



The mission of Concord University is to provide quality, liberal arts based education, to foster scholarly and creative activities and to serve the regional community (<http://www.concord.edu/academics/>).

**Course Prefix, Number and Title:** Chemistry 100: Fundamentals of Chemistry

**Course CRN # and Section** 20228, Section 01  
**Course Hours:** 3  
**Prerequisites:** none  
**Semester Taught (including year):** Spring 2019  
**Room Number (if applicable):** Science 309  
**Course Time (if applicable):** Monday, Wednesday, Friday 11:00-11:50am  
**Inclement Weather Time:** 12:15-12:55p

**Instructor:** Dr. Alec Wagner, Assistant Professor of Chemistry  
**Office:** Administration Building Room 323  
**Office Hrs.:** Mon. 2-4p, Thurs. 9-10a and 1-4p, Fri. 1-3p Also by appointment  
**Phone #:** 304-384-5988 or x5988 (on campus)  
**Fax #:** 304-384-6225  
**Email:** atwagner@concord.edu  
**Dep. Web:** <http://www.concord.edu/physci/node/2>

**Course Description/Rationale:**

This is an introductory chemistry course designed to build critical thinking and problem-solving skills. CHEM 100 will provide a firm foundation for CHEM 101 and CHEM 102. The skills learned in CHEM 100 will be applicable to more advanced classes in chemistry, biology, and geology.

**Course Management System:** Moodle

**Hardware/Software Needed:** Microsoft Word and Powerpoint

**Text requirements:**

*Chemistry 100 - Concord University Edition* ISBN: 9781269237109

One semester access to Sapling Learning Online Homework. ISBN: 9780983385950  
([www.saplinglearning.com](http://www.saplinglearning.com))

**Other required materials:**

Non-programmable scientific calculator (calculators in a cellphone are NOT acceptable)

**Concord University Educational Goals:**

**Skills:** Proficiency in interpreting data, integrating information, formulating ideas, thinking critically, and communicating with others, as demonstrated by the following competencies:

- An ability to employ appropriate observational, logical, analytical, computational, creative, and critical thinking skills within and across academic disciplines; and to apply these skills in problem solving.

**National Standards:** Not applicable

**Specific Learning Outcomes:**

As a result of taking Chemistry 100 the student should be able to:

- properly use scientific notation and significant figures
- prepare and interpret graphs
- solve unit conversion and stoichiometric problems
- understand the nature of matter and energy
- understand the modern model of the atom
- understand how compounds are formed from atoms
- understand the structure of the periodic table and its use to predict chemical properties
- identify the basic types of chemical reactions
- write and balance chemical reaction equations
- understand the nature of solutions

**Course Requirements:**

The following assignments will be used to determine the student's grade in the class.

- **Online homework assignments:** Multiple online homework assignments will be given throughout the semester via the Sapling system, NOT Moodle. These assignments are meant to help practice problem solving and critical thinking skills in preparation for tests in this course and in future courses.
- **Quizzes:** Quizzes will be given both in class and online (via Moodle) to help determine areas of difficulty between tests.
- **Tests:** Tests will be given frequently to assess your learning. Tests will all occur during class time and will have an associated review session hosted by the instructor. The times and locations of review sessions may vary. Questions will be a mixture of multiple choice, matching, and short answer questions. A given test may heavily favor one type over the others, and this may vary from test to test.

**Grading:**

Online Homework	15%
Quizzes	15%
Tests	60% total
<u>Final Exam</u>	<u>10%</u>
Total of	100%

Scale A: 90-100% B: 80-89% C: 70-79% D: 60-69% F: < 60%

## Course Policies:

- **Attendance & Make-Up:**  
Regular attendance is essential for adequate performance and is required. Although the instructor reserves the right to drop non-attending students, it is the student's responsibility to withdraw if they have decided not to complete the course. Accommodations for documented university or medical excused absences will be made on a case-by-case basis. In situations where the student is aware of the absence in advance (athletic events, field trips, etc.), arrangements for conducting the class during another section that week **MUST** be made prior to the absence. If a student misses an assignment due to an unforeseen circumstance, they must contact the instructor (see, email or call) as soon as possible to make arrangements if applicable. Individuals that wait to speak with the instructor at a later date will not be granted permission to make up the assignment.
- **Electronic Assignment Submission:**  
Some assignments require on-line submission via Moodle. On-line assignments must be completed in a timely fashion. An excuse for "technological difficulties" (internet was down, etc.) is not acceptable.
- **Late Assignments:**  
Assignments that are not submitted at the specified times will be considered late. There will be a 10% deduction for every day late.
- **Electronic Device Policy:**  
All cell phones must be turned off during class. The instructor reserves the right to make point deductions from your grade for using a cell phone during class. During the exam, all electronic devices except calculators must be inaccessible. Use of a cell phone during the exam will result in an F. Calculators that are part of a cell phone are not acceptable.

