Course Description

Chemistry is the central science. Chemistry or a chemist has directly or indirectly touched every man-made object. Chemistry is also central to all biological processes. This course is designed for non-chemistry majors as an introduction to basic chemical principals. The topics include the description of the atom and molecules, states of matter, chemical reactions, gas laws, nuclear chemistry as well as pH and acid-base chemistry.

Prerequisite: MATH123 or MATH 129

Lecture: MW 6:00-7:30pm (Science & Technology Building 413)
Laboratory: MW 7:40-9:40pm (Lyons Science 302)
Semester Credit Hours: 4

Instructor: Prof Nate Wymer
Office Location: none
Office Phone: none
Mobile Phone: (860) 449-4955
Email: nwymer@uncfsu.edu (natewymer@gmail.com)

Office Hours: I will be available before and after class as much as possible for questions.
Email questions are encouraged.
I reserve the right to leave early if no one attends early during office hours.

Announcements

Students are responsible for regularly checking email and BlackBoard for announcements. FSU Policy on Electronic Mail: Fayetteville State University provides to each student, free of charge, an electronic mail account (username@uncfsu.edu) that is easily accessible via the Internet. The university has established FSU email as the primary mode of correspondence between university officials and enrolled students. Inquiries and requests from students pertaining to academic records, grades, bills, financial aid, and other matters of a confidential nature must be submitted via FSU email. Inquiries or requests from personal email accounts are not assured a response. The university maintains open-user computer laboratories throughout the campus that can be used to access electronic mail.Rules and regulations governing the use of FSU email may be found at http://www.uncfsu.edu/PDFs/EmailPolicyFinal.pdf

Disabled Student Services

In accordance with Section 504 of the 1973 Rehabilitation Act and the Americans with Disabilities Act (ACA) of 1990, if you have a disability or think you have a disability to please contact the Center for Personal Development in the Spaulding Building, Room 155 (1st Floor); 910-672-1203.
Laboratory Safety
THE STUDENT MUST PURCHASE SAFETY GOGGLES BEFORE STARTING TO ATTEND ANY LAB. As of Spring 2013, the Department of Chemistry and Physics will no longer provide students with safety glasses. Fayetteville State University requires students to wear safety glasses while in the laboratory. Safety glasses can be purchased at the FSU Book Store; safety glasses must meet ANSI standard. If purchased elsewhere, the student is responsible for bringing them the day of lab, and NOT to store them in laboratory drawers.

Students are also required to wear closed toe shoes in the laboratory. Students wearing sandals or open toed shoes will not be permitted to participate the laboratory. Chemicals can fall and splatter on the ground making feet at risk for chemical exposure.

Student Learning Outcomes
Upon successful completion of this course, students will be able to:

1) Understand the general properties of matter
2) Understand the phase changes that matter undergoes
3) Perform mathematical manipulations such as unit analysis with proper attention to units and significant figures
4) Name and classify ionic or covalent compounds
5) Calculate amounts of chemicals involved in reactions based on balanced chemical equations and the mole concept
6) Visualize molecules with proper molecular and electronic geometry as predicted by VSEPR theory
7) Identify and predict the outcome of the various types of chemical reactions including acid-base and precipitation reactions
8) Understand the physical and chemical nature of solutions. Calculate and utilize solution concentration units, e.g., molarity
9) Recognize oxidation-reduction reactions using the concept of oxidation numbers

Students will develop good laboratory practice, which includes: Keeping a laboratory notebook, noting complete data and observations, follow safe laboratory procedures, manage laboratory time well.

Throughout this course, students will build a foundation for careers in health-related fields as well as chemistry and biology by doing hands-on experiments in the laboratory, understand scientific communication and thinking, and by understanding the concepts of chemistry that connect with health-related fields and everyday life.
Course Requirements and Evaluation Criteria

Student’s experiences of level of success and accomplishment in this course depends not only on academic ability, but also on how much time and commitment a student is willing to invest in the course. Your level of accomplishment in CHEM101 at the end of the semester is indicated by the grade you receive for the course. The grade you receive will be the grade you earn based on your academic performance. In other words, your grade depends on you and how much quality time you put into the course. Each new topic presented in CHEM101 builds upon the prior topics. As such, CHEM101 requires that you do not get behind, or you will not be successful. Your performance in CHEM101 is not measured against the performance of other students, but rather against course standards established by the instructor. The course standards upon which grades will be based are listed below. The final letter grade will be assigned according to the University Catalog.

