SDSU Chemistry 130 – Elementary Organic Chemistry Course Syllabus (Revised 1.19.23) (Section 1001)

LECTURE INFORMATION

Lecture:	Monday, Wednesday, Friday 11:00 – 11:50am (3 hours per week)
	Building: Peterson Gym Room: 153

INSTRUCTOR INFORMATION

Instructor:	Alfred M. Aberle, PhD			
Office:	Geology, Math, and Computer Science building (GMCS) Room 213A (2nd floor)			
Student hours:	TBD (email to make an appointment to meet in-person or virtually)			
Zoom ID:	979 118 9915			
eMail:	Aaberle@sdsu.edu (This is the best way to reach me). Please include 'Chem 130 Spring 2023			
	in the subject line when corresponding with me.			

COURSE DESCRIPTION

This is a one-semester course satisfies the organic chemistry requirements for fields related to allied health and the environment. Chem 130 will prepare students for Chem 160 (Introductory Biochemistry). The course material will focus on applications of organic chemistry to biochemistry. Organic chemistry differs from general chemistry in that it focuses on only a few elements (C, H, N, O, F, Cl, Br, I). Emphasis will be placed on understanding how the 3-dimensitional shapes of molecules relates to the activity of biological compounds. We will also discuss fundamental organic transformations and how they apply to every life.

REQUISITES

Prerequisite: Chemistry 100 (or Chem 200) with a grade of "C" or better. If you have not taken Chem 100 (SDSU) or Chem 200 (SDSU), then you are not eligible to take this course. <u>Note</u>: other college chemistry courses may qualify as a prerequisite. Please contact me ASAP for eligibility.

REQUIRED MATERIALS

- Text:Introduction to Organic Chemistry by William H. Brown and Thomas Poon 6th ed.Students Solutions Manual to Accompany Introduction to Organic Chemistry by Brown, Poon, and
Erickson (Wiley) 6th ed.
- **** This is an Immediate Access Course: All or a portion of the required course materials for this class are provided in a digital format by the first day of classes and are free through <u>the add/drop date of</u> <u>January 31, 2023</u>. Your SDSU student account will then be charged a special reduced price for use of the materials for the remainder of the semester unless you opt-out of the content by 11:59pm on the add/drop date. Please visit <u>www.shopaztecs.com/immediateaccess</u> for additional information about this service, pricing, digital subscription duration, print add-ons, opting out and other frequently asked questions. ****
- **Digital Media:** The WileyPLUS subscription to access electronic homework and course exams. The WileyPLUS accompanies the textbook purchase.
- Model Kit: Prentice Hall Molecular Modeling Kit for Organic Chemistry (or comparable)
- Required Technology:
 Computer webcam (Zoom) and microphone for exams and office hours. NO smart phones.

 For further details, please visit https://ces.sdsu.edu/sdsu-global-campus-it-support for online leaning at San Diego State University.

Online Resources: Your Canvas course shell. Make sure you can long into your Canvas course container. Make sure that you access it frequently in order to check for updates and announcements. Handouts will be posted to your Canvas course container.

COURSE OBJECTIVES (STUDENT LEARNING OBJECTIVES) BY CHAPTER

Upon successful completion of the course the student will be able to:

Chapter 1 - Covalent bonding and Shapes of Molecules

1) Describe the electronic structure of atoms.

- 2) Use the Lewis model of bonding to describe the nature of a bond between 2 atoms
- 3) Use VSPER theory to predict the shape of simple organic molecules
- 4) Use the concepts in SLO 1.1-1.3 to identify polar and non-polar molecules

5) Understand the concept of 'resonance' and apply it to a better understanding of how a molecule truly exists (as compared to the Lewis Dot Structure)

- 6) Gain a basic understanding of hybridization and the orbital overlap model of bonding.
- 7) Be able to identify whether an atom is sp, sp^2 , or sp^3 hybridized

8) Identify common functional groups

Chapter 2 - Acids and Bases

1) Identify Arrhenius, Bronsted-Lowry, and Lewis Acids and Bases

- 2) Understand the relationship between pKa and acidity, and how pKa is calculated.
- 3) Using pK_a data, predict the equilibrium of an Acid-Base reaction.
- 4) Identify conjugate acid-base pairs for Bronsted-Lowry acids and bases.
- 5) Relate position in periodic table to acidity.
- 7) Draw relationships between acidity and molecular structure

Chapter 3 - Alkanes and Cycloalkanes

- 1) Describe what an alkane is
- 2) Identify constitutional isomers of an alkane.
- 3) Name simple alkanes according to IUPAC Rules
- 4) Describe the different conformations of alkanes and cycloalkanes. Relate conformation to energy level
- 5) Draw the condensed and line-angle structural formulas and give the names for the cis-trans isomers of alkenes.
- 6) Understand the molecular properties and trends that lead to varying physical properties of alkanes.

