

CHEM 2B INTRODUCTION TO ORGANIC AND BIOCHEMISTRY – Hybrid F-17

Total Number of Units: 5

Prerequisite: Chem 2A or 1A

Hours of Lecture Per Week: online

Hours of Laboratory Per Week: 3

Hours of Discussion Per Week: online

Course Instructor: Cliff Gottlieb, Phone: 242-2323. e-mail cgottlieb@shastacollege.edu

web page: <http://www.cliffschemistry.com> and Shasta online

Office Hours: Tues. 1:30 – 3:30 PM; Wed. 11 AM – 2:00 PM and at almost any time by appointment to meet your needs in 1412 or in the Science Learning Center, 1626. **Please come and visit:** lots of good stuff happens.

The hybrid nature of this course offers students the flexibility in study times to meet individual needs. However, a successful student in an online situation must be motivated, organized, and a self starter. The lecture and discussion are online and the lab is in room 1414 at Shasta College on Tuesdays from 6:00 – 8:50 PM. Plan to spend at least 12 hours per week on the lecture/discussion part of this course.

Catalog Course Description: A survey of the major classes of organic compounds including structure, nomenclature, properties, reactions, and reaction mechanisms; an introduction to the biochemistry of proteins, carbohydrates, lipids, nucleic acids and their basic metabolic reactions. Suitable for nursing, dental hygiene, agriculture/natural resources and non-science majors. The lecture/discussion portion of this course may be offered in a distance learning format.

Student Learning Outcome: Students will be able to find and use information and data to solve problems and answer questions in chemistry.

GOVERNING PRINCIPLE: I will use a variety of educational techniques to provide the environment to help you learn about the information, thought processes, and methodologies used in all sciences, particularly chemistry, which will allow you to succeed in this class and future classes. Practical applications will be emphasized. **YOU must WORK for your SUCCESS while we LEARN and have FUN.** Finally there is **NO FREAKING OUT ALLOWED! I will help you in every way that I can. Just ask!!!!**

Materials for the Class: (The text, the solutions manual, and other materials are available in the Science Learning Center.)

General, Organic, and Biological Chemistry, 7th ed. McMurry. Publisher: Prentice-Hall ISBN 0321750837

I will also accept the 5th, ISBN 0131877488, or 6th, ISBN 0136054501, editions as textbooks for the course.

Laboratory Manual: Chem 2B Lab Manual Cliff Gottlieb Introduction to Organic and Biochemistry ISBN 9781323697412

Lab Safety Goggles – Must meet ANSI Standard 287.1 1989 (can be purchased from Science Club on 1st day of lab; about \$6)

Suggested but not required: Solutions manual for the text

I have provided numerous resources on my web sites including lecture notes, practice worksheets, and internet links.

INTERNET DELIVERY ISSUES:

The lecture and discussion sections of this course will be delivered over the internet using the Shasta College online program called **Canvas**. Most documents are in Adobe Acrobat PDF format. You should download the free Acrobat Reader immediately and install it on your computer. Here is the hyperlink, [Get Acrobat Reader](#). **You must be comfortable using computers and the internet.**

You also must expect to spend the same amount of time on this course to what you would have spent on the face to face version of this course which is a **minimum of 12 hours at home per week. You should log onto this course every day, check your mail, calendar, any announcements, and discussion boards and make sure all of your work is up to date.** Furthermore you must have sufficient self-discipline to set and adhere to your own and to the course timelines. The internet version of this course is equal to the content and may be more time consuming than the face to face version. Expect to spend at **least 12 hours per week** on this class in addition to the lab. **DO NOT FALL BEHIND!! I AM ALWAYS READY TO HELP YOU.**

TECHNICAL PROBLEMS: If you have technical problems, **NO FREAKING OUT. Freaking out is not allowed. ☺☺.** You just need to communicate with me immediately or as soon as possible. To communicate with me use Canvas e-mail. If that is not working, send me an e-mail at cgottlieb@shastacollege.edu and put Chem 2B as the subject.

For your success it is absolutely imperative that you have thoroughly studied the chapters related to each lab BEFORE you come to lab!!!