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<thead>
<tr>
<th>Percentile Points</th>
<th>Letter Grade</th>
<th>Accomplishment Level</th>
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<tbody>
<tr>
<td>90-100%</td>
<td>A</td>
<td>Excellent</td>
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<tr>
<td>80-89%</td>
<td>B</td>
<td>Proficient</td>
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<tr>
<td>70-79%</td>
<td>C</td>
<td>Average or Acceptable</td>
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<tr>
<td>60-69%</td>
<td>D</td>
<td>Poor</td>
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<tr>
<td>below 60%</td>
<td>F</td>
<td>Unacceptable</td>
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<tr>
<td></td>
<td>FN</td>
<td>(Failing due to non-attendance)</td>
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Assignments

One-hour exams 60%
Laboratory 10%
Homework 10%
Final exam 20%

Laboratory Grade: A student who fails to pass the laboratory portion of CHEM101 with 75% or higher will not obtain final grade higher than a C.

Homework: Homework will be done on assigned worksheets. Homework is due by the specified date, typically on the day of the exam. No late homework will be accepted.

Laboratory Reports: Laboratory reports are due at the beginning of the next class. Students can work together or collaborate to complete a laboratory report. However, each student must turn in his or her own report. Photocopied blank lab reports for use during the laboratory period are fine. Photocopied finished lab reports WILL NOT be accepted and be counted as a zero.

Make-Up Policy: No make-up lab, homework, or any exams will be given. Make-up exams will be offered only under exceptional circumstances and with a valid written excuse (see below).

Neatness Counts: Points will be deducted for untidy, illegible, or unstapled work. Assignments MUST be stapled when turned in.

Grading: When assignments or exams are graded, the answers are marked as either correct or incorrect. To calculate the grade, the points from the correct answers are simply divided by the total number of possible points.
Extra Credit: I will not give extra credit or extra assignments to help boost your grade. I would rather have you spend time studying or doing your homework. DO NOT ASK FOR EXTRA CREDIT.

Leaving during Exam Time: A student is permitted to leave during exam time only if the student first turns in the exam. The exam will not be returned to the student until it is graded.

Interim Grades:

Interim grades will be assigned from the first week of the semester until the deadline for class withdrawals. Interim grades are used for informational and warning purposes only; they are not part of your permanent transcript and have no effect on your grade-point average (GPA). In accordance with university policy, the following changes have been implemented:

1) WN (withdrawal due to non-attendance) grades have been discontinued. This means that the student is responsible for withdrawing from classes prior to the published deadline.

2) Final grade FN (failure due to non-attendance). This final grade is assigned to students who are on a class roster, but who never attend the class. An FN grade is equivalent to an F grade and adversely affects your GPA.

3) Interim Grade X (No-show). This grade is assigned to students who are on a class roster, but who never attend class. If you have an X grade, either begin attending class or withdraw from it. If you do not take action in response to an X grade, you will receive a final grade of FN.

4) Interim Grade EA (Excessive Absences). If you have an EA grade, you are in jeopardy of failure if you do not take immediate actions. Either resume attending the class or withdraw from it. This grade is assigned to students whose class absences exceed 10% of the total contact hours.

Note: X, EA, FN grades are part of the Early Alert System.’

Attendance Requirements

Class attendance is required for all students. Attendance will be taken for each class period. Students are expected to attend all class meetings, laboratories, and other instructional sessions for all courses in which they are enrolled. Students are also expected to arrive to class on time and remain in class for the entire scheduled period. When students must miss class for unavoidable reasons, i.e., illness, family emergencies, or participation in official university sponsored activities, they are responsible for informing faculty of the reasons for the absences, in advance if possible, and completing all missed assignments. Faculty members will indicate in their syllabi the conditions for making up missed assignments.

During the first half of the term, faculty will assign an interim grade of EA for students whose class absences exceed 10% of the total contact hours for the class. Students who receive EA interim grades must either withdraw from the class or resume attendance. Students who resume attendance must consult with the instructor about completion of missed assignments. The EA is not a final grade, so students who are assigned an interim grade of EA, but do not withdraw from the class, will receive a final grade based on the evaluation criteria for the class.

