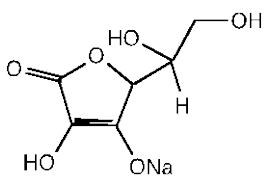
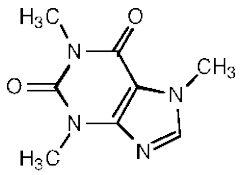


Vitamin C



Caffine

Organic Chemistry 330
Summer 2016

Meetings:	MTWR, 9:00-11:50 am
Location:	LaT 143
Instructor:	Dr. Douglas A. Klumpp
Office:	FR 356
Office Hours:	MW, 12:00-1:00 pm and by appointment.
Textbooks:	**Organic Chemistry**, 10th Ed by Francis Carey and Robert M. Giuliano McGraw Hill Publishers, 2017 9th Ed acceptable, too (please get homework problems)
	Study Guide to Accompany Organic Chemistry By Francis Carey and Robert Atkins McGraw Hill Publishers, 2017

Grades:
The course grade will be assigned based on your point totals from the four exams and four quizzes. No quizzes or exams may be dropped, and no make up exams or quizzes will be given. If an exam or quiz is missed, a score of zero will be assigned. NOTE: by enrolling in this class, you are agreeing to take the exams and quizzes on the scheduled dates. The quizzes will be on Tuesday and the exams will be on Thursdays. The point total is as follows:

Exams (four at 100 pts each)	400 points
Quizzes (four at 50 pts each)	200 Points
Total Points	600 Points

Approximate Scale:

Average grade: A (100-85%), B (84-65%), C (64-50%), D (49-40%)

TENATIVE SCHEDULE

10th Edition

Chapters.sections	Subjects
1.1-15	Atomic structure, electron configuration, covalent and ionic bonding, multiple bonds, organic functional groups, formal charge, hydrogen bonding, hydridization (sp3, sp2, sp), Bronsted-Lowry acids, Lewis acids, structure of acids, equilibrium in acid/base reactions, Ka and pKa, Nomenclature
2.1-23, **3.1-11**	Chemistry of alkanes (oxidation, cations/radicals/anion, halogenation); isomers; conformational isomers of alkanes and cycloalkanes.
4.1-12 (skip 13,14)	Chirality, enantiomers, diastereomers, optical activity, configurations of stereoisomers, cis and trans, stereochemistry in reactions, racemic mixtures, optical purity.
5.4-15, 6.1-10	Alcohol chemistry, Sn1 and Sn2 reactions mechanisms,transition state, electrophiles and nucleophiles, energetics of reactions.
7.2-12,14-20 **8.1-12**	Structures of alkenes and cycloalkenes; E1 and E2 (synthesis of alkenes); addition reactions (reactions of alkenes)
9.5-13	Preparation and reactions of alkynes
10.1-5,8	Free radical structures; reactions with alkanes and alkenes; polymers
11.1-7,10-13	Chemistry of conjugated systems

Suggested homework problems 10th ed:

Chap. 1:	42, 45a,c, 46, 47, 48, 53a,c, 59, 60, 65, 66
Chap 2:	24, 26, 31, 32, 33, 36, 39, 48
Chap 3:	27, 30, 33, 38, 40a, 48, 50, 52
Chap 4;	28, 31, 35, 38, 39, 41, 47
Chap 5:	20c, 30, 33, 34, 44, 45
Chap 6:	19, 20, 22c, 32a,b, 37, 41, 42
Chap 7:	37b,f, 39a,d, 41b, 43, 45a-d, 49
Chap 8:	28, 31, 34, 58, 61, 64
Chap 9:	24, 27, 27a,d, 30, 34
Chap 10:	16b, 19, 20, 23, 32
Chap 11:	33, 34, 41, 46, 49

For comparison purposes only:

9th Edition

	Chapters.sections	Subjects
	1.1-17 **2.1, 2.6-18**	Atomic structure, electron configuration, covalent and ionic bonding, multiple bonds, organic functional groups, formal charge, hydrogen bonding, hydridization (sp3, sp2, sp), Bronsted-Lowry acids, Lewis acids, structure of acids, equilibrium in acid/base reactions, Ka and pKa, Nomenclature
	2.19-22, 4.13-17, **3.1-11**	Chemistry of alkanes (oxidation, cations/radicals/anion, halogenation); isomers; conformational isomers of alkanes and cycloalkanes.
	7.1-13 (skip 10)	Chirality, enantiomers, diastereomers, optical activity, configurations of stereoisomers, cis and trans, stereochemistry in reactions, racemic mixtures, optical purity.
	4.4-13, 8.1-12,	Alcohol chemistry, Sn1 and Sn2 reactions mechanisms,transition state, electrophiles and nucleophiles, energetics of reactions.
	5.2-4,6,8-16,18 **6.1-20, 22**	Structures of alkenes and cycloalkenes; E1 and E2 (synthesis of alkenes); addition reactions (reactions of alkenes)
	9.5-13	Preparation and reactions of alkynes
	10.1-7,10-13	Chemistry of conjugated systems
	11.1-9, 18-23	Benzene, aromaticity and anti-aromaticity (time permitting)

Suggested homework problems 9th ed:

Chap. 1:	40, 43, 44, 47, 50a,c, 53c, 56, 57, 63, 65.
Chap 2:	24, 27, 28, 29, 30, 35, 43, 45.
Chap 3:	21, 27, 28, 34a, 40, 44, 46, 48
Chap 4;	25a, 36, 39, 40, 43, 44, 49a
Chap 5:	33b,f, 35a,d, 37b, 39, 41a-d, 43
Chap 6:	27, 34a-j, 39a-i, 47c,d, 58, 61
Chap 7:	33, 36, 38, 42, 44, 47, 51
Chap 8:	21, 23, 32c, 33a,b, 34b-d, 49, 50
Chap 9:	22c,d, 25a-e and g-k, 29d, 31
Chap 10:	28, 32a-e, 43,