The course schedule is at the end of this syllabus. Dates will be on the course calendar in Canvas and on every graded material. Be sure to note the due dates!

METHODS OF EVALUATION/GRADING SCALE: Each of you has the innate ability to earn an "A". I hope that each of you will work to achieve an "A"!!

1. 400 points for exams. Four exams are 100 points each. Exams will be given either at the beginning of the lab or in the Science Learning Center. Each exam will have at least 10 extra credit points, so you can earn at least 40 extra credit points here.
2. 110 points for Quizzes/assignments. Each will count 10 points each. No make-ups allowed. There will be fourteen quizzes/assignments worth 100 grade points. It is possible to earn up to 130 points out of 100 points possible This is like having the opportunity to earn 30 "extra credit" points. Quizzes/assignments will be given either at the beginning of the lab, online or in the Science Learning Center.
3. 45 points for graded homework at 3 points per chapter will be done online using the Shasta College Online program and are worth 45 points.
4. 100 points for lab. It is you average lab percent not total lab points. You must have 70% in lab to pass the course
5. 45 points for discussions. These discussions consist of two types: For one you will have to ask a question about something you don't understand about a topic in each chapter. I will answer it. This is worth 2 points each. The other is that you will write a short paragraph about something you do understand about a topic in each chapter. This is worth 1 point.
6. With reasonable notice, I reserve the right to modify or create other assignments or requirements that I deem necessary

Course grades are based on the total points that you earn not by percent. There are 700 points in the course with the opportunity to earn at least 770 points with the extra credit (that is 10 % extra credit) outlined above. There is **no credit other than outlined above. DO NOT ASK IF THERE IS MORE EXTRA CREDIT! BECAUSE OF ALL THE AVAILABLE EXTRA CREDIT, THESE POINT VALUES FOR THESE GRADES ARE IN STONE AND WILL NOT BE DEVIATED EVEN BY ONE POINT!** Course Grades: **A = 630 or more points, B = 560 – 629, C = 490 – 559 , D = 420 – 489, F = fewer than 420 points**

All work must be done in black or blue ink or gray pencil!! I recommend pencil.

No make-up or LATE exams, quizzes, or homework are allowed unless you have immediate family or personal health or legal emergencies. Call me as soon as possible, typically the same day, to notify me of your emergency. If you have health, legal, or sports non-emergencies, you may be able to make arrangements to take an exam, quiz or submit homework early. You must contact me at least one week prior to make arrangements.

I do not drop exams. You are responsible for keeping track of your own points. I have provided a spreadsheet on Canvas that you can download and can enter all of your grades and it will keep track of your total points. DO NOT ASK ME WHAT YOUR GRADE IS!!! Or I will deduct 10 points from your course total. That spread sheet will give you your current percent at any time.

If you work within my parameters, I will do everything I can to accommodate your needs. **Keep all graded work.** If you have any corrections or grade questions about any graded material, you must notify me within one calendar week after the material is returned to the class. No adjustments in grades will be made after this time. I reserve the right to create grading policies to cope with atypical situations. Finally, you probably are aware that only you can get your education--no professor can give you an education. **You are responsible for yourself.** I am responsible to help you help yourself. Your success in this class is a reflection of your effort.

I will help you in any way that I can. Please communicate with me any issue or situation no matter how small so I may help you! Communicate early and often. And one more thing: NO FREAKING OUT!!

ACADEMIC HONESTY: DON'T CHEAT! CHEATING is the unauthorized giving or getting of answers to quizzes or exams or having someone else take exams, take quizzes or write discussions for you. All work is to be completed by you individually. No copying or group work unless explicitly stated. It is not fair to you, your classmates, or to me. In life all you really own is your personal integrity. Please for your own peace of mind, do not throw away your integrity for a grade in a course. That would be pathetic. **DON'T DO IT!!** . If you cheat, you will receive a 0 for the work involved and a penalty of a 50 point penalty fine deduction from your final course grade. **BY ENROLLING IN THIS CLASS, YOU AGREE NOT TO CHEAT BY OATH ON YOUR RELIGIOUS, SPRITUAL, OR PHILOSOPHICAL BELIEFS!!** If you have concerns regarding academic honesty, or any aspect of cheating, please contact me.