7) Explain where many alkanes come from.

Chapter 4 - Alkenes and Alkynes:

- 1) Describe what alkenes and alkynes are. Describe their structures, shapes, and physical properties.
- 2) Name simple alkenes and alkynes according to IUPAC rules.

Chapter 5 - Reactions of alkenes and alkynes

- 1) Understand the concept of a reaction mechanism and how we denote electron movement via 'arrow pushing'
- 2) Understand the basic idea of electrophilic addition reactions to alkenes and alkynes.
- 3) Understand what a carbocation is and the factors that lead to carbocation stability trends.
- 4) Describe a Carbocation rearrangement.

5) Understand the basic idea behind the reduction of alkenes to alkanes, and alkynes to alkenes.

Chapter 6 - Chirality and the handedness of molecules

1) Understand the difference between isomers, stereoisomers, and enantiomers (non-superimposable mirror images). Draw a connection between molecular chirality and handedness.

- 2) Know what a stereocenter is, and how we designate conformations using 'R and S' nomenclature.
- 3) Describe how we deal with molecules with multiple stereocenters.
- 4) Describe the differences in physical properties between stereoisomers.
- 5) Understand the real-world consequences of chirality (e.g. thalidomide).

Chapter 7 - Haloalkanes

1) Name simple Haloalkanes using IUPAC rules and predict the physical properties of them using concepts previously learned in class.

2) Describe the products and mechanism of nucleophilic aliphatic substitution reactions (S_N1 and S_N2)

3) Understand the mechanistic differences between S_N1 and S_N2 reactions as well as the factors that will lead to each reaction.

4) Describe the products and mechanism of Elimination reactions (E1 and E2)

5) Understand the mechanistic differences between E1 and E2 reactions as well as the factors that will lead to each reaction.

Chapter 8 - Alcohols, ethers, and thiols

1) Name simple alcohols, ethers and thiols using IUPAC rules and understand the characteristic physical properties of each.

2) Understand the reactivities of alcohols, ethers and thiols.

3) Understand the basic properties of an epoxide (a special cyclic ether).

Chapter 9 - Benzene and its derivatives

1) Understand the concept of aromaticity and be able to predict if a compound is aromatic.

2) Be able to name simple aromatics using IUPAC rules and predict their physical properties.

3) Understand the characteristic reactions of aromatics, particularly electrophilic aromatic substitution.

4) Understand the basic mechanism of electrophilic aromatic substitution and how substituents effect the reaction outcome

Chapter 10 - Amines

1) Understand the chemical and physical properties of amines and how to name simple amines using IUPAC Nomenclature

2) Understand the characteristic reactivities of amines (basic, generally good nucleophiles).

Chapter 11 – skipped

Chapter 12 - Aldehydes and Ketones

1) Understand the chemical and physical properties of aldehydes and ketones and how to name simple aldehydes and ketones using IUPAC Nomenclature.

2) Understand the characteristic reactivity of ketones and aldehydes (electrophiles at the C-2 Carbon).

3) Describe the difference between adding a strong nucleophile (Grignard reagent) and a weak nucleophile (water) to an aldehyde and ketone.

4) Understand what acetals and ketals are and how they relate to carbohydrates.

Chapter 13-Carboxylic acids: (4/18-4/22)

1) Understand the chemical and physical properties carboxylic acids and how to name them using IUPAC Nomenclature.

2) Understand the characteristic reactivity of carboxylic acids (The OH is acidic, the carbonyl carbon is somewhat electrophilic.

Chapter 14-Functional derivatives of carboxylic acids (through 14.6)

1) Know the common derivatives of carboxylic acids and how to name them.