## Course Timeline (Schedule of Assignments/Assessments/Presentations):

This is a tentative schedule. The instructor reserves the right to modify this schedule as needed. Depending on the speed at which topics are covered, lecture topics AND TEST DATES may be moved accordingly.

<u>Date</u>	<u>Topic</u>	<u>Reading</u>
1/14	Introduction, The Scientific Method	Chapter 1
1/16	<b>Toledo Exam</b>	
1/18	Significant Figures and Scientific Notation Part 1	2.1-2.4
1/21	<b>Martin Luther King, Jr. Day – NO CLASS</b>	
1/23	Significant Figures and Scientific Notation Part 2	2.1-2.4
1/25	Basic Units, Prefixes, and Unit Conversions	2.5-2.6
1/28	Multistep Conversions	2.7-2.10
1/30	Matter	3.1-3.4
2/1	Properties and Changes	3.5-3.6
2/4	Law of Conservation of Matter and Energy	3.7-3.11

2/6	Atoms and Elements	4.1-4.5
2/8	<b>Exam 1 (Chapters 1-3)</b>	
2/11	The Periodic Table	4.6
2/13	Ions, Isotopes and Average Atomic Mass	4.7-4.9
2/15	Molecules and Compounds	5.1-5.4
2/18	Ionic Compounds	5.5-5.7
2/20	Molecular Compounds	5.8-5.11
2/22	The Mole	6.1-6.4
2/25	Conversions Using the Mole	6.5
2/27	Percent Composition and Chemical Formulas	6.6-6.9
3/1	Chemical Reactions and Equations	7.1-7.3
3/4	Balancing Chemical Equations	7.4
3/6	Review	
3/8	<b>Exam 2 (Chapters 4-6)</b>	
3/11	<b>Spring Recess – NO CLASS</b>	
3/13	<b>Spring Recess – NO CLASS</b>	
3/15	<b>Spring Recess – NO CLASS</b>	
3/18	Reactions in Solution	7.5-7.7
3/20	Acid-Base and Gas Evolution Reactions	7.8-7.10
3/22	Basic Stoichiometry	8.1-8.4
3/25	Limiting Reactant and Yield	8.5-8.6
3/27	Enthalpy	8.7
3/29	Review	
4/1	<b>Exam 3 (Chapters 7 and 8)</b>	
4/3	Historical Model of the Atom	9.1-9.4
4/5	Quantum Mechanical Model of the Atom	9.5-9.6
4/8	Electron Configurations	9.7
4/10	Periodic Trends	9.8-9.9
4/12	Lewis Structures	
4/15	Resonance	10.6
4/17	Shapes of Molecules	10.7
4/19	Polarity	10.8
4/22	Solutions	13.1-13.4
4/24	Concentration	13.5-13.7
4/26	Solution Stoichiometry	13.8
4/29	Colligative Properties	13.9-13.10
5/1	Review	
5/3	<b>Exam 4 (Chapters 9, 10, and part of 13)</b>	
5/6	<b>Standardized Final Exam 11:30a – 1:45p</b>	

\* *Friday, April 5<sup>th</sup>, 2019*      *last day to drop w/ "W"(by 4:00pm)*

**Accessibility/Accommodations:**

Concord University is committed to responding to the needs of students with disabilities as defined by the Americans with Disabilities Act. Please inform your instructor at the beginning of the class semester if you have a disability and are requesting accommodations. It is your responsibility to self-disclose that you are requesting accommodations. The University and instructor will provide you with a reasonable accommodation. You should register with CU's Disability Services Office, located in the Athens campus Jerry and Jean Beasley Student Center, Bottom Floor, across from the Campus Post Office. The Disability Services Office phone is 304-384-6086 or you can email the Director, Nancy Ellison, at nellison@concord.edu for assistance.

**Academic Dishonesty:**

Academic dishonesty is morally unacceptable as well as destructive to the learning and teaching atmosphere. Academic dishonesty includes the giving or receiving of improper help on examinations or assignments, falsifying documents, and plagiarism (the act of stealing and using, as one's own, the ideas or the expression of the ideas of another). Such dishonesty can lead to a variety of penalties — including but not limited to failure of assignment, failure of course, loss of institutional privileges, or dismissal from the University. (See University Catalog Academic Policies and Procedures.)

