CHEM 331-002

Classroom: Math-132  
Class Times: 9:00-9:50 AM  MWF

Instructor: Bidisha Sengupta, Ph.D.

Office: Math 112  
Email: bidisha.sengupta@sfasu.edu

Office Hours: M (3.00-4.00 PM); T (11.30-12.30 PM); R (2.00-3.00 PM); F (10-11 AM)
Other time by appointment (email me to make appointment)

Phone: (936)-468-2485

Recitation: R 12:30-1:20

IT IS STRONGLY RECOMMENDED THAT YOU READ AND UNDERSTAND THE POLICIES OUTLINED IN THIS SYLLABUS. IF YOU SHOULD HAVE QUESTIONS ABOUT ANYTHING CONTAINED HEREIN, PLEASE CONTACT ME AS SOON AS POSSIBLE!

Catalog Description:

Organic Chemistry I – Development of organic chemistry for chemistry majors, minors, and pre-professionals.

Prerequisites:

A grade of C in CHE 134 (or its equivalent)

Required Texts and Other Materials:

By William H. Brown, Brent L. Iverson, Eric V. Anslyn, Christopher S. Foote
• Notebook paper & pencils
• A quiet place to study regularly

Supplementary Readings:

• Handouts will be posted on D2L. You are free to download these and/or print them out as you see fit.
• A solutions manual for the main lecture text is also available for purchase. It is not required, and it makes no difference to me whether you purchase it or not. I do have a solutions manual in my office that you are welcome to use during my office hours.

Student Learning Outcomes: Upon completion of CHE 331, students will be able to:

1. Identify the various organic functional groups present in the structure of an organic molecule.
2. Give the correct name of an organic compound when provided the structure of the compound, and give the correct structure of a compound when provided the name.
3. Illustrate basic concepts of structure and bonding in organic compounds, including constitutional isomerism, stereoisomerism, conformational analysis, and structural effects on the physical and chemical properties and reactions of organic compounds.
4. Apply fundamental chemical principles including: thermodynamics, kinetics, and acid-base behavior to explain the chemical behavior and reactivity of organic compounds.
5. Illustrate basic concepts relating to reactivity of organic compounds, including: substitution, addition, elimination, oxidation-reduction, free radical, and pericyclic reactions and the mechanisms for these reactions.
6. Predict the product(s) of an organic reaction(s) consisting of one or several steps, correctly taking into account aspects of stereo-, regio-, and chemoselectivity.
7. Formulate a reasonable multi-step synthesis of an organic compound from a specified starting material.
8. Analyze spectroscopic data (IR, MS, and 1H-NMR) in order to elucidate the correct structure of a molecule, including being able to assign correctly various spectral attributes and features to a particular portion of a molecule’s structure.

**Grading Policy**

**Grading**

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<thead>
<tr>
<th>Activity</th>
<th>Date</th>
<th>Place</th>
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<tbody>
<tr>
<td>Exam 1</td>
<td>Sep. 18</td>
<td>Miller Science 139 (5-7 PM)</td>
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<tr>
<td>Exam 2</td>
<td>Oct. 16</td>
<td>Miller Science 139 (5-7 PM)</td>
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<td>Exam 3</td>
<td>Nov. 13</td>
<td>Miller Science 139 (5-7 PM)</td>
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<tr>
<td>Exam 4</td>
<td>Dec. 04</td>
<td>Miller Science 139 (5-7 PM)</td>
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<tr>
<td>Final Exam</td>
<td>Dec 9</td>
<td><strong>In the lecture class</strong>(8-10:30 AM)</td>
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<tr>
<td>Weekly Quizzes</td>
<td>To be announced</td>
<td>In the lecture class</td>
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**Letter Grade**

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<tr>
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**Quizzes:**

- Quizzes total 100 points
- All quizzes will be given in the class period.
- Quizzes may NOT be made up for any reason (this includes excused or unexcused absences).
- Quizzes will cover material discussed during the previous week in class, assigned readings, and assigned homework problems. You will be given more specific info for each quiz in class.
- The points you earn on a quiz might not seem like much when you consider them individually, but do keep in mind, that the SUM of the quiz grades carries as much weight as the final exam grade. In other
words, you need to take these quizzes seriously as they can have quite an impact on your grade (positively or negatively)