2) Understand the characteristic reactions of carbonyl derivatives (electrophiles at Carbonyl carbon)

Chapter 18 – Amino acids and Proteins

1) Understand what an amino acid is and how they come together to form a protein (via the amide bond)

2). Be able to identify basic secondary structure features of proteins and that H-bonding largely acts as the glue that hold these features together

ATTENDANCE AND WITHDRAWAL POLICY

Attendance to the lecture is critical to teaching and learning and is therefore extremely important. Attendance will be taken at the beginning of each session by passing around a roll sheet. In my experience those who regularly attend lecture do better in the class.

It is the *student's responsibility* to add, drop, or withdraw from *classes before the deadlines stated in the class schedule*. Petitions to add, drop, or withdraw after the deadline will not be approved without proof of circumstances beyond the student's control which made him/her unable to meet the deadline. Lack of money to pay fees is not considered an extenuating circumstance. Students anticipating difficulty in paying fees before the add deadline should check with the Financial Aid Office about sources of funds or other alternatives for which they may be eligible. A grade of incomplete will be given only upon verification of extenuating circumstances and only after a formal written request for this grade is made by the student.

Below are very important attendance policies:

- It is the student's responsibility to drop all classes in which he/she is no longer attending.
- Students who remain enrolled in a class beyond March 22nd, 2023 will receive an evaluative letter grade in this class.

IMPORTANT DATES (SPRING 2023)

- Last day for add codes = January 31st
- Last day to opt-out of Immediate Access or Equitable Access = January 31st
- Last day to file a petition for changing grading basis = January 31st
- Last day to drop without a "W" = February 14th
- Last day to drop with a "W" = March 22^{nd}

EVALUATION

Category	<u>Points</u>	Dates (Tentative)
Exams	800 pts (200 pts. each; none dropped)	(2/10, 3/10, 4/28, 5/8)
Final Exam	Midterm IV	May 8 th
Homework	130 pts. (Best 13 out of 14 assignments x 10 pts.)	See Lecture Schedule

Those enrolled at the end of the semester must receive a letter grade unless they have chosen the Pass/No Pass option.

A (>88%), B (87-78%), C (77-65%), D (64-55%), and F < 55%.

Your final grade will be calculated as follows:

Final grade percent = 0.85 (Exam percent) + 0.15 (Homework percent)

- Exam percent = Total exam points /800 pts. total
- Homework percent = Total homework points/130 pts. total

ELECTRONIC HOMEWORK: Homework will be graded on a ten (10) point basis using the online WileyPLUS homework software. The homework will be due at 11:00am the day of the exam that covers those chapters. DO THE HOMEWORK AS WE PROCEED THROUGH EACH CHAPTERS! There are fourteen (14) homework assignments and the best thirteen (13) will count towards your final grade. I will not check every problem but will choose a sample to grade. The final homework grade will be 15% of the total grade in the class. The lowest homework assignment grade will be dropped. Tentative due dates for homework are posted in the syllabus lecture schedule.

EXAMS: There will be four (4) midterm exams this semester. The fourth midterm will stand for the final exam and will be administered the day of the course scheduled final (May 8th, 2023). Exams will be asynchronous and administered on Canvas. Students can take them anytime between 11:00am and 11:59pm on the tentative scheduled day. To ensure the integrity of the exam, the student will be required to send me proof of taking the exam. See the lecture schedule for the tentative midterm dates. Please note that there will be no cumulative final exam. Midterm IV will be during our scheduled final exam date and time (8 May 2023 at 10:30am – 12:30pm). Midterm IV may be given as a paper exam, so be prepared to come to class to take the midterm IV (the last exam for the course). All exams will be open book on open notes; however, each exam will have a lot of material. Thus, students are urged to be prepared and organized for each exam. These exams are not optional and are given as per the schedule. None of the midterms will be dropped.

Note: Make up exams may be given with an acceptable, verifiable excuse if arrangements have been made **prior to the exam**. The exam must be made up before the exam has been returned to the class.

No bathroom breaks during an exam. If you leave the room, then I will reserve the right to end your exam and consider that you have finished the exam.

GENERAL POLICIES

- 1. Evaluation will be in the form of exams and homework.
- 2. There is **no make-up** for any assignment given during class.
- 3. Tentative dates of all exams and homework are provided on the schedule found in the syllabus.
- 4. **Students are encouraged to attend all lectures**. The responsibility for obtaining lecture notes, assignments and due dates rest entirely with the student, regardless of attendance habits.
- 5. Students must always show their work for all problems involving calculations in order to receive full credit.
- 6. **Ipods, mp3 players, cell phones, pagers or the like are not allowed in class.** Turn them off and put them away before class starts.