THE DETAILS REGARDING EVALUATION: PAY ATTENTION TO ALL DUE DATES!

EXAMS will be given during the first hour of lab period. They will be fill in the blank, problems, and short answers questions. I will provide a copy of last semester's exams with answers, which you can use to familiarize yourself with my exams. Also I provide a detailed study guide for each exam that tells you exactly what you need to know. Use it!

QUIZZES/ASSIGNMENTS will be open ended question, problems, multiple choice, fill in the blank, or submitting a list of at home observations. Each quiz is worth 10 points. Quizzes will be offered in person at the beginning of the lab period. No late or make-up quizzes permitted with no exceptions other than health or legal situations or emergencies. Two of these will be done online.

HOMEWORK ASSIGNMENTS will be available online using the Shasta College Online program and must be completed in the specified time. You will get 3 tries. I would study and then take the chapter homework. Then look at what you missed, study that material and then take the homework again. By doing this you should usually be able to get 100%. The homework typically will be due on Mondays.

CHAPTER DISCUSSIONS will occur on the Canvas discussion topic for each chapter and include 2 kinds for each chapter.

The first type of discussion is a question for EACH CHAPTER about material covered in the text, or notes that you do not understand I will answer your question. This is worth 2 points for each chapter. **To get credit for this, you must reply to my answer by the homework due date for the chapter involved. Furthermore, do not repeat someone else's question!** You may say that someone else's question was your question and now you understand. That will count for credit.

Do not ask not questions about material not in my notes here, but ask those types of question in the "Ask Cliff questions here" forum

The second type is to write a brief paragraph for EACH CHAPTER explaining a concept you understand in your own words from the text, notes or provided websites. **A brief paragraph includes a topic sentence, at least 3 supporting sentences and a concluding sentence.** This is worth 1 point for each chapter.

You may ask more than one question although that will not affect your grade. I will answer all you questions and check your explanations to ensure that they are correct. **All students in the class are expected to read each explanation, question, and my replies. Any material on these attendance discussion boards can be put on quizzes and exams even if they are not in the text or notes.** Once we complete a chapter, you can no longer get credit for discussions.

OTHER DISCUSSIONS: There will also be two other discussion boards available to you throughout the class. One is dedicated to any other questions that you might have that you would like me to address. I will check this board regularly. The other is for discussions between you and your classmates. I will look at these discussions infrequently.

MY RESPONSIBILITIES

I will provide you with interesting information to you and be available to answer your questions. I will help you hone your understanding of how the world works from a chemical perspective. **I will be available for consultation on the phone or in person during office hours, by Canvas e-mail or discussions and at other times by appointment. You just have to ask.** You can typically expect communications with me to be answered within 24 hours except from Friday afternoon through Sunday. From Friday afternoon through Sunday, I will typically reply to communications on Monday. I will help you to achieve the best grade that you chose to achieve. I hope that you choose to achieve an "A". If you have any difficulties, please see me in person. **BOTTOM LINE:** I am here to help. Finally if something goes wrong, **NO FREAKING OUT!!!** Stay calm and just send me the details and we will figure things out.

YOUR REONSIBILITIES

You must read the book, read the notes, complete assignments, and participate in the class discussions. **MAKE SURE THAT YOU READ MY NOTES!!!!** Log onto the class at Shasta College Online EVERYDAY! **Plan to devote at least 12 hours a week in addition to lab on this course.** . You need to be self-motivated and disciplined to work on your own to complete assignments. You need to work with your classmates on-line to facilitate your learning. Studies show that students who study in groups typically perform better than students who do not work in groups. **I DO NOT FORMALLY DROP STUDENTS FROM THE CLASS. IN ALL CASES YOU MUST DROP THE CLASS YOURSELF THROUGH THE REGISTRAR'S OFFICE!!** Although if you do not participate in the class for more than 1 week, I reserve the right to "lock" you out of the Shasta College Online portion of the course. And of course **NO FREAKING OUT!**

