon but the links show pretty pictures so you have an idea of what these sets look like and on the bottom of each page they also show similar sets that may entice you.

Former semester's favorite was the Organic Chemistry Set by Dalton Labs (https://www.amazon.com/MolecularMolecule-Chemistry-Dalton-Labs/dp/B01AXZV94M/ref=sr_1_fkmr0_1?ie=UTF8&qid=1483988068&sr=8-1-%20fkmr0&keywords=advanced+molecular+model+set+for+general+and+organic+chem).

Students have also been satisfied with the Advanced Molecular Model Set for General and Organic Chemistry by Mega Molecules, LLC https://www.amazon.com/gp/offer-listing/B00F25ZERW/ref=dp_olp_all_mbc?ie=UTF8&condition=all.

COURSE TECHNOLOGY

The student may require Adobe Acrobat Reader, Adobe Flash Player, Microsoft Silverlight and other software. Free tutorials on many software applications can be found at Lynda.com.

COURSE COMMUNICATIONS

GENERAL QUESTIONS

You are welcome to ask general questions before, during, or after lecture each day. These can relate to course content, structure, or assignments.

PRIVATE OR GRADE-RELATED QUESTIONS

Only if in-person discussion is not a viable option: Direct these to your instructor via the mail function in D2L only. Do not email outside of D2L to your instructor's external email address – we are not permitted to discuss grade related questions outside of D2L. You will be asked to resend the query through D2L. ****In person discussions are highly preferred!**

ATTENDANCE, EXTENSION REQUESTS

Requirements for class attendance, make-up assignments, and other work in this course are consistent with university policies. Prior notification is expected and appreciated in case of a foreseeable absence. Missing more than 10% of lectures is grounds for removal from the course by the instructor; student receives a "W" for the course.

Attendance will be taken by the completion of the *Introduce yourself discussion post* - due by the end of the first week of class.

Students are responsible for all material assigned and discussed in class. The material assigned may include readings for future discussion (accessible via D2L), initial attempts for mastery of material on Progress checks, etc.

Electronics - computers, cell phones, tablets, etc. - are to be used only for educational purposes. Texting and working on late assignments for this class or others is not appropriate behavior nor typically well received.

Exam and Progress check absences will be handled in accordance with official UNG academic regulations. See below for further clarification for two different types of situations:

(1) Conflicts with other events: this should be rare, as CHM1151 exams will be given during our regularly scheduled class times. You should plan accordingly. Such reasons may include religious holidays, military obligations, special curricular requirements (e.g., attending professional conferences), or participation in official UNG-sanctioned activities such as athletic competitions, etc. For more information on such absences see the official UNG Policy. If you must be absent for an exam due to a documented and approved conflict known in advance, you must e-mail your instructor (within D2L) the **documentation at least one week prior to the scheduled assessment and an early attempt (i.e. before the regularly scheduled date) will be scheduled for you.**

(2) Missing an assessment due to an emergency or sudden illness: If you are absent due to an unpredicted AND documented medical reason or family emergency, you must contact the instructor as soon as possible, and you may be asked to have your excuse verified by the Dean of Students Office (DSO). Your instructor will follow UNG academic regulations in evaluating the notification and/or documentation received from you or from the DSO on your behalf. Once your instructor is satisfied with the validity of your absence, a make-up will be scheduled after a reasonable amount of time, i.e., before the end of the semester. If your documentation is deemed insufficient to excuse your absence you will receive a zero on the missed assessment (in the case that the absence is for a Progress Check, only the first attempt will be forfeited while the additional retake attempts are still available).

Extensions: Requests for extensions should NOT be made the night of a due date. Requests for accommodations are much better received with advanced notice.

COURSE POLICIES AND ASSIGNMENTS

FIRST DAYS

Log into D2L and access the course. You should check daily for new *Announcements* and/or emails containing important information and reminders. Click on the *Important Items Module* to frequently review the due dates for assignments throughout the term. Many of your questions are answered in the *syllabus* including: Which types of calculators are approved? How do you get help? Can assignments be submitted late? What does the formula sheet for an exam look like? Click through the other modules to read all of the information and become familiar with where to find lecture slides, problem sets, etc.

