

**ORGANIC CHEMISTRY II (CHM 2212) Spring 2015**  
**(CRN 32034, 32035, 32036)**

**Time and Location:**

classes:	MWF	all sections	11:30 - 12:20	MENDEL 102
<u>recitations:</u>	Thursdays:	section 004	10:00 - 10:50	John Barry 204
		section 005	11:30 - 12:20	John Barry 204
		section 006	1:00 - 1:50	John Barry 204

**Instructor:** Dr. Robert M. Giuliano **Office:** 300 D Mendel  
**phone:** (610) 519-5433, **e-mail:** robert.giuliano@villanova.edu  
**Office Hours:** MWF: 12:20 – 1:00; Thursday: 2:00 – 4:00

**Course Materials:**

**Text:** F. A. Carey, R. M. Giuliano, *Organic Chemistry*, 9<sup>th</sup> Edition, McGraw-Hill, 2014  
**Solutions Manual:** *Student Solutions Manual*, Carey, Giuliano, 9<sup>th</sup> Edition, 2014  
**ConnectChemistry/LearnSmart** (for the 9<sup>th</sup> Edition)

**Course Coverage and Goals:** We will start with the remaining topics in chapter 12. Our focus will then shift to the spectroscopic analysis of organic compounds, followed by new classes of organic compounds and the types of reactions that they undergo. Many of the most important reactions of organic compounds, such as those of carbonyl compounds, will be introduced, and examples that relate to biosynthesis will be included. Concepts of structure and reactivity encountered in the first semester will be important to your understanding of organic reactions. One of your goals will be to develop the ability to predict the products of an organic reaction from a given starting material and set of conditions. Another goal will be to develop an understanding of organic reaction mechanisms appropriate for this level.

<b>Week</b>	<b>Topics</b>	<b>Text</b>
1	Arenes, Spectroscopy	12,13
2	Organometallic Compounds	14
3	Alcohols, Diols, Thiols	15
4	Ethers, Epoxides, Sulfides	16
5	Aldehydes and Ketones	17
6	Carboxylic Acids	18
7	Carboxylic Acid Derivatives	19
8	Enols and Enolates	20

9	Amines	21
10	Phenols	22
11	Carbohydrates	23
12	Lipids	24
13	Amino Acids, Peptides, Proteins	25
14	Nucleic Acids, Polymers	26, 27

**Quizzes and Exams:** Ten 25-minute quizzes will be given at the start of the class period on the following Fridays: 1/23, 1/30, 2/6, 2/13, 2/20, 3/20, 3/27, 4/10, 4/17, 4/24. The mid-term exam will be given on Friday, March 13. The final exam will be Thursday, May 7, 2:30 – 5:00. Your grade will be assigned based on your record of performance on these quizzes and exams. Early or make-up quizzes or exams will not be given. It is your responsibility to notify me *in advance* if you will be absent. An average score is used for the excused absences.

9 of 10 Quizzes - 25 points each:	225 points
Mid-Term Exam:	75 points
Final Exam:	150 points
Connect/LearnSmart Homework	15 points
Total:	475 points

**Classroom Attendance/Presence:** Attendance is not recorded; however, it is essential that you attend all classes and recitations. You should not expect a good grade in organic chemistry if you do not attend classes and recitations. As noted above, there are no early or make-up quizzes or exams.

Talking in class is disruptive and is not acceptable, however questions on the material are welcomed and encouraged. Electronics, including laptops, iPods, iPads, and cell phones are not permitted to be used in class. Use your class and recitation time to pay attention, take notes, and to ask questions.

**Academic Integrity:** All student are expected to follow the *University Code of Academic Integrity*. Your instructor is also bound by this code, which requires that violations are taken seriously and acted on.