**Major Exams:**

- 4-hour exams (100 pts per test). The dates of exams are shown on the course calendar. The exams will be given on the specific dates and places mentioned on the course calendar. Partial credit may be given on some types of questions so it is important to always show your work. Credit will not be given for correct answers unless you show how you arrived at the answer.
- My exams are thorough and challenging. You need to be well-prepared.
- You are required to write neatly and legibly on all parts of exams. This includes written responses as well as any diagrams, molecular structures, or reaction mechanisms. If you do not do this, you will incur a substantial penalty.
- **Exams must be taken in PENCIL.** Exams taken in ink will receive a substantial penalty for not following directions. You are allowed to bring an eraser and/or a ruler to exams to help you write more neatly. You are welcome to use a template for drawing structures if you have one (although these are hard to find these days)
- Students arriving more than 15 minutes after an exam has begun will not be allowed to take the exam, unless an arrangement has been made with me prior to the exam.
- **Do NOT bring cell phones to exams.** If, for some reason, you must bring your cell phone to the exam, turn it OFF completely. It doesn’t mean to set your phone to vibrate. That means O-F-F. Off. Cell phones ringing during an exam are exceedingly annoying. For this reason, I reserve the right to assess a 5 point penalty—per ring—on the exam grade of anyone whose cell phone rings during an exam.
- **There will not be any in-class or out-of-class review sessions for the exams.** If you have questions or need help preparing for exams, please come by my office and talk to me. I do not go over exams after they are returned to you. Exam keys will be posted on D2L after exams have been returned. You are urged to review the key once you get your exam paper back so that you can learn where to improve on future exams. If you have questions about how your exam was graded or about the solution for any of the problems, please come and talk to me.

**Final Exam:**

- Your final exam will be a comprehensive, multiple-choice exam.

- The final exam will in M-132, i.e. the room where we normally have lecture.
- **YOU MUST TAKE THE FINAL EXAM IN ORDER TO PASS THE CLASS. IF YOU DO NOT TAKE THE FINAL, YOU WILL BE ASSIGNED A GRADE OF F IN THE COURSE, REGARDLESS OF YOUR STANDING IN THE CLASS PRIOR TO THE FINAL EXAM.**

**Homework:**

- We will NOT be using ANY online homework this semester.
- This most certainly DOES NOT mean that you don’t have to do homework. On the contrary, if you expect to complete this course successfully, you will need to devote much time and effort to working the homework problems that are assigned at the end of each chapter.
• In addition to the homework problems from the Brown text, I will post problem sets that you are expected to master as well. These problem sets will be especially useful in drilling you and developing the kinds of skills you need to do well on exams, particularly in areas in which the texts don’t cover well enough.
• Homework WILL NOT be collected. You do not have to turn it in; however, I will be happy to help you with the homework during my office hours. I am also happy to make appointments to meet with you outside of office hours.
• I can tell you from my experiences as a student and as someone who has taught O-Chem for over 13 years that students who do well in my classes devote a great deal of time in working problems and learning to master the skills that are necessary in this class.

JUSTIFICATION FOR HOURS
This course is for 3 credits and spans 15 weeks. The course contains extensive content requiring students to prepare by completing the assigned weekly reading, homework, online content, etc. Students have significant weekly reading and homework assignments involving critical thinking and quantitative reasoning. Students are tested over the material via several exams during the semester including a comprehensive final exam. These activities average at a minimum 6 hours of work each week to prepare outside of time spent engaging with the content.