Please note that the WN grade is no longer in effect. Students must not expect faculty to withdraw them from classes.
Class absences will only be excused when valid documentation is provided for participation in university sponsored activities, serious illness, and family emergencies. Other absences may be excused at the discretion of the instructor, who may require documentation. The latter may be in the form of a note from a doctor or the university’s student health clinic in the event of serious illness, a note from another Fayetteville State faculty or the athletic department indicating your involvement in an official university-sanctioned event, a bulletin from a funeral service, a note from an employer, etc. In all cases, contact information (i.e., a phone number), must be included. Students must notify the instructor, in advance when possible, of the reasons for the class absence. When prior notification is not possible, students are required to explain the reason for their absence by the next class meeting. When students fail to explain class absences, those absences are unexcused. The university policy concerning absences from class will be strictly enforced. Class attendance is important because of the pace of the course and the abstract nature of many of the topics covered. The student is responsible for all making up any and all missed work. The student is responsible for obtaining class notes, assignments, and announcements when a lecture is missed.

Students are required to be punctual for each class session. Class will begin promptly at the scheduled time. Students are expected to be in class and ready to learn at the scheduled time and remain in class until dismissed by the instructor.

In my experience, regular class attendance is a necessary, but not sufficient, indicator of success. Absences, whether for a good reason or not, do not excuse the student from completing the homework assignments. Attendance does not count as part of your grade in class because you do not get course credit for merely following University policy. However, attendance will be taken as necessary to accomplish the critical task of verifying the accuracy of the official course roster.

More than THREE unexcused absences will result in the loss of one letter grade in the final semester grade.

Laboratory attendance is required. There are no provisions for making up a missed laboratory experiment. If a student must miss a laboratory time with an excusable absence, the student can have that lab be considered excused. The excused lab assignment will not be factored in when calculating the student’s final laboratory score. Experiments must be performed during the scheduled time period. Required readings/pre-labs must be completed before class. Homework and other assignments are due on the dates specified.

**Missed Exams**

The following policies have been implemented as a matter of fairness for all students in the course: You are expected to take all examinations and quizzes at the scheduled times. No student will be allowed to take an exam or quiz before or following the scheduled exam time. Should an illness, family emergency, official university-sanctioned event or other unavoidable problem necessitate your missing a scheduled exam, you may take a make-up exam provided that (1) the instructor is notified prior to the exam, and (2) you show verifiable evidence for the condition/situation/event that resulted in your missing the regularly scheduled exam. You must contact the instructor via email, phone call, or text message within 24 hours after a missed exam in order to schedule a make-up. Evidence for missed exam may be in the form of a note from a physician or the university’s student health clinic in the event of a serious illness, a note from another Fayetteville State faculty or the
athletic department indicating your involvement in an official university-sanctioned event, a bulletin from a funeral service, a note from an employer, etc. In all cases, contact information (i.e. a phone number) must be included. The make-up exam will be administered at a time agreed upon by both the student and the instructor. Note that makeup exams may be longer, more difficult, and have a different format than the exam given to the class as a whole.

Other Student Expectations

The instructor will respect all students and will make every effort to maintain a classroom climate that promotes learning for all students. Students must accept their responsibility for maintaining a positive classroom environment by abiding by the following rules:

1) Students who are enrolled in CHEM 101 are expected and presumed to have met the prerequisites for this course.

2) Each student must work towards an understanding of the material discussed in class and the textbook, including the basic language of chemistry, chemical concepts and principles, and applying chemical principles to solving chemistry-related problems.

3) Each student is expected to read the assigned chapters in the textbook. This will help in understanding key concepts and learning necessary factual material. Due to time constraints, it is not possible to cover each topic fully in lecture. Students are responsible for reading the text to fill in the details that are not covered specifically during class meetings.

4) Students are expected to refrain from disruptive behavior during class. Such behavior is rude and may cause you or those around you to miss an important point or announcement made in class. Examples of disruptive behavior that have been noted by myself and other faculty include, but are not limited to, habitually walking into class late, chatting with other students while the instructor or another student is talking to the class, packing up and leaving class early (unless the instructor is notified first that you must leave early for a certain reason), sleeping, and talking on cell phones. Cell phones and pagers also should be turned off before class begins.