**Grade Assignments:** Your grade will be assigned based upon your record of performance on the quizzes, mid-term exam, and final exam, according to the scale shown below. Grades will be consistent with the definitions given in the *Villanova Student Handbook* and attached,

**Range of letter grades:**

100-93%	A	72-69%	C
92-89%	A <sup>-</sup>	68-65%	C <sup>-</sup>
88-85%	B <sup>+</sup>	64-61%	D <sup>+</sup>
84-81%	B	60-57%	D
80-77%	B <sup>-</sup>	56-50%	D <sup>-</sup>
76-73%	C <sup>+</sup>	<50%	F

**Some comments regarding study time, homework problems, and recitation:**

You will probably hear that learning organic chemistry involves a lot of memorization. In fact, although some memorization is necessary, the only way to really learn and retain what you learn in orgo is to learn to recognize trends in structure and reactivity of organic compounds. You will also need to learn some mechanisms. Pay careful attention in class! You don't have to be a chemistry major to find that this class can be rewarding. An art historian once told me that organic chemistry was one of his favorite subjects! The molecules that make life possible, carbohydrates, amino acids, proteins, vitamins, lipids and the nucleic acids DNA and RNA are organic molecules.

Prepare to study outside of class on a regular basis. It is suggested that you spend 2 - 3 hours of study time per hour of class, and that you spend as much of your study time as possible working problems. In general, you should attempt to solve all of the "drill" problems within each chapter, and the additional problems that your instructor recommends, from the back of each chapter and on the ConnectChemistry and LearnSmart sites. Homework problems are not graded, but it is important that you do them. The main purpose of recitation is to discuss the problems, and these discussions will be meaningful to you only if you come prepared. Quiz and exam questions are often based upon the problems, so practice is valuable. Do not simply scan the problems, but work through them with a pencil and paper - as much paper as necessary! Your instructor will gladly discuss any questions with you, during class, recitation, or during office hours.

## Villanova's Definitions of Grades

Faculty members are responsible for maintaining the integrity of the evaluation and grading system. Presented below in the Undergraduate Grading System.

**A** Is the highest academic grade possible; an honor grade that is not automatically given to a student who ranks highest in the course, but is reserved for accomplishment that is truly distinctive and demonstrably outstanding. It represents a superior mastery of course material and is a grade that demands a very high degree of understanding as well as originality or creativity as appropriate to the nature of the course. The grade indicates that the student works independently with unusual effectiveness and often takes the initiative in seeking new knowledge outside the formal confines of the course.

**B** Is a grade that denotes achievement considerably above acceptable standards. Good mastery of course material is evident and student performance demonstrates a high degree of originality, creativity, or both. The grade indicates that the student works well independently and often demonstrates initiative. Analysis, synthesis, and critical expression, oral or written, are considerably above average.

**C** Indicates a satisfactory degree of attainment and is the acceptable standard for graduation from college. It is the grade that may be expected of a student of average ability who gives to the work a reasonable amount of time and effort. This grade implies familiarity with the content of the course and acceptable mastery of course material; it implies that the student displays some evidence of originality and/or creativity, works independently at an acceptable level and completes all requirements in the course.

**D** Denotes a limited understanding of the subject matter, meeting only the minimum requirement for passing the course. It signifies work that in quality and/or quantity falls below the average acceptable standard for passing the course. Performance is deficient in analysis, synthesis, and critical expression; there is little evidence of originality, creativity, or both.

**F** Indicates inadequate or unsatisfactory attainment, serious deficiency in understanding of course material, and/or failure to complete requirements of the course.

**N** Incomplete: course work not completed.

**S** Satisfactory: Assigned in Satisfactory/Unsatisfactory courses (work must be equivalent to C or better).

**SP** Satisfactory Progress.

**T** Transfer grade.

**WX** Approved withdrawal without penalty.

**W** Approved withdrawal with penalty.

**U** Unsatisfactory: Assigned in Satisfactory/Unsatisfactory courses.

**AU** Audit.

**Y** Unofficial withdrawal from course (or for freshmen, failure for excessive absences).

**NG** (Or Blank); no grade reported.