STUDENT SUCCESS

- 1. In general, you can expect to put in at least two hours of your own time for each hour of lecture. That is a commitment of 6 hours per week of study/homework time.
- 2. <u>Use your text</u>. Ideally you would skim the material before lecture and then read it in more detail later. Your text is a great resource to use when trying to solve homework questions, study for exams, etc..
- 3. <u>Take Notes</u>. Take lecture notes and supplement them from you text. Summarize them right after lecture while the information is fresh in your minds.
- 4. <u>Form Study Groups</u>. This is the best way to learn, everyone sees things differently. What you may understand your classmates might not and vice versa.
- 5. <u>Keep up</u>. Getting behind in class is very dangerous. Chemistry builds on the information that is learned; therefore, if you fall behind you will not be able to understand the new material being learned.
- 6. <u>Do the Homework</u>. It is points to help buffer your grade and it helps to prepare you for the exams. It is very hard to do well in this course if you do not complete your homework.
- 7. <u>Ask Questions</u>. If you do not understand something, please ask. There are no bad questions. If you are stuck on a homework problem, etc. ask.

8. <u>Quality Sleeping Habits</u> – <u>This might be the most important thing you can do for yourself.</u> Sleeping allows our brains to store information from short-term (working) memory into long-term memory for later retrieval. Sleeping before, during or after studying is imperative in order that the brain can sort, process and store information for future recall. The result of not sleeping is equivalent to being mildly drunk. You will be slower, have a hard time focusing, and be more prone to sickness. Ultimately, your working memory will suffer along with your reasoning skills. Long story short...... Sleeping is extremely important!</u>

CLASSROOM BEHAVIOR AND STUDENT CODE OF CONDUCT

Students are expected to adhere to the student code of conduct at all times. The student Code of Conduct can be found in 41301, Title 5, California code of Regulations, Student Rights, Responsibilities and Administrative Due Process posted on the website at: <u>https://sacd.sdsu.edu/student-rights/student-conduct</u>

Students who violate the Student Code of Conduct may be removed from class by the faculty for the class meeting in which the behavior occurred, and the next class meeting. Acceptance of make-up work during the removal will not be accepted. Incidents involving removal of a student from class will be reported to the college disciplinary officer for follow up.

Cheating of any form is unacceptable and is grounds for removal from class. Cheating is defined as copying or discussing test questions during an exam. Cheating on an exam and quiz will result in a zero on that paper and may result in failing the course. Cell phones must be turned off and put away during exams. If a student is caught using his or her cell phone during an exam and quiz, they will receive a zero for that assessment assignment. The zero remains! This includes but is not limited to cheating or any academic dishonesty. Cheating will not be tolerated, so don't cheat.

Mutual respect of all persons in the class is essential to a productive learning environment. Accordingly, I will not tolerate hate speech of any kind, derogatory remarks about your fellow classmates, and derisive tones and sounds. These articulations are unacceptable. Students must feel safe in class in order to learn effectively. I reserve the right to ask any student to leave the classroom if I determine that (he/she/ze/they) are impairing the learning environment in any way. My goal is to ensure that everyone is a valued member of the classroom learning environment. Colleges and universities in the United States are mandated by federal and state laws to provide environments that promote academic and personal development for all students.

RESPECT FOR DIVERSITY

I intend that students from all diverse backgrounds and perspectives be well served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength and benefit. I, also, intend to present materials and activities that are respectful of diversity: gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture. Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups.

In addition, if any of our class meetings conflict with your religious events, please let me know so that we can make arrangements for you.

Please visit SDSU Global Campus Diversity Statement on the websites:

- https://ces.sdsu.edu/about/diversity-statement
- https://ces.sdsu.edu/sites/default/files/sdsu_global_campus-diversity_inclusion_plan.pdf

PREFERRED NAME & PREFERRED GENDER PRONOUNS

Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, culture, religion, politics, sexual orientation, gender, gender variance, and nationalities. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records.