**Concord University Honor Code:**

A Concord University Honor Code was approved by students, staff, faculty, administration, and the CU Board of Governors. The Code states:

*"As a member of the Concord University Community I will act with honesty and integrity in accordance with our fundamental principles and I will respect myself and others while challenging them to do the same."*

The Honor Code is intended to unite the Concord community behind a culture of honesty, integrity, and civility.

**Class/Online Attendance Policy:**

Regular class attendance is part of a student's academic obligation at Concord. Irregular attendance may affect academic performance adversely and is detrimental to the atmosphere of a class. (See University Catalog Academic Policies and Procedures.)

**Emergency Alert System:**

In an effort to increase safety and security on our campus, Concord University encourages everyone to register for instant text message alerts. Alerts will only be used for security and safety notices. All students, faculty, and staff are eligible to receive text message alerts on their cell phones or email alerts. Please contact the IT Help Desk for further assistance (304-384-5291).

**Emergency Information:**

Emergency/courtesy telephones are located at the main entrance of each residence hall and at various other locations on campus. Emergency telephones can be identified by the flashing blue light and will provide the user with a direct link to Public Safety at the press of a button. To report an on-campus emergency, call 304-384-5357 or 911. The Office of Public Safety is located on the bottom floor of the Rahall Technology Center. For further emergency information go to:

<http://www.concord.edu/administration/office-public-safety>.

**Inclement Weather Policy:**

As a general policy, the University will remain in normal operations during adverse weather conditions. In the event of severe weather conditions, the following may occur:

**University Closure**

No students or employees are to report.

### Classes Cancelled

Students do NOT report BUT employees are expected to report to work at their normal time.

### Operating on an Inclement Weather Delay

Under this schedule, all 8 a.m. classes will start at 10 a.m. Students and faculty will follow the Inclement Weather Schedule. (See <http://www.concord.edu/emergency-alerts> for Athens/Beckley Inclement Weather Schedules.)

*\*Announcements invoking the late schedule or other options referenced above are aired on area radio and television stations and are sent as text and email messages to those enrolled for this service*

### **Student Conduct:**

In classrooms, online, laboratories, and during any activities that are part of course requirements, students are expected to observe reasonable rules of conduct.

### **Sexual Harassment & Assault:**

Federal law, Title IX, and Concord University policy prohibits discrimination, harassment, and violence based on sex and gender (including sexual harassment, sexual assault, domestic/dating violence, stalking, sexual exploitation, and retaliation). If you or someone you know has been harassed or assaulted, you can receive confidential counseling support through the Concord University Counseling Center (304-384-5290). Alleged Violations can be reported non-confidentially to the Concord University Title IX Coordinator at 304-384-6327 or [titleix@concord.edu](mailto:titleix@concord.edu). Reports to Campus Security can be made at (304-384-5357). As an employee at Concord University, I am a mandatory reporter which means I must report any sexual misconduct I am made aware of. This includes verbal or written (such as in an assignment) disclosures of sexual harassment or sexual assault.

### **Technology Services:**

Contact the CU Help Desk at extension 5291 from campus or 304-384-5291 off campus. You may also e-mail [cuhelpdesk@concord.edu](mailto:cuhelpdesk@concord.edu).

### **Moodle Privacy Policy:**

Please follow this link to view Moodle's privacy policy. <https://moodle.org/mod/page/view.php?id=8148>

### **Sapling Privacy Policy:**

Please follow this link to view Sapling's privacy policy.  
<http://macmillanlearning.com/Catalog/other/privacy>

### **Academic Resources:**

The Academic Success Center is ready to assist any student with academic or personal concerns, tutoring, study skills, time management, and much more. The Academic Success Center is located in Suite 243 (Atrium) of the Rahall Technology Center. Students can stop by the ASC Monday through Friday, 8:00 am until 4:00 or by appointment. The ASC may be reached by calling (304) 384-6074, (304) 384-6298, or [asc@concord.edu](mailto:asc@concord.edu). Website: <http://hub.concord.edu/academicsuccess/> The drop-in tutoring schedule is posted online: <https://apps.concord.edu/tutoring/>. Smarthinking— online, and on-demand tutoring—is available on Blackboard at [elearn.concord.edu](http://elearn.concord.edu).

### **Syllabus Disclaimer**

**"This syllabus is subject to change based on the needs of the class. Please check it regularly."**