SYLLABUS
CH-312 ORGANIC CHEMISTRY

INSTRUCTOR:	Dr. Amanda Lynn Hofacker, FSB 310, (256)-765-4344 alhofacker@una.edu
OFFICE HOURS:	Monday, Tuesday, Wednesday, Friday 9:00 - 11:00 Thursday 11:00 – 12:00 *(Other Hours by Appointment)*
COURSE: TIME/PLACE:	Organic Chemistry 312; 4 credit hrs Monday – Friday, 8:00 - 8:50; FSB 102
PREREQUISITES:	Must have successfully completed CH-311 and CH-311L with a grade of C or better.
CO-REQUISITE:	Must be currently enrolled in CH-312L.
TEXT:	Brown, W. H.; Foote, C. S.; Iverson, B. L.; Anslyn, E. V. *Organic Chemistry*, 5th Ed.; Brooks/Cole-Cengage Learning: Belmont, CA 2009.
EVALUATION:	Homework (4 x 25 Points = 100 Points) Quizzes (10 x 10 Points = 100 Points) Four Exams (4 x 150 Points = 600 Points) One Final Comprehensive Examination (200 Points) {Monday, May 10, 3:15 - 5:15}

GRADE: 900-1000 = A, 800-999 = B, 700-899 = C, 600-799 = D, < 600 = F

PURPOSE: This course is a continuation of chemistry 311, focusing on the remaining functional groups that have not yet been covered including alcohols, ethers, epoxides, thiols, sulfides, amines, and carbonyls. This course is designed to introduce the basic principles of organic chemistry including the origin, composition, classification, and interrelatedness of matter, with an emphasis on molecular structure, chemical transformations, and mechanistic explanations. Furthermore, this course is designed to strengthen students' critical thinking skills through organic structure determination from spectroscopic data.

GOAL: The fundamental concepts introduced in chemistry 311 will be expanded upon and utilized in explaining molecular structures and organic reactions. Throughout this course the student should learn to categorize, name, and design synthesises for simple organic compounds. Furthermore, the student should develop the knowledge-base and skills necessary to explain the outcome of functional group transformations with a thorough mechanistic description.

LEARNING OUTCOMES: **Alabama Department of Education -** As per standard 290 3-3-.17(1)(c)#, following this course, students should demonstrate knowledge of the following:

290-3-3-.17(1)(c)1. Knowledge of molecular orbital theory, aromaticity, metallic and ionic structures, and correlation to properties of matter.
290-3-3-.17(1)(c)5. Knowledge of major biological compounds and natural products.
290-3-3-.17(1)(c)7. Knowledge of chemical reactivity and molecular structure including electronic and steric effects.
290-3-3-.17(1)(c)8. Knowledge of organic synthesis and organic reaction mechanisms.
290-3-3-.17(1)(c)11. Knowledge of historical development perspectives in chemistry including contributions of significant figures and underrepresented groups, and the evolution of theories in chemistry.
290-3-3-.17(1)(c)12. Knowledge of how to design, conduct, and report research in chemistry.
290-3-3-.17(1)(c)13. Knowledge of applications of chemistry and chemical technology in society, business, industry, and health fields.

*ASSESSMENT: *Each of these areas will be assessed on the final exam.*

ASSIGNMENTS:

QUIZZES: Quizzes will cover key information pertaining to the week's lecture. Each person should complete their own quiz and only their quiz. Completion of a classmate's quiz will be considered academic misconduct for all participants. The quizzes will be graded and returned in a timely fashion. There will be 10 quizzes each worth 10 points given on selected Wednesdays and Fridays throughout the session. There will be **no make-up** quizzes.

EXAMS: Four one-hour exams will be given throughout the semester during the scheduled class period. There will be **no make-up** exams. If you will not be present on the day of the exam the instructor must be informed four days prior to the exam. An early exam will be issued at an agreeable time prior to the scheduled examination. If you are absent from an hour exam due to illness or unusual circumstances beyond

your control, it is your responsibility to call (765-4344) and let me know your reason for missing the exam as soon as possible, but no later than 24 hours after the exam. A grade of zero will be recorded for an unexcused absence from an hour exam.

FINAL EXAMINATION: An ACS comprehensive final examination will be given on Monday, May 10 from 3:15 - 5:15 in room FSB 102.

HOMEWORK: There will be four homework assignments each worth 25 points that will be collected on selected Monday's throughout the semester. These homework assignments will be given in the form of a handout and/or selected problems from the text book. To complete these assignments it is encouraged that students WORK TOGETHER (not copy), and exhaust all available resources especially professor's office hours.