Please take note of the following:
• You are adults and I will treat you like adults. This course and what you do in it is 100% your responsibility. It is your responsibility to come to class, read the assigned sections in the text before class, take good notes in class, do the homework, and get help if you are having trouble. I am more than willing to help you if you have trouble, but YOU need to take the initiative to seek help.
• Adults do not make assumptions when unexpected circumstances happen. They make arrangements. Please contact me if some sort of unexpected circumstance should happen in your life. If you do this promptly, chances are that we can arrive at some sort of mutually acceptable arrangement that can ameliorate things.
• Grades will NOT be “curved” in this course. If you aspire to make a certain grade, please make sure that you have acquired the minimum number of points for that grade by the end of the semester.
• The laboratory and lecture sections of this course are entirely independent of one another. What you do in lab has no effect on your lecture grade; what you do in lecture has no effect on your lab grade. The lecture portion of this course counts for GPA purposes as 3 credit hours; the lab counts as 1 credit hour.
• You are advised to look over quizzes and exams promptly after they have been returned to you.
• Keys for quizzes & exams will be posted on D2L. You may consult these at your convenience, and are encouraged to do so regularly.
• If you have a question about how a quiz or an exam was graded, you have five (5) class days after the paper is returned to bring the paper to my office to discuss it. Grades will NOT be changed after five class days.
• If you are absent from class when an assignment is returned, it is your responsibility to come to my office to pick up the paper; the 5-day policy begins when I hand out the paper in class, whether you were present that day or not.
• If you happen to be absent when exams are returned, I WILL NOT post your exam grade on D2L. It is your responsibility to come by my office and pick up your exam as soon as possible. Only after you have picked up your exam paper will I post the grade on D2L.
• Grades will be posted on D2L. This constitutes the official grade record for the course. I will use this data at the end of the semester to calculate the final grade. It is YOUR RESPONSIBILITY to check your grades on D2L. If the grade listed on your paper does not agree with the grade listed on D2L, you need to bring it to my attention as soon as possible.
• In order to protect your privacy, I do not discuss grades before, during, or immediately after class. If you have any sort of grade question, please come by during office hours or make an appointment to meet with me to discuss the matter privately. Please email me if you wish to make an appointment.
• It is YOUR RESPONSIBILITY to keep all graded papers throughout the semester. Do not throw anything away until the semester is over. If there is a problem or question regarding the grade on a specific assignment (e.g. the grade listed for you on D2L is different from the grade listed on the paper), then I will require you to bring the paper to my office before I will change the grade.

Make-up Policy:
• Missed exams: If you miss an exam, it is your responsibility to contact me within 24 hours of the exam date. Make-up exams will only be allowed when an absence is documented and verified as being excused under the provisions of the SFA Policies and Procedures Manual. I reserve the right to give a comprehensive exam with essay questions for a make-up. I also reserve the right to give make-up exams during dead week.

Attendance Policy:
• You are expected to be in class EVERYDAY. This is an extremely fast-paced course. You do not want to be absent unless it is ABSOLUTELY NECESSARY.
• You are free to sit where you please.
• I will take attendance by passing around a sign-in sheet at the beginning of each class period. I monitor attendance for my own records and DO NOT use it directly in the determination of your grade. You will not be directly rewarded for coming to class; nor will you be directly penalized for missing a class.
• Absence will SEVERELY impede your chances of completing the course successfully.
• I have learned this lesson the hard way as a student, and I have seen it in my experience as a professor.
• Students who earn a grade of A in my courses typically have fewer than three absences during a semester. Students who earn a grade of F in my courses typically have five absences or more during a semester.
• You are adults; attendance is 100% your responsibility.
• If you should miss a day, regardless of the reason, you are expected to consult with your classmates and get the notes and get caught up with the material.
• You DO NOT need to bring me a doctor’s note if you are absent.
• If you should need to be absent for an extended period, or if there are extenuating circumstances regarding attendance, please inform me as soon as possible. I am more than happy to work with students in cases of severe illness, hospitalization, etc.
• Six points will be added to the point total of anyone that has zero absences. Four points will be added to the point total of anyone that has only one absence. Two points will be added to the point total of anyone that has only two absences.