There is a discussion board – Settling in – that should be utilized for general course related questions.

GRADING

GRADE POLICY

Should a student wish to dispute any grade received in this class, the dispute must be in writing and be submitted to the instructor within 72 h of receiving the grade, or within 24 h of the Final Exam.

Grades are not rounded at the end of term. Course grades are not curved. Take care to complete each assignment prior to its advertised due date and to submit assignments as directed. Contact the UNG Help Desk for help as needed with D2L.

There will be NO end of semester extra credit, and any mid-semester extra credit assignments will NOT be reopened later.

A point-based grade scale is used for this course (note: there is no rounding to your score in D2L).

A total of 1000 points are available throughout the semester, according to the following categories:

Letter	A	B	C	D	F
Cutoff	900 and higher	800 – 899	700 – 799	600 – 699	below 600

Assignments weights are as follows:

Assignment Group	Weight by Points
Initial assignments	30
Progress Checks (15 @ 40 each)	600
Mid-term exam	120
Worksheets (2 opportunities @ 20 each)	40
Practice Sets in D2L	20
Post-exam assignments (varies)	10
Reflections (3 @ 20 each)	60
Cumulative Final Exam	120
Total =	1000

INITIAL ASSIGNMENTS

1 – An Introduction discussion assignment during the first week of class. This doubles as an attendance check.

2 – A pre-test will be administered through D2L using a lockdown browser. This is for a completion grade.

PROGRESS CHECKS

Progress checks are (mostly) weekly quiz-type assessments that are timed and taken during class for your first attempt. These are on a Pass/Fail system, where a "Mastery" (passing) grade is 80%. Questions are graded without partial credit.

- PC: Your first attempt will take place in class on specified dates. In case you don't achieve mastery on the initial try, up to 2 additional retake opportunities will be provided. A detailed key will be made available after the quiz, offering insights into areas that require improvement. Recognizing your strengths and growth areas is essential for excelling in chemistry. Please note that these quizzes are timed to ensure prompt completion.
- Retake Quizzes: You have two additional attempts to pass a retake quiz during or after class. These quizzes have a specific deadline in D2L, after which they will no longer be accessible, making the date a firm deadline.

PC questions may include multiple choice, fill in the blank, matching, multiple answer, or numerical answer. There is no partial credit.

Mastery of 5 Essential progress checks is required to pass the course, regardless of performance on other assessments. The 5 are in bold on the course schedule below.

****See the UNG handbook for appropriate reasons to reschedule. Personal travel does not fall under this umbrella. Missing class the day of a Progress Check simply means a forfeit of the first attempt; retakes are still available.*

MID-TERM EXAM

A cumulative mid-term exam will be given prior to the withdrawal deadline of Oct 13. This exam is equivalent to 3 Progress Checks (120 points total) and will be graded as a traditional exam, including the opportunity for partial credit.

This assessment is graded using partial credit for numerical and longer answers but also contains multiple choice, fill in the blank, and matching questions.

QUIZ/EXAM QUESTION DISPUTES

If you believe you have found an error on a PC/exam or would like to dispute a question, the deadline for doing so is within 72 h of being returned or 24 h for only the final exam. Email your instructor with a written detailed explanation of the error or see your instructor in person **(in-person discussions are highly preferred!).**

CUMULATIVE FINAL EXAM

Our department is required to give the American Chemical Society exam, which is a national multiple choice style exam. More information will be distributed as the end of the semester approaches.

The grade of the final is calculated in the same manner as the mid-term exam.

WORKSHEETS

Uploaded proof of the completion of assigned notes pages and worksheets in an appropriate time frame.

PRACTICE SETS IN D2L

Participation: In-class participation in the form of Kahoot review games, active learning, and problem-solving time is expected by all.