CLASS COMMUNICATIONS

Use the Shasta College Online Canvas program personal class communication. One discussion board will be for general course questions use the "Ask Cliff questions here" discussion board so everyone can benefit. Most course communication are made using the Canvas mail, unless there is a problem or emergency. The discussion forums are public. If there is a personal issue or emergency, send me an e-mail using Canvas. **ONLY if Canvas is not functioning**, send me an e-mail to me at cgottlieb@shastacollege.edu and put CHEM 2B as the subject. **MAKE SURE YOUR CURRENT E-MAIL ADDRESS IS ON FILE AT MY SHASTA.**

IMPORTANT!!!! Using Canvas e-mail: **USE THE INBOX LINK TO SEND ME E-MAIL!!!** Here is how. After you click on the inbox, at the top middle of the page you will see an icon with a pencil on a sheet of paper. Click on it and choose Chem 2B. At the far right of the "To:" Box you will see a person icon. Click it and choose your recipient. Type the subject, your message and hit send.

NOTE: PLEASE DON'T USE THE HELP LINK TO SEND E-MAIL.

OTHER RESOURCES

Science Learning Center. It has tutors and other resources available if you are on campus. Information on page 7.

Disabled Student Programs & Services (DSPS) will provide resources for students with disabilities. They will also test students for learning disabilities. 530-242-7790. www.shastacollege.edu/student-services/dsps

NON-DISCRIMINATION STATEMENT

The Shasta-Tehama Trinity Joint Community College District ("Shasta College"), in accordance with applicable Federal and State Law, does not discriminate on the basis of race, color, national origin, sex, religious preference, age, disability (physical and mental), pregnancy (including pregnancy, childbirth, and medical conditions related to pregnancy or childbirth), gender identity, sexual orientation, genetics, military or veteran status or any other characteristic protected by applicable law in admission and access to, or treatment in employment, educational programs or activities at any of its campuses. Shasta College also prohibits harassment on any of these bases, including sexual harassment, as well as sexual assault, domestic violence, dating violence, and stalking. Inquiries regarding equal opportunity and non-discrimination may be directed to:

Gregory Smith, Director President of Human Resources, (530) 242-7649, gsmith@shastacollege.edu

Sandra Hamilton Slane, Associate Dean of Students, (530) 242-7799, sslane@shastacollege.edu

Lab Procedure: Lab Procedure will be determined and communicated by your lab instructor. Attendance is mandatory. If you do not attend on the first day, you may be dropped.

Tentative Lecture and Lab Schedule

Week starting Tues.	Chapter Schedule for 5 th and 6 th editions	Suggested End of Chapter Problems (evens) for 5 th and 6 th editions	Chapter Schedule for 7 th edition	Suggested End of Chapter Problems (evens) for 7 th ed	Lab Activity
8/15	12 & 13 review	Ch 12 18 – 72 Ch 13 24 – 86	12 & 13	Ch 12 20 – 72 Ch 13 24 – 90	Safety; Hydrocarbon structure (handout)
8/22	14	14.24 - 74	13 & 14	14.22 - 74	Hydrocarbons' reactions (handout)
8/29	14 & 15	15.22 - 64	14 & 15	15.22 - 64	Alcohols, Phenols,
9/5	15		15		Amines (omit amides)
9/12	Exam 1 & 16	Exam 1 Ch 12-15.	Exam 1 & 16	Exam 1 Ch 12-15.	Tie Dye (hand out)
9/19	16 & 17	16.18 - 64	16 & 17	16.20 - 68	Aldehydes & Ketones,
9/26	17 & 18	17.30 - 86	17 & 18	17.32 - 84	Carb. Acids and esters
10/3	18	18.30 - 90	18 & 19	18.34 - 100	Peptides and Proteins
10/10	19	19.19 – 25 all; 19.26 - 82	19	19.26 - 92	Enzymes
10/17	Exam 2 & 22	Exam 2 Ch 16-19	Exam 2 & 21	Exam 2 Ch 16-19	Types of Carbohydrates
10/24	22	22.21 – 25 all; 22.30 - 94	21	21.25-29 all; 34-88; 94	Tests for Carbohydrates
10/31	21	21.20 – 78, 98	20	20. 22-88	Digestion of Foods: Carbs & Proteins only
11/7	23	23.16-21 all, 22 – 86	22	22.21,22;28-64;70-86;86	Polymers (Handout)
11/14	Exam 3 Ch 21 - 23, Start 24 & 25	24.19 – 24 all; 24.26 – 86 25.9, 14 – 60	Exam 3 Ch 20-22 Start 23 & 24	23.28 – 102 24.12,14,20-27all;29-82	Soaps and Saponification
11/28	24 and 25		23 and 24		Lipids
12/5	26	26.19 – 25 all; 26.26 - 74	25	25.23-28 all; 30-80	DNA extraction
12/12	27	27.6 – 11 all; 14 – 58	26 & Exam 4	26.23-29 all; 30-62	Check out