Tardiness:

• This class begins at the specified time. I will begin class promptly at the specified time. Be here BEFORE the specified time.
• Chronic tardiness is a particular pet peeve of mine. It is discourteous to me and to the other students in the class who did take the trouble to arrive at class on time. You are expected to be in class and be ready when class begins. If you have trouble getting up and getting out of bed to go to class, buy an alarm clock and/or consume a beverage containing a high concentration of 1,3,7-trimethylxanthine.
• If you happen to arrive after I have begun class, you should enter the class quietly and discretely, without disrupting the class. UNDER NO CIRCUMSTANCES SHOULD YOU WALK IN FRONT OF ME ONCE I HAVE BEGUN CLASS!!! This is exceedingly rude, and will earn a stern rebuke from me if you do it. Don’t do it.
• I will close the door to the classroom when class has begun. If you arrive late and find the door closed, DO NOT KNOCK ON THE DOOR. You have missed class for the day. You are responsible for getting the notes from a classmate. Try to be on time in the future.
• If you need to leave class early for any reason, you should do so quietly and discretely, without causing a disruption to me or to the other students in the class.
• If you have a legitimate reason for arriving to class late, please let me know as soon as possible so that we can make a suitable arrangement.

Academic Integrity Policy:

• All students are urged to acquaint themselves with the University's codes, policies, and procedures involving academic misconduct, grievances, sexual and ethnic harassment, and discrimination based on disability. Copies of the SFA Policies and Procedures Manual can be obtained in print or online from the Office of Academic Affairs (http://www.sfasu.edu/upp/pap/academic_affairs.html).
• It is 100% YOUR responsibility to abstain from engaging (or even appearing to be engaging) in academic misconduct. If you see others engaged in academic misconduct, please report it to me as soon as possible. Students engaging in any type of academic misconduct (including, but not limited to: cheating, plagiarism, or any other action that can improperly affect my evaluation of your performance) will be subject to sanctions in accordance with SFA Academic Integrity Policies. Please note: The usage of electronic devices (including, but not limited to: cell phones, PDAs, mp3 players, etc.) while a quiz or exam is being given will be treated as academic misconduct. **DO NOT HAVE THESE DEVICES OUT DURING A QUIZ OR AN EXAM!** I will recommend a grade of "F" for the course and expulsion from the University for any such violations. You are allowed to use graphing calculators
on quizzes and exams; however, I reserve the right to erase the memory of such calculators prior to any quiz or exam.

Semester Withdrawals:

Please note: The last day to drop this course without receiving a WP or WF on your transcript is Wednesday, Oct. 23rd.

Academic Disabilities Policy:

Stephen F. Austin State University is committed to providing reasonable accommodations for all students with disabilities. Students with disabilities who require accommodations in this course are requested to speak with me as early in the semester as possible. Students with disabilities must be registered with the Office of Disability Services prior to receiving accommodations in this course. The Office of Disability Services is located in the Human Services Bldg., Room 325, (936) 468-3004 or (936) 468-1004 (TDD).

Classroom Behavior Policy:

• Again, you are adults. I will treat you like adults, and will expect you to behave in a mature and responsible manner while in class.
• Students are expected to conduct themselves as responsible scholars while in class.
• I use a system similar to that used in Association Football (Soccer) matches to insure proper classroom behavior. Minor infractions will result in the person(s) involved being shown a YELLOW CARD. If a person earns two yellow cards in a class period, he/she will be dismissed from class for that day. Major infractions will result in the person(s) being shown a RED CARD. When a person earns a red card, he/she is immediately dismissed from class for that day.
• I encourage you to ask questions if you do not understand something, however, chatting with a classmate during lecture is not allowed (this is a yellow card offense).
• TURN OFF YOUR CELL PHONES WHEN YOU COME TO CLASS! I WILL NOT TOLERATE RINGING CELL PHONES OR TEXT MESSAGING IN CLASS. If I see you using a cell phone in class, this is a red card offense.
• IN CASE IT WASN’T CLEAR THE FIRST TIME. I DO NOT WANT TO SEE CELL PHONES OUT IN CLASS! I DON’T CARE WHAT THE REASON IS. PUT THEM AWAY. You won’t have time to engage in this sort of tomfoolery anyway.
• You are also not allowed to read other materials (e.g. newspapers) or study for another course while in class. If I see you doing this, I will issue a red card.
• If you bring anything to class with you (food/drink/etc.), please throw it away or take it with you when you leave.
• You are NOT allowed to use tobacco products of any kind in class (SFA official policy).
• You are not allowed to sleep in class. This is a red card offense. If you have trouble staying awake in class, you should drink a beverage containing high concentrations of 1,3,7-trimethylxanthine before coming to class.
• You are NOT ALLOWED to use laptops, tablets, or iPads to take notes in class.

