**CH 111-SM Atoms and Molecules. Syllabus for Fall 2022**

**Instructor: Dr. Walter E. Turner II**

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**Required Materials:**

* Class Text: *Chemistry* by OpenStax <https://openstax.org/details/books/chemistry-2e> ISBN 9781947172623. This book is an open-source textbook available as a web-based copy, a downloadable pdf or iBook, or you can purchase a hardcopy from Amazon
* Lab Text: The laboratory manual is available in the bookstore.
* A non-programmable calculator.
* Achieve online homework, access code available at the bookstore.
* Splash goggles, may be purchased from the bookstore.
* iClicker 6-month Access IA REEF ONL 6M ADD ON ISBN 9781319285814

**Philosophical Statement**:

* Employers frequently list critical thinking amongst the most desired skills in workers. Accordingly, my main goal in this class is to encourage a heathy skepticism through critical thinking.
* I regularly consult educational research and seek the advice of colleagues and students to examine my biases towards teaching and welcome any input from members of this class.
* One of my passions is equity in education, which recognizes that socioeconomic standing, race, gender, ability, sexual orientation, age, nationality, etc. can disadvantage students and aims at compensating for these factors to ensure that all students can attain the same educational success.
* Asking for help is not a sign of weakness.

**Statement of Inclusion and Equity:** No person shall, on the basis of age, race, religion, gender, sexual orientation, national origin, or disability, be excluded from participation in, or be denied the benefits of an education, or be subjected to discrimination. Please notify me in advance if there is a conflict. Religious beliefs will be reasonably accommodated with respect to all examinations and other academic requirements with early notification.

**Accessibility ADA:** Students with a disability that qualify under the Americans with Disabilities Act (ADA) and/or Section 504 of the Rehabilitation Act and require accommodations should be registered with BSC’s Accessibility Office. If you are registered for academic accommodation, please make an appointment with me as soon as possible to discuss any accommodation that may be necessary. During this discussion you are not expected to disclose any details concerning your disability though you may do so at your discretion. If you have a disability but have not yet registered, please contact Dr. Sandra Foster, Assistant Director of Accessibility Services and Resources, at 205-226-7909 (x1909) or smfoster@bsc.edu, or visit Norton 228. Keep in mind that no accommodation will be made unless and until the instructor receives official notification from the College.

**Title IX**: Birmingham-Southern College is committed to the creation and maintenance of a safe and healthy learning environment for students and the campus community. The College forbids any type of sexual or gender-based misconduct among its students, faculty, and staff. The College encourages all members of the academic community to report suspected sexual and gender-based misconduct to the appropriate authorities so that it can be investigated, remedied, and eliminated. BSC forbids retaliation against any person who has opposed, reported, or participated in an investigation concerning sexual or gender-based misconduct. See the BSC Title IX website (www.bsc.edu/titleix) for more information, including a link to file an online report form and information about how and to whom to report in person. If you or a peer have experienced such misconduct, the Title IX webpage also includes information about the numerous resources available on campus and in the local community with whom the College encourages you to seek support. Confidential resources include counseling and health care providers, our Chaplain, and numerous faculty and staff members who are trained in assisting students by answering questions and helping them navigate their choices in seeking further support and the reporting process.

**Communication with me:** I encourage you to check your Birmingham-Southern student email account as email will be my primary means of communicating with you. Email is the best way to contact me, but be aware that I may not get an email the same day that it is sent if you send it late in the day. I will get back to you the following business day. It is difficult for me to explain how to do calculations by email, so don’t feel put off if I ask you to come speak to me or meet via Microsoft Teams instead of giving an answer via computer. Sending a photo of your work via email is also helpful.

**Extra Help**: You should attend all class periods during the week. You should also take full advantage of my student hours or schedule an appointment. Student hours are times when you can meet with me to discuss the material being presented in class or other interests you have. Example of student hour discussions include but are not limited to asking for extra help, seeking clarification of material presented in class, and following up on aspects of the class you find compelling. In addition, students also discuss majors and programs of study, and graduation requirements, as well as summer internships, graduate schools, campus events, and much more. Asking me questions is not bothering me! If you do come to my office, however, please be prepared with what you want to talk about and have work to show me that you are attempting the problems. I can tell more from the types of mistakes that you make and where you get stuck than I can from the statement “I don’t understand what we are doing in class”. There are often students at the ARC tutoring center that can help with chemistry problems. There is no substitute for practice and hard work!

**Attendance Policy:** Students are responsible for all material covered during the class periods. It is the responsibility of the student to obtain the material covered when they miss class. Students are required to attend all scheduled exams. I will record all the lectures. I will only give make-up exams, accept late work, and provide links to lecture recordings to students with excused absences. As instructor, I will make the final decision as to the validity of an excused absence.

**Moodle**: This course will make regular use of the Moodle course website. Problems with your computer or this software should be directed to the IT Helpdesk, as they are the best able to help you. Documents related to the course will also be posted on Moodle. Please do not use the email inside of Moodle to contact me; it is a separate system from the standard Birmingham-Southern email. Use the address at the top of the syllabus.