5) Students shall not engage in laboratory experiments that are not written within the laboratory experiments. These actions can cause serious injury to the student or others. Performing these extra laboratory experiments will immediately subject the student to disciplinary action.

6) Participate actively in classroom discussions and activities.

7) Take examinations at the scheduled dates and times.

8) Refrain from participating in all forms of academic misconduct (see below)

9) The use of electronic devices will NOT be permitted during an exam or quiz. The student will only need a pen or pencil and a calculator. All other materials need to be underneath the desk.

FSU Policy on Disruptive Behavior in the Classroom

The Code of the University of North Carolina, of which FSU is a constituent institution, and the FSU Code of Student Conduct affirm that all students have the right to receive instruction without interference from other students who disrupt classes.
FSU Core Curriculum Learning Outcome under Ethics and Civic Engagement (6.03): All students will “prepare themselves for responsible citizenship by fulfilling roles and responsibilities associated with membership in various organizations.”

Each classroom is a mini-community. Students learn and demonstrate responsible citizenship by abiding by the rules of classroom behavior and respecting the rights all members of the class.

The FSU Policy on Disruptive Behavior (see FSU website for complete policy) identifies the following behaviors as disruptive:

1) Failure to respect the rights of other students to express their viewpoints by behaviors such as repeatedly interrupting others while they speak, using profanity and/or disrespectful names or labels for others, ridiculing others for their viewpoints, and other similar behaviors.

2) Excessive talking to other students while the faculty member or other students are presenting information or expressing their viewpoints.

3) Use of cell phones and other electronic devices

4) Overt inattentiveness, e.g. sleeping, reading newspapers, constant checking of mobile phone.

5) Eating in class, except as permitted by the faculty member.

6) Threats or statements that jeopardize the safety of the student and others.

7) Failure to follow reasonable requests of faculty members.

8) Entering class late or leaving class early on regular basis.

9) Others as specified by the instructor.

Consequences for Failing to Meet Behavioral Expectations

The instructor may take the following actions in response to disruptive behavior. Students should recognize that refusing to comply with reasonable requests from the faculty member is another incidence of disruptive behavior.

1) Direct student to cease disruptive behavior.

2) Direct student to change seating locations.

3) Require student to have individual conference with faculty member. At this meeting the faculty member will explain the consequences of continued disruptive behavior.

4) Dismiss class for the remainder of the period. (Must be reported to department chair.

5) Lowering of the student’s final exam grade by a maximum of one-letter grade.

6) File a complaint with the Dean of Students for more severe disciplinary action.

Students who believe the faculty member has unfairly applied the policy to them may make an appeal with the faculty member’s department chair.
Academic Misconduct

As members of an academic community, each student is expected to preserve his or her personal integrity by refraining from all forms of academic dishonesty. Academic fraud includes, but is not limited to, the following:

1) Copying answers on an exam, quiz, homework assignment, or laboratory assignment from another student.

2) Plagiarism of written work, including laboratory reports, from the textbook, internet webpage, laboratory manual, or other published work.

3) Using notes or a crib sheet on an exam or quiz without the consent of the instructor. This includes writing notes on any part of your body.

4) Asking another student for help or answers during an exam, or providing such help to another student.

5) Having another person take an exam or quiz for you.

6) Stealing or having in one’s possession without permission a copy of an exam or quiz generated by the instructor prior to its administration.

Evidence of cheating, in any form, on an exam or quiz will result in an "F" (0 points) for that quiz or exam. Any student caught cheating more than once could face more severe disciplinary measures, including expulsion from the university, in accordance with university policies as outlined under Disciplinary System and Procedures in the Fayetteville State University Student Handbook. The handbook may be obtained from the Office of Student Affairs located in the Collins Administration Building.

Plagiarism

Plagiarism is any use of another person’s words or ideas without giving proper credit to the person whom you borrowed the words or ideas. Plagiarism is the theft of intellectual property. Plagiarism includes the following:

1) Failing to cite properly any direct or indirect quotation(s) from professionally written materials (books, journal articles, etc.) student papers, projects, presentations, etc.

