

INTRODUCTORY CHEMISTRY I – CHM 101, Spring 2018
Lecture Sec 001A: Tue,Thu 9:30 – 10:45 am, Room AA 345
Lab Sec 0A1A: Thu 11:00 am – 1:30 pm, Room AA 489

Instructor: Dr. Monica Feazell
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Office Hours (AA 352):

M 10:45 am – 2 pm, and 3:15 pm – 5 pm
T 10:45 am – 12 pm
W 1:30 pm – 2 pm, and 3:15 pm – 5 pm
Th 1:30 pm – 3 pm (from 1:30 to 3 pm, only by appointment)

Recommended Text Timberlake: *General, Organic and Biological Chemistry*, 4th Edition. The 3rd custom edition for NOVA, available at the campus bookstore, is equivalent to the 5th edition. It contains only the chapters we are covering (1-11). Older editions are ok.

Course Description. This is the first half in the two semester general chemistry series designed for the non-science major. It emphasizes experimental and theoretical aspects of inorganic, organic, and biological chemistry. We will discuss general chemistry concepts as they apply to issues within our society and environment. CHM 101 is for nursing majors at NVCC (or non-science majors) or if you are certain that the school you are transferring to only requires an Intro to Chemistry class.

Course Objectives:

- apply principles of scientific method and measurement
- define and apply basic terminology
- use chemical symbols, formulas, and nomenclature correctly
- balance simple chemical equations and perform simple stoichiometric calculations
- demonstrate an understanding of the principles of atomic structure and the periodic table
- solve simple gas law problems
- determine the type of bonding and polarity of simple compounds
- determine solution concentration and pH
- relate concentration and temperature to reaction rate and equilibrium

Course Prerequisites: Satisfactory placement scores into ENG 111 and MTH 151 or completion of MTT 0-5.

Audits, Withdrawals & Incompletes Audits may be granted by special permission during the first week of the semester only. The last day to drop this course and get a refund is **Sept 7**. The last day to withdraw without penalty or permission is **Oct 31**. Past the withdrawal deadline, a student must fill out an Add/Drop form and submit a written petition with supporting documentation to the instructor. Performing poorly is not a valid reason for withdrawing after the deadline. If the petition is not granted or not submitted, the student will be given a grade based on the work completed to that point. Incompletes must be approved by the division dean and are granted to students who encounter unforeseeable, documentable, dire circumstances and have completed at least 75% of the course work with a passing grade.

Grades are based on the points earned out of 640 and are assigned as follows:

960 pts or greater = A	8 highest Blackboard Quizzes	160 points
768 pts or greater = B	4 Highest Exams	400 points
672 pts or greater = C	8 highest in-class Quizzes	160 points
576 pts or greater = D	10 highest labs	200 points
Less than 480 points = F	8 highest lab blackboard quizzes	40 points
		960 points

Lecture Grades: (720 points, 75%)

Exams: There will be five exams worth 100 points each. If you do not attend class during an exam, **for any and all reasons**, your exam score will be a zero. I will accommodate requests for early exams **when possible**. No one will be allowed to take an exam late, please do not ask.

Quizzes: Ten 20 points quizzes will be given. Quizzes may be individual, group. The two lowest quizzes will be dropped. There will be no make-up or early quizzes given.

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Blackboard quizzes: online quizzes will be given. The two lowest grades will be dropped. There will be no make-up quizzes. Each quiz will be worth 20 points. The due dates will be posted on blackboard, please check it regularly. The quizzes will be available one week before their due date. Since these quizzes will be in the form of a blackboard quiz, no late quizzes will be accepted. The deadline is posted in the syllabus (the students should take the quiz by 9AM that day).

- There are no make-up quizzes. The lowest two grades will be dropped.
- The quizzes are designed to be taken in 60 minutes, if you leave the quiz and go back, the time will still be running and once the 60 minutes have passed, you won't be able to access the quiz anymore.
- There will be only one chance to submit your answer, so please make sure that you are 100% sure before submitting it.
- There will not be backtracking for any of the quizzes. This means that you won't be able to go back to any question and change your answer once you have submitted it.

