Syllabus – Organic Chemistry 311-01
Fall 2012

Instructor: Dr. Frank A. Diaz
Office: FSB 304
256-765-4474
fdiaz@una.edu
Hours – M, T, W, F 9-11:30 (Others by appointment)

Class Time/Location
M, T, W, F 8-8:50 – FSB 102

Credits: 4 Credit Hours

Prerequisites: CH 111, CH 111L, CH112 and CH112L (with a C or better)

COREQUISITE: CH 311 Lab required in conjunction with this course unless already completed.


Course Description: The fundamental concepts introduced in general chemistry 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 syntheses 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. This course will cover and assess the following areas as established by the state of Alabama:

*290-3-3.17(1)(c)5 - Major biological compounds and natural products.
*290-3-3.17(1)(c)6 - Knowledge of solvent system concepts including non-aqueous solvents.
*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)13. Knowledge of applications of chemistry and chemical technology in society, business, industry, and health fields.
*290-3-3.-15(1)(b)1.(viii) Fundamental biochemistry.
*290-3-3.-15(1)(b)1.(ix) Functional and polyfunctional group chemistry.
*290-3-3.-15(1)(b)1.(xiv) Models of nuclear and subatomic structures and behaviors.
*290-3-3.-15(1)(c)2.(ii) Chemistry, including broad concepts and basic laboratory techniques of inorganic and organic chemistry, physical chemistry, and biochemistry.

*Each of these areas will be assessed on the final exam.*
Chapters and Topics:

Chapter 1 - Bonding and Molecular Shape (Exam 1)
Chapter 2 - Acids and Bases (Exam 1)
Chapter 3 - Alkanes their Stereochemistry (Exam 1)
Chapter 4 - Cycloalkanes their Stereochemistry (Exam 2)
Chapter 5 - Stereochemistry (Exam 2)
Chapter 6 - Organic Reactions (Exam 2)
Chapter 7 - Alkenes: Structure and Reactivity (Exam 3)
Chapter 8 - Alkenes: Reactions and Synthesis (Exam 3)
Chapter 9 - Alkynes and Organic Synthesis (Exam 3)
Chapter 10 - Organohalides (Exam 4)
Chapter 11 – Nucleophilic Substitutions and β-Eliminations (Exam 4)

Quizzes and Homework:

Quizzes and homework will be assigned some of which will be grade and returned. All assignments whether graded or not are designed to help you to learn the course material and perform your best on the exams. Graded assignments will cumulatively equal a test grade (100 points).

Grading:

Four Hourly exams – 100 points each = 400 pts total
Homework -- 100 pts
Final Exam (Comprehensive) - 200 pts
Class Participation/Attendance 10 pts (1.5%)

Grade Distributions

A 630-700 pts (90%)  
B 560-629 pts (80%)  
C 490-559 pts (70%)  
D 420-489 pts

* Exceptions – There will be NO make-up exams offered. If you miss an exam during the semester your final exam will be increased in value to replace that exam. *Be aware the final is cumulative and therefore will be significantly more difficult to score well on.*

Extra Credit

The instructor reserves the right to offer extra credit throughout the course of the semester. This is in no way promised.

Class Attendance

General Regulations, 2011-2012 University Bulletin, – *Regular and punctual attendance at all scheduled classes is expected of all students and is regarded as integral to the course.*

A sign-in sheet will be circulated for every class; it is your responsibility to make sure you sign it every class.
If you will miss class for a legitimate reason you will need inform me prior to your absence or email me prior to the next class period and bring documentation that verifies your reason if you wish to turn in any assignments given during that class.

Withdrawal:

- 10/22/12 – Last day to receive a W; 11/16/12 Last day to receive WP/WF.
- Students dropping 311 lecture will be required to also drop the corresponding laboratory course.
- See 2011-2012 UNA Undergraduate catalog for the University’s policies on attendance and withdrawal.

It is the responsibility of the student to withdraw themselves from a course. Ceasing to attend class without withdrawing yourself from the course will result in an F for the course.

Academic Honesty:

Students of the university academic community are expected to adhere to commonly accepted standards of academic honesty. Allegations of academic dishonesty can reflect poorly on the scholarly reputation of the University including students, faculty and graduates. Individuals who elect to commit acts of academic dishonesty such as cheating, plagiarism, or misrepresentation will be subject to appropriate disciplinary action in accordance with university policy.

Incidents of possible student academic dishonesty will be addressed in accordance with the following guidelines:

1. The instructor is responsible for investigating and documenting any incident of alleged academic dishonesty that occurs under the instructor’s purview.
2. If the instructor finds the allegation of academic dishonesty to have merit, then the instructor, after a documented conference with the student, will develop a plan for disciplinary action. If the student agrees to this plan, then both instructor and student will sign the agreement. The faculty member will forward a copy of the signed agreement to the Office of Student Conduct for record-keeping purposes.
3. If the student disagrees with the instructor’s proposed plan for disciplinary action and wishes to take further action, he/she is responsible for scheduling a meeting with the chair of the department where the course is housed to appeal the proposed disciplinary plan. The department chair shall mediate the matter and seek a satisfactory judgment acceptable to the faculty member based on meetings with all parties. If a resolution is reached, the disposition of the case will be forwarded to the Office of Student Conduct. If a resolution at the departmental level is not reached and the student wishes to take further action, he/she is responsible for scheduling a meeting with the dean of the college where the course is housed to appeal the proposed disciplinary plan. The college dean shall mediate the matter and seek a satisfactory judgment acceptable to the faculty member based on meetings with all parties. If a resolution is reached, the disposition of the case will be forwarded to the Office of Student Conduct. If a resolution at the college level is not reached and the student wishes to take further action, he/she is responsible for scheduling a meeting with the Vice President for Academic Affairs and Provost (VPAA/P) to appeal the proposed disciplinary plan. The VPAA/P shall mediate the matter and seek a satisfactory judgment acceptable to the faculty member based on meetings with all parties. After reviewing all documentation, the VPAA/P may, at his/her discretion, choose either to affirm the proposed action, to refer the case to
the Office of Student Conduct for further review, or to dismiss the matter depending on the merits of the case. The final disposition of the case will be disseminated to appropriate parties, including the Office of Student Conduct.