Additionally, it is suggested that students work the practice problems at the end of each chapter, however, these problems will not be taken up or graded; they are for the student's benefit only.

REGRADE RQUESTS: Must be made in writing and returned to the instructor no later than 5:00 pm 3 days following the quiz or exam. Clearly state what should be re-graded and why. **The entire quiz or exam will be re-graded**. Make all marks on the quiz or exam with a different color ink than was originally used.

CLASS ATTENDANCE: Regular and punctual attendance at all scheduled classes and activities is expected of all students and is regarded as integral to course credit. It is up to the discretion of the instructor to conduct random quizzes, in class assignments, and/or account for attendance shall she deem it necessary.

CELL PHONE POLICY:
If I see or hear them during class, you will be asked to leave. TURN THEM OFF BEFORE ENTERING CLASS!

WITHDRAWAL FROM THE COURSE: A student may withdraw from a course with a grade of W up to and including Friday, March 12 by bringing a completed withdrawal slip (signed by the instructor) to the Registrar's office. The time period from March 15 through April 21, a student may withdraw from a course with a grade of WP (withdraw passing) or WF (withdraw failing) assigned by the instructor. During the final two weeks of class, withdrawal is not permitted except in extraordinary circumstances. Permission of both the instructor and department head is required, and the grade of WP or WF will be assigned by the instructor.

March 12- Last day for course withdrawal with a "W"
March 15- Begin "WP/WF" period.
April 21- Last day to drop a class. End of "WP/WF" period.

Students dropping the lecture course must also drop the corresponding laboratory course.

EQUAL OPPORTUNITY STATEMENT: In accordance with the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act of 1973, the University offers reasonable accommodations to students with eligible documented learning, physical and/or psychological disabilities. Under Title II of the Americans with Disabilities Act (ADA) of 1990 and Section 504 of the Rehabilitation Act of 1973, a disability is defined as a physical or mental impairment that substantially limits one or more major life activities as compared to an average person in the population. It is the responsibility of the student to contact Developmental Services prior to the beginning of the semester to initiate the accommodation process and to notify instructors within the first three class meetings to develop an accommodation plan. Appropriate, reasonable accommodations will be made to allow each student to meet course requirements, but no fundamental or substantial alteration of academic standards will be made. Students needing assistance should contact Developmental Services.

TENTATIVE SCHEDULE:

Week of	Monday	Tuesday	Wednesday	Friday
1/11	NO CLASS	NO CLASS	CH 12	CH12
1/18	NO CLASS	CH 12	CH 12	**Quiz 1**
1/25	CH 13	CH 13	CH 13	**Quiz 2**
2/1	CH 14	CH 14	CH 14	**EXAM 1**
2/8	CH 15	CH 15	CH 15	**Quiz 3**
2/15	CH 16	CH 16	**Quiz 4**	NO CLASS
2/22	CH 16	CH 17	CH 17	**Quiz 5**
3/1	CH 17	CH 18	CH 18	**Quiz 6**
3/8	CH 18	CH 18	CH 18	**EXAM 2***
3/15	CH 19**	CH 19	CH 19	**Quiz 7**
3/22	NO CLASS	NO CLASS	NO CLASS	NO CLASS
3/29	CH 20	CH 20	**Quiz 8**	NO CLASS
4/5	CH 20	CH 20	CH 21	**EXAM 3**
4/12	CH 21	CH 21	CH 22	**Quiz 9**
4/19	CH 22	CH 22	CH 23***	**Quiz 10**
4/26	CH 23	CH 23	CH 24	**EXAM 4**
5/3	CH 24	CH 24	**Quiz 11**	

Final Exam: Monday, May 10, 3:15 - 5:15 in FSB 102.
* March 12- Last day for course withdrawal with a "W"
**March 15- Begin "WP/WF" period.
***April 21- Last day to drop a class. End of "WP/WF" period.

EXAM 1: CHAPTERS 12, 13, 14
EXAM 2: CHAPTERS 15, 16, 17, 18
EXAM 3: CHAPTERS 19, 20
EXAM 4: CHAPTERS 21, 22, 23

Topics List
Infrared Spectroscopy
Nuclear Magnetic Resonance
Mass Spectrometry
Introduction to Organometallic Compounds
Aldehydes and Ketones
Carboxylic Acids
Functional Derivatives of Carboxylic Acids
Enolate Anions and Enamines
Conjugated Systems
Carbon-Carbon Bond Formation and Synthesis
Benzene and the Concept of Aromaticity
Reactions of Benzene and its Derivatives