Extra Credit: A small amount (~20 points) of extra credit will be offered. Points earned are added to the point total. Assignments can be found on Blackboard.

Lab Grade: (240 points, 25%)

Your lab grade counts as 240 points of your final course grade. See Laboratory section of syllabus for how the Lab % is determined.

There will be no curving of grades. Please remember that grades represent the accumulation of performance during the semester, not your potential as a person or a student. Grades are not negotiable.

Math A command of algebra is assumed in this class. You must have a calculator that can handle scientific notation, logarithms and inverse logs. Students are expected to bring their calculator to every class. I recommend a TI-30XA or TI-36X Pro.

Homework Assigned homework is posted on Blackboard and located within and at the end of each chapter in the text. Homework may be turned in the day of the exams for extra credit. It is in your interest to do and check your homework. Practice is essential to doing well in any class and quiz and exam questions will be closely related to homework questions. Answers to odd problems are in the back of each chapter.

Attendance Regular attendance in the lecture is expected and encouraged, though not required. If you miss a class, you are responsible for the material covered in that class and any missed announcements. Attendance will be taken each day for administrative purposes.

Classroom Behavior Please be respectful of other students learning in the classroom. Arrive to class on time; if you happen to be late, please enter the classroom without causing a disturbance. Chronic lateness is not acceptable. Turn off all electronic equipment (cell phones, ipods, laptops, etc.) when in class. You may leave the cell phone/pager on vibrate mode if you are expecting an important phone call and attend the call by excusing yourself quietly. If you need to leave early, please let me know and sit by the door. I reserve the right to ask you to leave the room if I decide that you are a distraction to others in the class.

Course Materials All course material (slides, homework assignments, and other course documents) will be available or linked to on Blackboard. Please check Blackboard regularly for announcements and postings.

Instructor/Student Communications Policy The primary means of communication outside the classroom between the Instructor and the student is via Blackboard announcements and e-mail. Students should check Blackboard and their e-mail daily for any Instructor communications. Failure on the part of the student to check Blackboard and e-mail on a regular basis is not an excuse for missed/late assignments or exams. The Instructor turn-around time to respond to e-mails is 24-to-48 hours Monday through Friday. I will email you at your VCCS email address. If you do not check this address frequently, set up automatic forwarding to an email address that you do check frequently. When emailing me, always send email from your VCCS email address.

Disability Services for Students Students requiring special needs in accordance with the ADA must provide me with a current NOVA Accommodation Form. Every effort will be made to meet student's special needs when the student makes those needs known appropriately. Accommodations will begin as soon as the form is received and are not retroactive. Please read the section titled Disability Services for Students in the Student Handbook and visit the Disability Support Service (DSS) NOVA website for additional details and a list of Disability Counselors by Campus. <http://www.nvcc.edu/disability-services/index.html>

Academic Dishonesty Academic Dishonesty will not be tolerated. Academic dishonesty includes cheating, plagiarism, and other forms of dishonorable conduct. Penalties can range from the issuance of failing grades (on an assignment, an exam, or the course) to being referred to the Dean of Students for further disciplinary action, including possible expulsion from the college. Students involved in cheating will receive a grade of "F" on the activity during which cheating occurred and may fail the course. Please read

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the section titled *Student Conduct, Rights, and Responsibilities: F. Academic Dishonesty* in the [Student Handbook](#).

Academic dishonesty, as a general rule, involves one of the following acts:

1. Cheating on an examination or quiz; including the giving, receiving, or soliciting of information and the unauthorized use of notes or other materials during the examination or quiz.
2. Buying, selling, stealing, or soliciting any material purported to be the unreleased contents of a forthcoming examination, or the use of such material.
3. Substituting for another person during an examination or allowing such substitution for one's self.
4. Plagiarism. This is the act of appropriating passages from the work of another individual, either word for word or in substance, and representing them as one's own work. This includes any submission of written work other than one's own. You are responsible for understanding what constitutes plagiarism. A [helpful handout](#) can be found on my homepage.
5. Collusion with another person in the preparation or editing of assignments submitted for credit, unless such collaboration has been approved in advance by the instructor.
6. Knowingly furnishing false information to the College; forgery and alteration or use of College documents or instruments of identification with the intent to defraud.