Email:

• Email has been designated an official method of communication by the University.
• All students have an “official” SFA email address; classwide email announcements will be sent to this address
• It is YOUR RESPONSIBILITY to check your SFA email account on a regular basis
• If you have your SFA email forwarded to another account (e.g. yahoo, gmail, etc.) it is your responsibility to ensure that class emails are not treated as “spam” and automatically routed into your “junkmail” folder. “I didn’t get the email about that” is NOT a valid excuse!
• You are welcome to email me with questions. Please DO NOT email me from D2L & expect a prompt response from me. If you want me to respond to your email, the best thing to do is to email me directly at bidisha.sengupta@sfasu.edu.
• IF YOU EMAIL ME, PLEASE PUT “CHE 331” IN THE SUBJECT LINE. ALSO INCLUDE YOUR NAME in the body of the email (especially if your name is different from your email address)

Desire to Learn (D2L):
• All SFA students are able to log onto D2L, which will be used to manage the course
• You can access D2L thru MySFA (https://d2l.sfasu.edu/)
• You will need your official SFA username and PIN to be able to log onto D2L
• D2L will be used to post course announcements, handouts, info for quizzes & exams, and (most importantly for you) your grades
• Documents will be posted as pdf files. You will need Adobe Acrobat Reader on the computer you are using to be able to open these files.
• You can download Acrobat Reader free of charge at http://www.adobe.com
• If you have MySFA or Blackboard technical questions, please contact IT at 468—HELP

TIPS TO BE SUCCESSFUL

A few philosophical musings on organic chemistry after having taught the subject for more than 10 years:

Organic chemistry is a cumulative course; more so than any other course that you will probably take as an undergraduate. You cannot afford to forget the material once an exam is over. We will use skills and concepts from the material presented on the first day of the course over the entire semester and continue using it for organic chemistry II, biochemistry, and professional school exams. This course is not one that you should undertake half-heartedly. You must immerse yourself in the course if you wish to succeed. You cannot expect to simply come to class and succeed. You cannot be merely involved in the course. You have to be committed to mastering the material in order to succeed. The difference between “being involved” and “being committed” can be illustrated with a simple breakfast of eggs and bacon. The chicken was involved. The pig was committed. That’s the type of commitment that you will need to be successful in this course. Don’t be afraid to come and get help. You can get behind very easily, without even realizing it, in this course. Come and get help before exams. I can’t do much to help you after the exam. For those wishing to go on to medical, dental, or pharmacy school in the future, O-Chem is as much of a test of character, resolve, and determination as it is a test of your knowledge and skill in the chemistry of carbon compounds.

“I’m having trouble in class. Where can I get help?”
• Paying a private tutor is many times NOT what students need if they are having trouble in the class. There are a number of resources that you have already paid for available to you on campus. I strongly recommend that you take advantage of these resources before paying additional money to a private tutor.

Some of these resources are:

Your instructor:

• Come see me during office hours or email me to make an appointment. I should be your first line of defense. I know what material is being taught, what material will be on exams, and what material you need to know (after all, I am the one who writes the quizzes & exams). You’ve already paid for me when you paid your course tuition. Don’t hesitate to come for help. I want to see you improve and do well. Don’t think that your question is unimportant or that you are wasting my time. I have office hours to help you. That’s why they are there. Even if you are behind, come get help.

The AARC: You can get one-on-one tutoring at the AARC. Contact the AARC for more specific information on how to get a one-on-one tutor. You need to do this quickly, as only a limited number of slots are available and they fill up rapidly.