SEXUAL MISCONDUCT

Title IX makes it clear that violence and harassment based on sex and gender (which Includes sexual orientation and gender identity/expression) is a civil rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, color, religion, age, status as a person with a disability, veteran's status or genetic information.

If you or someone you know has been harassed or assaulted, you are encouraged to report it to the Title IX Coordinator Gail Mendez at <u>gmmendez@sdsu.edu</u> (619) 594-6464 who will contact you to let you know about support services at SDSU and possibilities for holding accountable sexual violence victim advocate (619 594-0210) (website: <u>https://titleix.sdsu.edu/</u> or Counseling and Psychological Services (619 594-5220) and visit the (website at <u>https://sacd.sdsu.edu/cps</u>

To report to the police, contact the <u>San Diego State University Campus Police (619) 594-1991 or 911 for any</u> <u>emergency.</u> Visit website: <u>https://police.sdsu.edu/</u>

AMERICANS WITH DISABILITIES ACT (ADA)

- Any student with any disability should discuss this with me during the first two weeks of class so we can make accommodations to enhance the learning process. All information will be kept confidential. I will do everything that I can to make the class workable for you.
- Please allow 10 14 days for this process
- Students that need evacuation assistance during campus emergencies should also meet with the instructor as soon as possible to assure the health and safety of all students.
- For more information, you may contact the DSPS Office on your campus or the website: www.sdsu.edu/sasc

WELLNESS STATEMENT

Personal concerns such as stress, anxiety, relationship difficulties, depression, cross-cultural differences, etc., can interfere with a student's ability to succeed and thrive at SDSU. For helpful resources contact Well-being & Health Promotion located Calpulli Center, 3rd floor Suite 3201 (619) 594-4133. Visit the website: <u>https://sacd.sdsu.edu/health-promotion/about-us/contact-us</u> Please also let me know if you need any additional support in this class for any reason. Also see the Division of Student Affairs and Campus Diversity website: <u>https://sacd.sdsu.edu/</u> for a complete directory of student support services at SDSU.

VETERAN SERVICES

If you are a student veteran, SDSU offers the Joan and Art Barron Veterans Center, Student Services West 1661 (619) 594-5813 for support services. Please visit their website <u>https://arweb.sdsu.edu/es/veterans/</u> for more information about what support they offer, a list of ongoing events and links to outside resources. Please also let me know if you need any additional support in this class for any reason.

MATH & STATS LEARNING CENTER AND WRITING CENTER FOR TUTORING SERVICES

Free Math and Science Tutoring is available on the 3rd floor of the Love Library in room LL 328. The hours of operation can be found at: <u>https://mslc.sdsu.edu/</u> Also visit the library website: <u>https://library.sdsu.edu/help-services/tutoring</u>

ACADEMIC HONESTY The university adheres to a strict <u>policy regarding cheating and plagiarism</u>. These activities will not be tolerated in this class. Please become familiar with San Diego State University policies <u>https://catalog.sdsu.edu/content.php?catoid=5&navoid=385</u>

Any cheating or plagiarism will result in a failing course grade this class and a disciplinary review by Student Affairs.

Examples of Plagiarism include but are not limited to:

- Using sources verbatim or paraphrasing without giving proper attribution (this can include phrases, sentences, paragraphs and/or pages of work)
- Copying, in part of in whole, for another's test or other examination
- Copying and pasting work from an online or offline source directly and calling it your own
- Using information you find from an online or offline source without giving the author credit
- Replacing words or phrases from another source and inserting your own words or phrases
- Submitting a piece of work you did in another course, if contrary to the policies of the course
- Altering or interfering with grading procedures
- Assisting another student in any of the above

If you have questions on what is plagiarism, please consult the SDSU Center for Student Rights and Responsibilities website policy: <u>https://sacd.sdsu.edu/student-rights/academic-dishonesty/cheating-and-plagiarism</u>

SDSU ECONOMIC CRISIS RESPONSE TEAM

If you or a friend are experiencing food or housing insecurity, technology concerns, or any unforeseen financial crisis, it is easy to get help! Visit <u>www.sdsu.edu/ecrt</u> for more information or to submit a request for assistance. SDSU's Economic Crisis Response Team (ECRT) aims to bridge the gap in resources for students experiencing immediate food, housing, or unforeseen financial crises that impacts student success. Using a holistic approach to well-being, ECRT supports students through crisis by leveraging a campus-wide collaboration that utilizes on and off-campus partnerships and provides direct referrals based on each student's unique circumstances. ECRT empowers students to identify and access long term, sustainable solutions to successfully graduate from SDSU. Within 24 to 72 hours of submitting a referral, students are contacted by the ECRT Coordinator and are quickly connected to the appropriate resources and services.