Be aware of the following:

- Any attempt to give or receive information on a quiz or exam will result in an immediate zero that cannot be dropped.
- A second instance of academic dishonesty or cheating on the final exam will result in an automatic "F" for the course.
- All submitted work must be *in your own words*, otherwise it constitutes plagiarism. Both the student that copied and the student copied from will be penalized.

How to do well in this class:

- Read the relevant textbook chapter *before* you come to class. This will help you better absorb the lecture.
- Ask questions! – in class, in my office hours, in the help room, over email. If you are having trouble with the material ask questions and *talk to me immediately* – don't wait until after the first exam! If you feel so lost in lecture that you don't even know what questions to ask, you need to see me as soon as possible and make sure you are reading the book before lecture.
- Pace your studying and don't fall behind. Do all of the homework and read/review the material on a regular basis. The key to doing well is practice, practice, practice – you will get out what you put in.

The time to be concerned about your grade is now and every day after today. Do NOT wait until the last week of the semester to start thinking about how you can improve your grade in the course.

Exam Procedures:

- Your cell phone must be off (vibrate is not ok) before you enter the room. If your cell phone is visible or you are caught looking at your cell phone at any time during an exam, it will be assumed you are cheating.
- All bags, bulky jackets and papers must be put in the front of the room before you begin an exam. Take out extra pens, tissues, and anything else you might need before beginning your exam. You will not be allowed in your bag during the test.
- You may not leave the room once the exam has started.
- You must have your own calculator, I will not lend you one and you may not share with other students. If you have a graphing calculator, you may be asked to clear the memory before exams. If you forget your calculator on exam day, the library lends calculators.
- I reserve the right to assign you a seat or move your seat in the middle of an exam.
- The back of your exam is the only scratch paper allowed. Nothing on the back of the exam will be graded unless it is circled and initialed by me during the exam.

Quiz Procedures

- All exam rules apply, except you may keep bags under your desk, providing all papers are well put away. Having any loose papers in the vicinity of your desk will be considered cheating.

LABORATORY Course Description:

This is the laboratory component of the first half of the two semester introductory chemistry series. We will be performing experiments that introduce you to various techniques in chemistry. After having completed this course, the student should:

1. Know and be able to practice safe and generally accepted laboratory techniques

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2. Understand the basic principles of the experiments performed and instruments used in the experiment.
3. Understand how to use and manipulate data in order to calculate results for the given experiments to the correct sig figs.

Required Materials – Bring to each lab

- 1) Splash-proof laboratory goggles of the kind sold in the college bookstore are the only approved goggles for this course. You are responsible for bringing your goggles to lab *every week*. If you do not have goggles you will not be allowed to participate in lab.
- 2) Proper attire – You must have closed-toed shoes and be covered from shoulders to knees. If you are not dressed appropriately you will not be allowed to participate in lab.
- 3) printed Lab Manual - download from : <https://blogs.nvcc.edu/alchm/lab/chm101/>
- 4) A Scientific calculator

Laboratory Safety Chemistry laboratory is potentially dangerous. Any student who I believe poses a danger to him/herself or others will be asked to leave lab. You are required know and follow all safety rules found on the course website and pass a safety quiz before working in the lab. Non-adherence to safety rules will result in loss of points on your lab and serious safety violations will result in expulsion from the lab and a zero on the lab report.

Laboratory Behavior Students who disrupt the class will be asked to leave and given a zero for the lab that day. Be prepared for the scheduled experiment: read the procedure before lab and be aware of the safety issues specific to the experiment. Use of cell phones is not allowed in the laboratory. I expect your full attention when I discuss the day's experiment at the beginning of class. Once the experiment has started, you may excuse yourself from the room for a couple minutes if needed.