• There is also a Chemistry walk-in table at the AARC. Check with the AARC for more information.
• There will not be an SI group for this class

Make sure you are equipped for success:

• All you need to do well in this class are the texts, pencils, and paper. A good model kit might not be a bad idea. If you have a friend in the class, you might one to buy one together and share the cost. Please see me if you want me to recommend a good kit.
• A good 3-ring notebook to keep your lecture notes and handouts. The ability to be organized is an important skill in this class. It will save you from wasting your precious study time looking for stuff.
• Plenty of pencils and paper for working problems
• A quiet place to study regularly

Be careful with the solutions manual:

• I have mixed feelings, pedagogically, regarding the use of student solutions manuals. I don’t require that you purchase the solutions manual; however, you might find it helpful. I have one in my office that you can look at if you need to. If you have a friend in the class, I would suggest that you go in together on a solutions manual and share it.
• If you do decide to purchase the solutions manual, I would advise that you use it with some caution. Many times in my experience as a teacher, I have found that students will work through the homework problems and have the solutions manual open. When they have difficulty on a problem, they immediately go to the manual and look at the answer. Don’t do this! The gains or benefits you get out of looking at the solutions manual right away are minimal, at best. The information tends to go in one ear and out the other. Remember: there’s a reason why newspapers don’t publish the answers to the crossword puzzle until the following day. If you have trouble on a problem, I would suggest that you do as much of it as you can and then go on to another problem and so on. Don’t check the manual to see if your answers are correct until
later that day, or even better, the following day. Former students of mine (some of whom are now in med school) have told me that they derived much more benefit from this type of approach.

• Remember that you won’t have a solutions manual available when you take exams

I think that some of the main reasons that students have trouble in Organic Chemistry are:

• **Not going to class.** Don’t fall into the trap of skipping class. It gets you into a cycle of not coming to class, and this can be hard to break. Trust me; I learned this lesson the hard way when I was a freshman! Look upon the times that your classes are scheduled as being completely inflexible. Don’t schedule other appointments, etc. when you have class. Make your extracurricular schedule fit around your class schedule (not the other way around). Even though I don’t directly use attendance as a part of your grade does not mean that I don’t want you to come to class, nor does it mean that I don’t think attendance is unimportant. My feelings are exactly the opposite. I want you to come in class, and I do think that class attendance is highly important. You are old enough now where you need to be able to motivate yourself to get up and come to class. This is a lesson that I learned the hard way when I was a student at SFA. Don’t make the same mistakes that I did. Is it a drag to have to get up and come to class? Sure it is. Sometimes I don’t want to have to get up and come teach. I’d love to be able to sit around my house all day, but part of being an adult is taking responsibility and doing things that you might not want to do. I can tell you that in my classes, there is normally a very strong correlation between attendance and performance. Students who have earned “A”s in my organic classes tended to have fewer than three absences during the semester, whereas students who earned “Ds” or “F”s in my classes tended to have five absences or more. Attendance does not necessarily guarantee that you will make an “A”, but it usually helps.

• **Not staying caught up** with the course often times this is associated with not coming to class. This class will be fast-paced and cover a lot of material. We’ll start out at a fast pace and will increase the pace over the course of the semester. YOU HAVE TO STAY CAUGHT UP WITH THE COURSE. I don’t think that there’s any way I can possibly overemphasize this point. This means that the “average” student will need to spend about 20 hours per week studying FOR THIS CLASS (that means lecture and lab) in order to master the material so that he/she can earn an “A” or “B”. I would advise that you spread your study time out throughout the week. O-Chem is not a subject that lends itself very well to cramming, particularly for the kind of exam that I give. My exams are challenging. You won’t be able to “B.S.” your way through them. I can usually quickly tell if a person has been studying or not. CRAMMING FOR MY EXAMS IS USUALLY A RECIPE FOR DISASTER. DON’T DO IT. I would recommend that you spend 2-3 hours five or six times during the week studying chemistry. This way, if you have trouble, you can get help as you go along. Believe me, it’s a lot easier to do it this way. Avoid the temptation of putting off studying.