For students who need assistance accessing technology for their classes, visit our ECRT website (<u>www.sdsu.edu/ecrt</u>) to be connected with the SDSU library's technology checkout program. The technology checkout program is available to both SDSU and Imperial Valley students.

SYLLABUS DISCLAIMER

The course syllabus should be viewed as an educational contract between the instructor and students. Every effort will be made to avoid changing the course schedule, but the possibility exists that unforeseen events will make syllabus changes necessary. *The instructor reserves the right to make changes to the syllabus as deemed necessary*. Students will be notified in a timely manner of any changes via email and the course announcements. **Please check your Canvas course page for announcements as well as your SDSU email account often.**

LAND ACKNOWLEDGEMENT

For millennia, the Kumeyaay people have been a part of this land. This land has nourished, healed, protected, and embraced them for many generations in a relationship of balance and harmony. As members of the San Diego State University community, we acknowledge this legacy. We promote this balance and harmony. We find inspiration from this land, the land of the Kumeyaay.

DATE			TENTATIVE LECTURE SCHEDULE	IMPORTANT DATES
Month	Day	Date	Chapter (Topic)	
Jan	Wed	18	Chapter 1 (Intro & Chapter 1)	First Day of Classes
	Fri	20	Chapter 1	
Jan	Mon	23	Chapter 1	HW for Ch. 1 Due
	Wed	25	Chapter 1	<u>Jan 30th @</u>
	Fri	27	Chapter 2	<u>11:59pm</u>
Jan	Mon	30	Chapter 2	31 st - Last day to add, drop, or change grading basis
Feb.	Wed	1	Chapter 2	
	Fri	3	Chapter 3	
	Mon	6	Chapter 3	
	Wed	8	Chapter 3	HW for Chs. 2&3
	Fri	10	MIDTERM I (Chapters 1-3)	<u>Due Feb 10th @</u>
	Mon	13	Chapter 4	<u>11:00am</u>
	Wed	15	Chapter 4	14th - Last day to
	Fri	17	Chapter 4	withdrawal without
	Mon	20	Chapter 5	a 'W' on transcript
	Wed	22	Chapter 5	
	Fri	24	Chapter 5	
	Mon	27	Chapter 6	
March	Wed	1	Chapter 6	
	Fri	3	Chapter 6	
	Mon	6	Chapter 7	
	Wed	8	Chapter 7	HW for Chs.
	Fri	10	MIDTERM II (Chapters 4-7)	4,5,6,7 Due March
	Mon	13	Chapter 7	<u>10^{cm} (<i>a</i>)</u> 11:00am
	Wed	15	Chapter 8	
	Fri	17	Chapter 8	
	Mon	20	Chapter 8	
	Wed	22	Chapter 10	22 nd - Last Day to
	Fri	24	Chapter 10	withdraw from
	Mon	27	Spring Break - First Day	classes with a 'W'
	Wed Fri	29 31	Holiday - Spring Break	

	DATE		TENTATIVE LECTURE SCHEDULE	IMPORTANT DATES
Month	Day	Date	Chapter (Topic)	
April	Mon Wed Fri	3 5 7	Chapter 10 Chapter 12 Chapter 12	
April	Mon Wed Fri	10 12 14	Chapter 12 Chapter 13 Chapter 13	
April	Mon Wed Fri	17 19 21	Chapter 13 Chapter 14 MIDTERM III (Chapters 8, 10, 12)	<u>HW for Chs.</u> <u>8,10,12 Due April</u> <u>21st @ 11:00am</u>
	Mon Wed Fri	24 26 28	Chapter 14 Chapter 14 Chapter 18	
May	Mon Wed <i>Thurs</i>	1 3 4	Chapter 18 Chapter 18 <i>Last day of classes before Final Examinations</i>	HW for Chs. 13,14,18 Due May 4 th @ 11.59pm
	Mon	8	Final Exam (10.30am - 12.30pm) SHW 011 Midterm IV (Chapters 13,14,18)	