Practice sets in D2L are given for each topic and are intended for practice in mastery of the material – ideally before the Progress Check. These appear in D2L as "quizzes" but multiple attempts are given and they are not timed. You are encouraged to work together and ask questions, as the primary point is to practice for mastery of the material.

POST-EXAM ASSIGNMENTS AND REFLECTIONS

These will be discussed at a later date during class, with a follow-up informational announcement for due dates and point values.

These are intended to better yourself as we progress through this course. These include reflection assignments, exam corrections (for a separate grade, not to replace your exam score), etc.

Surveys: Periodic surveys pertaining to the course will be given throughout the semester.

Miscellaneous: The rare occasional extra credit opportunity may pop up for a short time frame so stay tuned.

OTHER UNIVERSITY OR COURSE STATEMENTS

FEEDBACK

Class evaluations at UNG are conducted on-line through Banner. Evaluation of a class is considered a component of the course and so a student will not be permitted to access his/her course grade until the evaluation has been completed. The evaluations will be accessible beginning one week prior to Final Exam week.

GENERAL EDUCATION

SPECIFIC GOALS OF CHM1151

You will be required to analyze scientific concepts and think critically. This means being able to answer both quantitative (mathematical) and conceptual (qualitative) problems in a limited period of time. Additionally, you will have to write and/or orally communicate on discussion assignments, written assignments, and in discussion with your instructor. We will also demonstrate how these topics can be applied to the scientific method and how observation and experimentation leads us to the development of scientific theories. You will be required to utilize the methods of science as a logical means of problem solving through critical thinking. This means you must analyze information carefully and logically from multiple perspectives, using discipline specific methods, and develop reasoned solutions to problems. To ensure your competency in these concepts you will be required to complete quizzes and assignments that require critical thinking, analysis of problems, and drawing conclusions.

GENERAL EDUCATION STUDENT LEARNING OUTCOMES

Area	Institutional Definition	Institutional SLO
CONTENT	Content is knowledge of the concepts, principles, terminology and methodologies used within the discipline.	Students demonstrate competence in the terminology, concepts, methodologies and theories used within the discipline.
COMMUNICATION	Communication is the development and expression of ideas in written and oral forms.	Students communicate knowledge, ideas, and reasoning clearly and effectively in written or oral forms appropriate to the discipline.
CRITICAL THINKING	Critical thinking is characterized by the comprehensive analysis of issues, ideas, and evidence before accepting or formulating an opinion or conclusion.	Students analyze information carefully and logically from multiple perspectives, using discipline specific methods, and develop reasoned solutions to problems.

Naturally, all three areas of learning outcomes will be assessed in all categories of graded assignment administered in CHM1151.

PHYSICAL SCIENCE GENERAL EDUCATION PROGRAM OBJECTIVES

Physical science courses provide instruction in the basic concepts, theories and terms of the scientific method in the context of the physical sciences. Courses focus on major scientific developments and their impacts on society, science and the environment, and the relevant processes that govern physical systems. Students will formulate empirically-testable hypotheses derived from the study of physical processes, apply logical reasoning skills through scientific criticism and argument, and apply techniques of discovery and critical thinking to evaluate outcomes of experiments.

These objectives are accomplished through participation in the course, and individual work done on homework assignments and assessments.

COURSE LEARNING OUTCOMES

A complete list of student learning outcomes is posted in D2L within each Overview page.

DISCLAIMER

This syllabus represents my current plans and objectives. As we go through the semester, those plans may need to change to enhance the class learning opportunity. Such changes, communicated clearly, are not unusual and should be expected.