With reasonable notice, this schedule may be changed at the instructor's discretion. All problems in the text may be included on exams. You should do the problems in the chapter. The end of chapter even problems are suggested because the answers to them are in your text. These will not be collected unless specifically announced. Answers to all problems can be found in the Instructors Manual in the Science Learning Center.

Detailed calendar: Chapter references are for the 5th and 6th editions. Please see the previous table of lecture and lab schedule to coordinate with the 7th or 8th editions.

Day/month/year

14/8/2017, Review chapters 12 and 13, If you had Chem 2A from me we covered chapter 12 and started on 13. If you did not, you may not have covered them. Now is the time to get on it ASAP!!! As part of that review and work on the end of chapter problems
15/8/2017, Lab Alkanes Handout Come ready to do the lab,
15/8/2017, Homework ch 12 & 13 available, This is a homework It is available on Shasta College Online You have three tries and your highest one counts,
18/8/2017, Introductions due,
19/8/2017, Ch 12 question due,
20/8/2017, Ch 13 question due,
21/8/2017, Ch 12 replies explanation & homework due,
22/8/2017, Ch 13 replies explanation & homework due 2PM,
22/8/2017, Lab Rxns of Hydrocarbons Handout Quiz on ch. 12 & 13 in lab,
23/8/2017, Begin Ch 14 discussions. Ch 14 homework available,
27/8/2017, Ch 14 question due,
29/8/2017, Ch 14 replies explanation & homework 2PM,
29/8/2017, Lab Alcohols Quiz ch 14,
30/8/2017, Begin ch 15 discussions Ch 15 homework available,
2/9/2017, Ch 15 questions due
5/9/2017, Ch 15 replies explanation & homework due by 2PM,
5/9/2017, Lab Amines & Amides but omit amides Quiz Ch 15,
6/9/2017, Study for exam 1 and ask questions,
12/9/2017, Exam 1 covers Ch 12-15 Lab Tie Dye (bring cotton clothing to dye),
13/9/2017, Begin chapt 16 disc & homework available,
17/9/2017, Ch 16 questions due
19/9/2017, Ch 16 replies explanation & homework due 2PM,
19/9/2017, Quiz ch 16 Lab Ald & Ketones,
20/9/2017, Begin chapt 17 disc Homework avail,
24/9/2017, Ch 17 question due,
26/9/2017, Chapt 17 replies explanation & homework due 2 PM,
26/9/2017, Lab Carb acids & Esters Quiz Ch 17,
27/9/2017, Chapt 18 disc & homework avail,
1/10/2017, Ch 18 question due
3/10/2017, Ch 18 replies explanation & homework due 2PM,
3/10/2017, Ch 18 quiz Lab Peptides & proteins,
4/10/2017, Chapt 19 disc & homework avail,
8/10/2017, Ch 19 question due
10/10/2017, Ch 19 replies explanation & homework due 2PM,
10/10/2017, Quiz ch 19 Lab Enzymes,
11/10/2017, Study for exam 2,
17/10/2017, Exam 2 Ch 16-19 Lab Types of Carbs,
18/10/2017, Ch 22 disc & homework avail,
22/10/2017, Ch 22 question due
24/10/2017, Ch 22 replies explanation & homework due 2PM,
24/10/2017, Lab Tests for Carbs Quiz Ch 22.
25/10/2017, Begin chapt 21 disc Homework avail,
29/10/2017, Ch 21 questions due
31/10/2017, Ch 21 replies explanation & homework due 2PM,
31/10/2017, Lab Digestion of Foods: Carbs & Proteins only Quiz Ch 21,
1/11/2017, Chapt 23 disc & homework avail,
5/11/2017, Ch 23 questions due,
7/11/2017, Ch 23 replies explanation & homework due 2PM,
7/11/2017, Lab Handout: TBA Quiz Ch 21,
8/11/2017, Study for Exam 3 Ch 21-23,
11/11/2017, Veteran's Day Holiday,
14/11/2017, Exam 3 Ch 21-23 Lab Soaps and Saponification,
15/11/2017, Ch 24 & 25 disc & homework avail,
26/11/2017, Ch 24 & 25 questions due,