2) Submitting as your own work a paper, project, or presentation that you did not compose, e.g. write, compile, draw, etc.

3) Allowing another person to write your paper or develop your presentation or assignment.

Students who plagiarize will be subject to failing the assignment and/or failing the course.

Turnitin.com is a web-based service that provides online reviews of written material to judge if it has been copied from another source. Turnitin.com is used to evaluate the possibility of a student
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plagiarizing or cheating on written material. The instructor may require students to submit written work in an electronic format for the purpose of utilizing the Turnitin.com service.

Drop Deadline

No student will be allowed to drop the class after the official university drop deadline listed in the FSU Academic Calendar. If a student stops attending class after this date, they will receive a final grade of FN (failure due to non-attendance). An FN grade is equivalent to an F grade in the calculation of your grade-point average (GPA).

Academic Support Resources

Academic support resources available for this class include Center for Promoting STEM Education & Research (CPSER) in Lyons Science Annex (For registration, please contact Ms. Portia Nelson, http://www.uncfsu.edu/cpser/).

Other programs like OpTIMUM, RISE, NCLSAMP, FICAM, and McNair offer tutoring FREE services. Students need to contact these program coordinators independently and sign-up. Tutoring slots are limited, so early registration is encouraged.

The University College Learning Center in the H.T. Chick Building in Room 216 C is available to assist students with writing, mathematics, and reading comprehension. Students needing extra help must sign-up for Student Support services for tutoring.

Additional textbooks related to the course are available in the FSU library.

FSU strongly encourages students to utilize Criterion and/or Smarthinking, the online resources with tutoring in writing, math, biology, chemistry, physics, economics, accounting, statistics and Spanish. Visit Smarthinking Student Site at http://blackboard.uncfsu.edu/

Teaching Strategies

The primary means of instruction will be through instructor-led discussions and formal lectures & labs and by online assignments. To accommodate different student learning styles, the instructor will utilize both auditory and visual aids, such as Powerpoint® presentations, conventional blackboard recitations, and practical demonstrations that illustrate the application of theoretical concepts. To assist in presenting abstract material, the instructor will utilize computer visualization to increase the student’s problem-solving skills. The students are encouraged to participate in group problem-solving discussions to challenge their creativity, analytical, and logical reasoning skills. However, students are encouraged to participate without disrupting the class. Students should set-up appointments for individual needs related to the course during office hours (email appointments or questions are encouraged).
Textbooks:


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<th>Date</th>
<th>Topic</th>
<th>Chapter</th>
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<tr>
<td>Lecture 1</td>
<td>Syllabus Review</td>
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<td>Lecture 2</td>
<td>Science and Measurement</td>
<td>1</td>
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<tr>
<td>Lecture 3</td>
<td>Atoms and Elements</td>
<td>2</td>
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<td>Lecture 4</td>
<td>Exam Review</td>
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<td>Lecture 5</td>
<td>First Exam (Ch 1,2)</td>
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<td>Lecture 6</td>
<td>Compounds</td>
<td>3</td>
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<td>Lecture 7</td>
<td>Reactions</td>
<td>5</td>
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<td>Lecture 8</td>
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<td>Lecture 9</td>
<td>Second Exam (Ch 3,5)</td>
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<td>Lecture 10</td>
<td>Gases, Solutions, Colloids, and Suspensions</td>
<td>6</td>
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<tr>
<td>Lecture 11</td>
<td>Acids, Bases, and Equilibrium</td>
<td>7</td>
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<td>Lecture 12</td>
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<td>Lecture 13</td>
<td>Third Exam (Ch 6,7)</td>
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<tr>
<td>Lecture 14</td>
<td>Optional, flexible timing to accommodate vacations</td>
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<td>Lecture 15</td>
<td>Final Exam Review</td>
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<td>Lecture 16</td>
<td>Final Exam Review</td>
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Disclaimer

To accommodate emergent circumstances, the professor reserves the right to make reasonable changes in the syllabus while the course is in progress. Any understandings between a student and the professor including, but not limited to, changes, expectations, or modifications to course requirements or procedures must be in writing and must be signed by both parties. Any question of interpretation of course requirements or of understandings between a student and the professor will be at the discretion of the professor.