"You can teach a student a lesson for a day, but if you can teach him to learn by creating curiosity, he will continue the learning process as long as he lives." – Clay P. Bedford

"Difficulty with guidance produces grit for the future." – Dr. Todd

STUDY SCHEDULE

*The most up to date complete schedule is posted in D2L. This document may have been updated since posting- check D2L for details. **Bold Progress Checks are Essential.**

	Lecture slide name	**After lecture**	**Progress checks** **(First attempt)**
Week 1 – Aug 21-25			
Monday	Syllabus and chat	Become familiar with D2L	
Wednesday	Foundation of Chemistry	WS – Foundation of Chemistry	
Friday	Numbers Galore – part 1 *Bring an approved calculator to class*	WS – sig figs and conversions	
Week 2 – Aug 28 – Sept 1			
Monday	Cont ^ Naming – part 1 (Binary ionic)	Cont ^ WS – naming 1	
Wednesday	Numbers Galore – part 2	WS – density and temperature	**Sig figs and conversions**
Friday	Cont ^ Naming – part 2 (Nonmetals, Organic)	Cont^ WS – naming 2	
Week 3 – Sept 4-8			
Monday	No class	Sleep	Relax
Wednesday	Naming – part 3 (special Hydrogen)	WS – naming 3	Density and Temperature
Friday	All things Atoms	WS – atoms and isotopes	
Week 4 – Sept 11-15			
Monday	Naming – part 4 (Polyatomic list and salts)	WS – naming 4	Binary naming

Wednesday	Rxn types – part 1	WS – Classifying reactions WS – Counting atoms and spot balancing	
Friday	Naming – part 5 (Polyatomic acids)	WS – naming 5	**Atomic structure**
Week 5 – Sept 18-22			
Monday	Rxn types – part 2	WS – Redox practice	
Wednesday	Rxn types – part 3	WS – RXNs and Solubility	
Friday	~practice day~		**Mixed naming**
Week 6 – Sept 25-29			
Monday	Moles and Avogadro		
Wednesday	Stoichiometry, Limits, and Yield	WS – SLY	**Reactions of all kinds**
Friday	Cont ^		
Week 7 – Oct 2-6			
Monday	Cont ^	Cont ^	
Wednesday	Enthalpy and Nutrition	WS – Enthalpy and nutrition	
Friday	Cont ^	Cont ^	
Week 8 – Oct 9-13			
Monday	**Mid-term exam**		
Wednesday	Orbitals and Waves	WS – Orbitals and Waves	
Friday Withdrawal deadline	Cont ^	Cont ^	Enthalpy and Nutrition

Week 9 – Oct 16-20			
Monday	Lewis structures	WS – Lewis Structures and Geometry	
Wednesday	Cont ^	Cont ^	Orbitals and Waves
Friday	Geometry and Polarity	Cont ^	
Week 10 – Oct 23-27			
Monday	Cont ^	Cont ^	
Wednesday	Functional groups and Intermolecular Forces	WS – Functional groups and Polarity	Lewis structures and Geometry
Friday	Cont ^	Cont ^	
Week 11 – Oct 30 – Nov 3			
Monday	Reaction Rates	WS – Reaction rates	
Wednesday	Gas Laws	WS – Gas laws	Functional groups, IMF, Polarity
Friday	Cont ^	Cont ^	
Week 12 – Nov 6-10			
Monday	~practice day~		Reaction rates
Wednesday	Equilibrium – part 1		
Friday	Equilibrium – part 2	WS – Equilibrium	**Gases**
Week 13 – Nov 13-17			
Monday	Solutions – part 1	WS - Solutions	

Wednesday	Solutions – part 2	Cont ^	
Friday	Solutions – part 3	Cont ^	Equilibrium
Thanksgiving break – Nov 20-24			
Week 14 – Nov 27 – Dec 1			
Monday	Acid/Base – part 1		
Wednesday	Acid/Base – part 2		
Friday	Acid/Base – part 3		Solutions
Week 15 – Dec 4-8			
Monday	~practice day~		
Wednesday	Nuclear		Acid/Base
Friday	Review day		
Week 16 – Look on UNG final exam website for our final exam day and time *this will probably be different from our normal class time period.			
Finals week			