Laboratory Format A five question prelab quiz will taken by 11:59 pm the night before the lab. At the beginning of lab class I will initial each students rubric, verifying that they were present, prepared, and on time. I will then go over the safety and procedural details of the experiment. Students will work in groups of two or three. Lab reports must be completed and submitted before leaving the lab the day of the experiment.

Attendance Regular and punctual attendance is expected. Students who arrive more than 5 minutes late will lose 1 point on their postlab. Students arriving more than 15 minutes late will not be allowed to participate and will receive a zero for that day's lab. Please consider your commute to school, your work schedule and the traffic to make sure that you are on time.

Laboratory Grades

Pre-Labs: Each experiment has a 5-point pre-lab quiz to be taken on Blackboard.

- The quiz must be completed by 11:59pm the night before the lab.
- The quizzes primarily test that you have read the lab ahead of time and are familiar with the concepts explored in the lab.
- The lowest two quizzes will be dropped. There will be no makeup or late quizzes. You will have two attempts at each quiz in case in one of them you encounter technical difficulties. No additional attempts will be given.

Lab Report: Lab reports will be graded out of 20 points according to the rubric.

- You must show work for all calculations. Answers without work will receive no credit.
- Lab reports are due before you leave lab the day of the experiment.
- The lowest two lab grades will be dropped. You may not make up labs in other sections. Missed labs will earn a zero.

Since lab needs to be 25% of the overall course points, the points from lab reports and quizzes *do not get directly added to your grade*. I will take your lab percentage of 240 points and add that into your course point total.

Academic Honesty Students are encouraged to work together and help each other, collaboration on prelab quizzes and copying question answers or calculations is considered cheating. You may discuss how to solve a problem, but calculations must be solved individually. Both the copied work and the work that was copied will be given a zero that cannot be dropped. Data tampering and scientific dishonesty will also result in a zero that cannot be dropped. A second attempt at cheating or data tampering may result in an automatic F for the course.

EMERGENCY AND SAFETY INFORMATION SYLLABUS INSERT

TO REPORT AN EMERGENCY OR SUSPICIOUS ACTIVITY

NOVA Police at 703-764-5000

Police and Fire at 9-1-1

SAFETY PREPARATION

Your ability to react effectively during an emergency takes preparation. The Office of Emergency Management and Safety wants you to be prepared to react immediately. To start, you should know the locations of: the two safest and most direct evacuation routes (see posted evacuation route signs in classrooms), the locations of designated Assembly Areas outside the facility, shelter-in-place areas for a severe weather event, and the nearest automated external defibrillators (AEDs). For additional emergency preparedness information, visit the Office of Emergency Management and Safety website at: www.nvcc.edu/emergency.

FIRE/EVACUATION

- Activate the nearest fire alarm and call 9-1-1 if possible. If there are no fire alarms nearby, knock on doors and yell “fire” as you exit the building.
- Evacuate the building. Do not use elevators!
- Feel closed doors with the back of your hand. Do not open if doors are hot.
- Move well away from the building when evacuating, and assemble at designated assembly areas.
- Do not re-enter the building until cleared by authorized personnel.

SEVERE WEATHER/SHELTER-IN-PLACE

If the area is under a Severe Weather/Tornado **WARNING**, or if notified to shelter:

- Seek shelter immediately in a Severe Weather Shelter Area or go to an interior hallway or room; at the lowest level in the building; and/or an area free of windows or glass.
- Protect your body from flying debris with any available furniture or sturdy equipment.
- Use your arms to protect your head and neck.
- Wait for the “All Clear” before leaving your shelter area.

VIOLENCE/ACTIVE SHOOTER

Determine the most reasonable way to protect your own life and call 9-1-1 or 703-764-5000 when it is safe to do so.