• **Not having good study habits** Remember. I EXPECT YOU TO DEVELOP A MASTERY OF THE COURSE MATERIAL. Plain and simple. You need to establish good study habits right from the beginning. At first some of the material might seem familiar. We will cover some things you have seen in General Chemistry. You will think, “I already know this stuff, so I don’t have to work hard.” You can get by the first exam with this approach. We will soon be into things that you haven’t seen before. If you haven’t established good study habits, you’ll get yourself into a very deep hole very quickly. This hole is one that is very hard to dig yourself out of.

• **Not studying effectively** You need to learn to get the most out of the time you spend studying. You need to develop an active approach to studying. This does NOT mean sitting and looking at the text and saying, “OK, that makes sense…” You benefit a lot more by writing, working problems, explaining things to your
Get one or two classmates and study together once or twice a week. Don’t do this until you have studied individually. Explain things to each other. Make sample tests & quizzes for each other. You need to immerse yourself in the world of O-Chem for the next year if you want to be successful. You should spend about 1/2 to 1/3 of your study time STUDYING ACTIVELY, i.e. working problems. Don’t just sit and stare at the text and think that you will be able to solve the problems on the exams successfully.

**COURSE CALENDAR:** Disclaimer: Dr. Bidisha Sengupta reserves the right to review, and make changes to this document as deemed necessary. Materials will be covered in the following section order with approximate class time. Exam schedule is tentative.