4. If a student is allowed academic progression but demonstrates a repeated pattern of academic dishonesty, the VPAA/P may, after consultation with the Office of Student Conduct, assign additional penalties to the student, including removal from the University.

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 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.

CHEM 311 Schedule of Chapter Coverage (Schedule of material coverage and exams dates are subject to change. Precise exam dates and necessary schedule changes will be announced in class. Therefore it is very important to attend each session and keep abreast of schedule changes!)

Tentative Schedule:

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SYLLABUS FOR CHEMISTRY 311-LA  
Fall Semester 2012

INSTRUCTOR: Dr. Frank A. Diaz

OFFICE: FSB 304  
Phone: (256) 765-4474  
Email: fdiaz@una.edu  
Hours: M, T, W, F 9-11:30 or by appointment.

TIME: Section B – Wednesday 2:00-4:45 PM

CREDIT: One Hour

COREQUISITES: Must be taken concurrently with CH311 unless the lecture course was passed previously.


COURSE DESCRIPTION: This course is designed to further investigate reactions and concepts being studied in the organic chemistry 311 lecture course. The laboratory will further develop and apply common organic chemistry techniques, methods, and instrumentation. The isolation and identification of organic compounds through the proper use of equipment and instrumentation as well as the recording and tabulation of experimental data will be emphasized throughout this course. This course will cover and assess the following areas as established by the state of Alabama:

*290-3-3-.17(1)(c)5 - Major biological compounds and natural products.
*290-3-3-.17(1)(c)8 - Organic synthesis and organic reaction mechanisms.
*290-3-3-.17(1)(c)12 - How to design, conduct, and report research in chemistry.
Each of these areas will be assessed on lab reports.

GRADING:

- Laboratory Reports* 40%
- Lab Notebooks 30%
- Performing Experiments (Attendance) 10%
- Final Exam 20%

*see note regarding lab reports below

Quizzes: may be given at the beginning of each lab. The quiz will have questions from material from the experiment to be performed that day.

Lab Reports: The majority of your grade is based upon the laboratory reports you will complete, as such please note these important rules:

1. Reports are due at the beginning of lab before the quiz or lecture. If handed in any time after that they are late.
2. Late lab reports are not accepted unless you had an excused absence.
3. If you hand in copied work for any lab this will be considered cheating and you will receive a zero grade. If you allow another person in lab to copy your work you are also cheating and will receive a zero.
4. It is entirely your responsibility to keep up with which labs you have or have not handed in. This is very important as the following grading policy will be strictly enforced
   * Failure to hand in lab reports will result in low or failing grade for this class!
     - Failure to hand in 2 reports – C is maximum grade
     - Failure to hand in 3 reports – D is maximum grade
     - Failure to hand in 4 reports – F is maximum grade

CLASS ATTENDANCE: General Regulations, 2011-2012 University Bulletin: Four weeks of class equals 4 sessions for a class that meets only one day per week. Any student missing more than 4 labs for any reason will receive a grade of F for the course.

In most circumstances, if you are absent from a lab, you will receive a zero lab report, and any pre-lab assignments not turned in before lab.

No make-up labs are offered. If you are absent from a lab for a valid, verifiable reason that missed lab and quiz will be dropped and your other grades will be weighted more heavily. If you miss more than 25% of classes (4 weeks) for any reason you will made to withdraw and retake the course.
WITHDRAWAL:
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LABORATORY RULES:

1. Eye protection is required AT ALL TIMES when you are in the laboratory.

2. Horseplay, pranks, or other acts of mischief are especially dangerous and are prohibited.

3. Eating and drinking in the laboratory are prohibited.

4. Appropriate clothing MUST be worn. Confine long hair and loose clothing. Shorts, open-toed shoes or sandals are NOT permitted. You will be required to leave the lab if you do not wear the proper attire.

5. Learn the location of the shower, eye-wash station, fire extinguisher and exits.
6. Read the directions carefully for each experiment.
7. Unauthorized experiments are prohibited.
8. Never perform work on an experiment while alone in the laboratory.
9. Never place glassware or other laboratory equipment in your mouth.
10. Never taste chemicals in the laboratory.
11. Never return excess reagent (solid, liquid or solution) to the reagent bottle. Dispose of excess reagents as described in the experiment.
12. If you turn it on - turn it off. If you take it from the shelf - put it back.
   If you open it - close it.
13. No chemicals or equipment may be removed from the laboratory.
14. Wash your hands and arms before leaving the laboratory.