28/11/2017,Ch 24 & 25 replies explanation & homework 2PM,
28/11/2017,Lab Lipids. Quiz Ch 24 & 25,
29/11/2017,Ch 26 disc & homework avail,
3/12/2017,Ch 26 questions due,
5/12/2017,Ch 26 replies explanation & homework due 2PM,
5/12/2017,Lab DNA extraction Quiz Ch 25,
6/12/2017,Ch 27 disc & homework avail,
10/12/2017,Ch 27 questions due
12/12/2017,Ch 27 replies explanation & homework due 2PM,
12/12/2017, Exam 4 Ch 24-27 Lab Check out. Happy winter solstice

Course objectives: Upon completion of this course, the student will be able to:

1. Identify the functional groups for the major classes of organic and bioorganic compounds.
2. Draw structures for these compounds.
3. Correctly name these compounds
4. Describe physical properties for these compounds including water solubility and polarity.
5. Recognize the presence of hydrogen bonding and diagram it
6. Recognize structural and geometric isomers
7. Describe shapes of organic molecules
8. Describe crude oil distillation and cracking and burning of alkanes.
9. Recognize and write equations for substitution, elimination and addition reactions.
10. Recognize and write equations for the synthesis of organic compounds.
11. Recognize and write equations for organic acid/base reactions.
12. Recognize and write equations for addition and condensation polymerization.
13. Recognize oxidation and reduction reactions
14. Describe mechanisms for the reactions in objectives, 7, 8, 9 and 10.
15. Recognize chirality from structure.
16. Describe the rotation of plan polarized light by optical isomers and use + and – correctly
17. Define structures as D or L
18. Define and recognize enantiomers, meso compounds, diastereomers, and racemic mixtures.
19. Define and recognize monosaccharide, disaccharide, polysaccharide, triose, tetrose, pentose, hexose, aldose, and ketose.
20. Recognize acetals, ketals, hemiacetals, and hemiketals and reducing sugars from structures.
21. Write equations for the formation of hydrolysis of disaccharides and polysaccharides.
22. Recognize alpha and beta glycosidic linkages
23. Define lipids in terms of solubility properties.
24. Classify lipids.
25. Write the equations for the saponification of lipids.
26. Distinguish between soaps and detergents.
27. Describe two types of rancidity in fats.
28. Describe proteins using amino acids shorthand
29. Draw the protonated, deprotonate, and zwitter ion forms of amino acids
30. Based on pH and pI, determine which amino acid form is most prevalent in a given solution
31. Classify proteins
32. Describe primary, secondary, tertiary and quaternary structure of proteins and the bonding involved.
33. Describe hydrolysis and denaturation of proteins and the causatives agents.
34. Identify the components of RNA and DNA.
35. Describe the primary and secondary structure of RNA and DNA
36. Use shorthand to represent the bases of RNA and DNA.
37. Describe replication, transcription and translation.
38. Define gene, exon, intron, and mutation.
39. Understand the role of mutation in evolution.
40. Describe genetic “engineering” and its societal uses.
41. Classify enzymes.
42. Describe mechanisms of enzyme activity.
43. Describe factors which effect enzyme activity.
44. Define catabolism and anabolism
45. Describe the citric acid cycle, glycolysis, oxidative phosphorylation and fermentation.
46. Describe the biosynthesis of carbohydrates, lipids and amino acids.
47. Describe the way different neurotransmitters work.
48. Describe the most recent thinking regarding nutritional needs diet.
49. Describe the digestion of carbohydrates, lipids, and proteins.
50. Differentiate between water and fat soluble vitamins and other compounds.
51. Describe how caloric intake effects body mass