<table>
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<tr>
<th>Date</th>
<th>Tentative Schedule</th>
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<tr>
<td>26-Aug</td>
<td>syllabus policies; chapter 1: Chemical bonds, ionic bonds, covalent bonds, polar and nonpolar covalent bonds</td>
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<tr>
<td>28-Aug</td>
<td>Chapter 1: Lewis structure, VSEPR</td>
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<tr>
<td>30-Aug</td>
<td>Chapter 1: atomic orbitals, molecular orbitals, hybridization</td>
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<tr>
<td>2-Sep</td>
<td>Chapter 1: atomic orbitals, molecular orbitals, hybridization</td>
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<tr>
<td>4-Sep</td>
<td>Chapter 1: formal charges, resonance</td>
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<tr>
<td>6-Sep</td>
<td>Chapter 1: formal charges, resonance</td>
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<tr>
<td>9-Sep</td>
<td>Chapter 2: hydrocarbon, saturated, unsaturated, aromatic hydrocarbon</td>
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<tr>
<td>11-Sep</td>
<td>Chapter 2: structural formula, condense formula, skeleton formula, functional groups</td>
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<td>13-Sep</td>
<td>Chapter 2: naming of alkane and cycloalkanes</td>
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<td>16-Sep</td>
<td>Chapter 2: Newman Projections, conformation, Cyclohexane, chair conformation</td>
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<tr>
<td>18-Sep</td>
<td>Exam #1 (5-7 pm—MAT 101)</td>
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<tr>
<td>18-Sep</td>
<td>Chapter 2: Cyclohexane, chair conformation</td>
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<tr>
<td>20-Sep</td>
<td>Chapter 5 and 6: Naming alkene, E,Z system</td>
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<tr>
<td>23-Sep</td>
<td>Chapter 5 and 6: Reaction mechanism, carboxylation stability, rearrangement of carboxylation</td>
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<tr>
<td>25-Sep</td>
<td>Chapter 5 and 6: addition of water, alcohol, halogens to alkene,</td>
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<tr>
<td>27-Sep</td>
<td>Chapter 5 and 6: oxymercuration-reduction, hydroboration-oxidation</td>
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<td>30-Sep</td>
<td>Chapter 5 and 6: hydrogenation of alkene, glycol formation</td>
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<tr>
<td>2-Oct</td>
<td>Chapter 5 and 6: glycol formation, ozonolysis</td>
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<tr>
<td>4-Oct</td>
<td>Chapter 5 and 6: ozonolysis, problems solving</td>
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<tr>
<td>7-Oct</td>
<td>Chapter 7: Naming of alkyne, alkyne synthesis</td>
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<tr>
<td>9-Oct</td>
<td>Chapter 7: addition of HX, water, halogens to alkyne,</td>
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<td>11-Oct</td>
<td>Chapter 7: keto-enol tautomerism, hydroboration of alkyne,</td>
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<td>14-Oct</td>
<td>Chapter 7: alkyne acidity, organic synthesis from alkyne,</td>
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<tr>
<td>16-Oct</td>
<td>Chapter 4: different acid base definition, conjugate acid-base pair,</td>
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<tr>
<td>16-Oct</td>
<td>Exam #2 (5-7 pm—MAT 101)</td>
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<tr>
<td>18-Oct</td>
<td>Chapter 4: acid base reaction mechanism, Lewis acids and bases</td>
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<td>21-Oct</td>
<td>Chapter 4: organic acid strength evaluation, acid base equilibria</td>
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<tr>
<td>23-Oct</td>
<td>Chapter 3: Isomers, constitutional Isomers, stereoisomers</td>
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<td>Topics</td>
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<tr>
<td>25-Oct</td>
<td>Chapter 3: conformational Isomers, chiral molecules,</td>
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<tr>
<td>28-Oct</td>
<td>Chapter 3: achiral molecules, Fischer Projections,</td>
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<td>30-Oct</td>
<td>Chapter 3: Fischer Projections, naming enantiomers</td>
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<tr>
<td>1-Nov</td>
<td>Chapter 3: optical purity, meso compounds</td>
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<tr>
<td>4-Nov</td>
<td>Chapter 8: Structure, naming of alkyl radicals,</td>
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<tr>
<td>6-Nov</td>
<td>Chapter 8: carbons radicals, halogenation of alkanes, stereochemistry of radicals</td>
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<tr>
<td>8-Nov</td>
<td>Chapter 8: HBr-peroxide to alkene, allylic and bezylic bromination with bromine and NBS, organic synthesis</td>
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<tr>
<td>11-Nov</td>
<td>chapter 9: SN1 and SN2 reaction mechanism,</td>
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<tr>
<td>13-Nov</td>
<td>chapter 9: stereochemistry of SN reactions</td>
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<tr>
<td>13-Nov</td>
<td>Exam #3 (5-7 pm—MAT 101)</td>
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<tr>
<td>15-Nov</td>
<td>chapter 9: stereochemistry of SN reactions, factors affect the SN reaction rate</td>
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<tr>
<td>18-Nov</td>
<td>chapter 9: distinguish SN1 and SN2, E1 and E2 mechanism,</td>
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<td>20-Nov</td>
<td>chapter 9: distinguish E1 and E2, organic synthesis</td>
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<tr>
<td>22-Dec</td>
<td>Chapter 10: Naming alcohol, alcohol reaction with HX, PBr₃, SOCl₂,</td>
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<tr>
<td>25-Nov</td>
<td>No class—Thanks Giving Break</td>
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<td>27-Nov</td>
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<tr>
<td>29-Nov</td>
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<tr>
<td>2-Dec</td>
<td>Chapter 10: sulfonate ester, dehydration of alcohol</td>
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<tr>
<td>4-Dec</td>
<td>Chapter 10: reaction of diols, oxidation</td>
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<tr>
<td>4-Dec</td>
<td>Exam #4 (5-7 pm—MAT 101)</td>
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<tr>
<td>6-Dec</td>
<td>Chapter 10: oxidation, synthesis</td>
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<tr>
<td>9-Dec</td>
<td>Final Exams for class begins at 8.00 am, Room Math 132 at 8.00-10.30 am</td>
</tr>
</tbody>
</table>
Statement of Acknowledgement

PRINT LEGIBLY

I have read and understood the policies outlined in the course syllabus. I agree to abide by and follow the policies. I have been advised that if I do not agree to follow the policies outlined in the course syllabus, I should withdraw from the course.

__________________________  __________
Signature                Date

PRINT NAME

READ the syllabus thoroughly. Print this page, sign and return by August 30, 2019