**Classroom Etiquette:** Please arrive on time and be ready to participate at the start of class. If you cannot avoid being a few minutes late, please enter quietly, causing as little disturbance as possible. Maintaining academic integrity includes respecting others and learning how to disagree without being disagreeable. I encourage students to maintain an atmosphere of acceptance, respect, and engagement in the classroom. This includes not being disruptive or performing distracting behaviors such as texting or using electronic devices for non-class purposes.

**Grading:**

Lecture Tests 45 %

Online Homework 6 %

Classroom Activities 5 %

Workshops 4 %

Final 15 %

Laboratory 25 %

**Grade Scale:**

≥ 93.3 A, 93.2-90.0 A-, 89.9-86.7 B+, 86.6-83.3 B, 83.2-80.0 B-, 79.9-76.7 C+, 76.6-73.3 C, 73.2-70.0 C-, 69.9-66.7 D+, 66.6-60.0 D, 59.9 and below F

**Grade disputes:** If you believe that something has been incorrectly or unfairly graded, submit a written explanation of why you believe a specific question should be graded differently, and resubmit your paper. I am willing to re-examine any graded exam/paper/etc., if you are willing to write out why you think I should. If I calculated your score incorrectly, I’ll gladly fix that without dispute.

**Lecture Tests:** Tests will be the primary assessment tool to measure your mastery of the learning objectives. No exam scores will be dropped.

**Tentative Test Dates:** Test #1 Sep 16th

Test #2 Oct 5th

Test #3 Oct 31th

Test #4 Nov 30th

Test dates may be moved if situations in the class warrant it. Grading in this class is absolute, meaning everyone has a chance of passing the course if you learn the material. There will not be a curve applied nor is there a certain number of any grade that will be awarded.

**Online Homework:** An access is available for purchase to complete the course work. The online homework assignments will be due on the dates indicated on the online homework system. Online homework problems will be assigned grades, but the most important part is that you attempt every problem that I have assigned you.

**Classroom Activities:** Students are encouraged participate in all classroom activities and turn in all requested materials for each activity. Activities may also be group work. At the end of the semester, class average will be scaled to an 85 to handle illness, family emergencies, technology issues, and similar issues. Class activities miss due to excused illnesses can be made up by watching the lecture or reading the textbook and writing a paragraph about the material covered that day. The quality of that paragraph will then determine the grade earned.

**Workshops:** Workshop assignment will involve students working in groups on a set of problems based on the material from that week. Each group will turn in their completed problems at the end of the class period.

**Laboratory:** The laboratory manual, spiral bound laboratory notebook, and laboratory approved protective eyewear (goggles) are available for purchase in the bookstore. You are responsible for reading and understanding the assigned experiment before coming to class, as well as completing the pre-lab assignment. Be prepared to hand in a short pre-lab assignment at the beginning of every laboratory session. Laboratory scores are determined independently and will be used as a portion of your total course grade.

**Calculator Policy:** A scientific or graphing calculator is required for this course. It is recommended that you use such a calculator for all homework so that you will become familiar with its use. Use of cell phones or ipod/PDA devices are not allowed as a calculator replacement during exams. Calculators with capabilities that extend beyond that of a standard graphing calculator are not allowed

**COVID-19 Protocols:** If you cannot attend due to medical reasons, please email me as soon as feasible so that I can get you the course materials. I will do my best to assist you if you have an excused medical absence. You will still be expected to turn in work on-line and are responsible for information presented in class. Our class will be mask optional. However, if you are at all sick or symptomatic, I request that you wear a mask. Accordingly, you should still bring a mask to class every day in case you are requested to wear one.

**Honor Code:** Each student is expected to follow the BSC Honor Code. If it is determined that you have violated the honor code during an assignment or exam you will receive a zero on that component of your grade. Students may not look at assignments or exams from previous years.

**Copyright Statement:** Copyright Statement: (1) I hold the copyright on my lectures and course materials, (2) my copyright encompasses student notes or summaries that exactly reproduce my lectures and course materials, (3) these materials are made available to students for their personal use only, and (4) students may not distribute or reproduce these materials for commercial purposes without my express written consent.

**Course Learning Outcomes:** The major topics covered in this course are measurements and units, stoichiometry, atomic structure and the periodic table, descriptive chemical reactions, thermochemistry, behavior of gases and molecular structure. The departmental learning outcomes of this course are:

* Identify key properties of matter
* Distinguish between atoms, molecules, and ions
* Compare different models of bonding in substances
* Understand reaction stoichiometry
* Compare solutions and pure substances
* Describe modern atomic theory
* Assess intermolecular forces in liquids and solids

This course is tagged as a Scientific Methodologies course which has the following learning outcomes:

* Defines an empirical problem/question
* States a theoretically grounded rationale for the investigation
* Develops a hypothesis
* Tests the hypothesis
* Draws conclusions
* Presents data appropriately
* Explains data logically and clearly

Both the departmental and SM learning outcomes of this course are assessed in the laboratory which is a required component of the course.