- **Run** and evacuate if you can. This may be your best chance of survival. Have an escape route in mind. Leave valuables behind and keep hands visible.
- **Hide** in an area outside of the shooter's view. Block entry to your hiding place and lock doors. Turn off lights and silence electronic devices.
- **Fight** as a last resort and only when your life is in imminent danger. Attempt to incapacitate the shooter. Act with physical aggression.

EMERGENCY COMMUNICATION

In the event of an emergency you may be notified by various means depending on the emergency. Some of the ways you may be notified include:

- classroom telephones, computer pop-ups, digital flat panels,
- NOVA Access through www.facebook.com/NOVAaccess and www.twitter.com/novaaccess), or
- Text messaging through NOVA Alert.
NOVA Alert is a free notification service. You are automatically signed up for email alerts through your NOVA email address. To add a mobile phone number or an additional email account, you must register by going to: <https://alert.nvcc.edu>.
- NOVA may use some or all notification channels to notify you. For a complete list, visit the NOVA website at www.nvcc.edu and search for Alert Notification Systems.

Closing/Class Cancellations

If the College is closed or delayed for any reason, a text alert will be sent to cell phones registered on NOVA Alert and a notice will be posted on the home page of the College's website. In addition, a message will appear on our cable television station and on local radio and TV stations. The home page of the College's website will always have the most reliable and up-to-date information about closures or delays.

More Info: www.nvcc.edu/emergency

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Lecture Schedule

Date	Class	Quiz Due / Exam
08/22	Ch. 1	
08/24	Ch. 1	
08/29	Ch. 1	In-class Quiz Ch. 1
08/31	Ch. 2	Blackboard Quiz Ch. 1 Due
09/05	Ch. 2	
09/07	Ch. 3	In-class Quiz Ch. 2 Blackboard Quiz Ch. 2 Due
09/12	Exam 1 (Ch. 1, and Ch. 2)	
09/14	Ch. 3	
09/19	Ch. 3	
09/21	Ch. 4	In-class Quiz Ch. 3 Blackboard Quiz Ch. 3 Due
09/26	Ch. 4	
09/28	Ch. 5	
10/03	Ch. 5	In-class Quiz Ch. 4 Blackboard Quiz Ch. 4 Due
10/05	Exam 2 (Ch. 3, and Ch. 4)	
10/10	No school	
10/12	Ch. 5	
10/17	Ch. 5	
10/19	Ch. 6	
10/24	Ch. 6	In-class Quiz Ch. 5 Blackboard Quiz Ch. 5 Due
10/26	Ch. 6	
10/31	Ch. 7	In-class Quiz Ch. 6 Blackboard Quiz Ch. 6 Due
11/02	Exam 3 (Ch. 5, and Ch. 6)	
11/07	Ch. 7	
11/09	Ch. 8	
11/14	Ch. 8	In-class Quiz Ch. 7 Blackboard Quiz Ch. 7 Due
11/16	Ch. 9	
11/21	Ch. 9	In-class Quiz Ch. 8 Blackboard Quiz Ch. 8 Due
11/23	No school	
11/28	No class	
11/30	Exam 4 (Ch. 7, and Ch. 8)	
12/05	Ch. 10	In-class Quiz Ch. 9 Blackboard Quiz Ch. 9 Due
12/07	Ch. 10	In-class Quiz Ch. 10 Blackboard Quiz Ch. 10 Due
12/12	Exam 5 (Ch. 9, and Ch. 10)	

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Lab Schedule

Date	Lab
08/24	No lab
08/31	Safety and Math Review
09/07	Measurements and Conversions
09/14	Density and Specific Gravity
09/21	No Lab
09/28	Energy
10/05	The Periodic Table & Atomic Structure
10/12	Chemical Compounds
10/19	Chemical Reactions
10/26	Stoichiometry (take home)
11/02	Gas Laws
11/09	Solutions
11/16	Chemical Equilibrium
11/23	No Lab
11/30	Acids and Bases
12/07	No Lab