SCIENCE LEARNING CENTER
Redding Campus, Life Science Building - 1600
Room 1626 530.242.2325
Margaret Savage, SLC Coordinator
www.shastacollege.edu/ScienceLearningCenter

The Science Learning Center provides a supportive learning environment where students can realize their educational goals. The Science Learning Center offers a comfortable study environment where students can study individually or in small groups. In addition, free tutoring and a variety of other resources are available to assist students enrolled in science courses. Resources are available for use in the Science Learning Center. A driver's license or Shasta College ID card is required to check-out most resources.

Free Tutoring: Free Tutoring is offered by students who have successfully completed the courses they tutor with a "B" or better grade. In addition to clarifying any confusing concepts, tutors can recommend good study techniques and organizational skills to help you maximize your study time. A tutoring schedule is posted in the Science Learning Center.

Additional Resources:

- **Text books:** Current text books, as well as solution manuals are available for most courses. In addition, various references books are available.
- **Calculators:** Basic scientific calculators and graphing calculators are available for use.
- **Microscopes and slides:** Microscopes and slides are available for reviewing some lab material.
- **CD's/DVD's:** CD's/DVD's are available on various science topics.
- **Computers:** Four internet connected computers with Microsoft Office suite installed are available for use. In addition, two laptop computers are available for in room use. Printing is available for 10 cents/page.
- **Copy Machine:** A copy machine is available in the Science Learning Center. Copies are 10 cents/page.
- **Office Supplies:** Various office supplies and office equipment are available for use (paper cutter, staplers, scissors, tape, hole puncher, markers, colored pencils, etc.).
- **Study Room:** A small study room is available for quiet study.

The Science Learning Center is a friendly, helpful, encouraging environment, which could become your home away from home. Stop by and check out the Science Learning Center.

ADDING A CLASS

Students may add a full-term class through the fourth week of the term.* After the first two class meetings, approval of the instructor is required to add the class, which includes both the signature of the instructor and the first date of attendance. **IT IS THE STUDENT'S RESPONSIBILITY** to pick up the form from the Admissions and Records Office and take it to the instructor for approval. The student must then return the form to the Admissions and Records Office or Extended Education Center for processing before the add is finalized.

DROPPING A CLASS WITHOUT RECORD

Students may drop a class, and have no notation appear on their transcripts, through the fourth week* or 30% of the term for classes less than a semester in length. **IT IS THE STUDENT'S RESPONSIBILITY TO DROP CLASS (ES).** The necessary forms are available from Admissions and Records, Extended Education Centers, or by mail. If a student intends to drop a class and stops attending but fails to file the necessary forms, a failing letter grade may be assigned by the instructor.

WITHDRAWING FROM A CLASS WITH A "W" GRADE

Students may withdraw from a class after the official "drop" date and up through the fourteenth week or 75% of the term for classes less than a semester in length. The notation "W's" will appear on the student's transcript and will not be used in calculations of grade point average. Excessive "W" shall, however, be used as factors in probation and dismissal procedures. **IT IS THE STUDENT'S RESPONSIBILITY TO OBTAIN FORMS AND SUBMIT THE NECESSARY PAPERWORK TO WITHDRAW FROM A CLASS.** Forms are available from Admissions and Records, Extended Education Centers, or by mail. Students who have not dropped or withdrawn from a class before the end of the fourteenth week or 75% of the term will be assigned a course grade.

ATTENDANCE

Students are expected to attend all class meetings. A student who fails to attend the first meeting of a course without notifying the instructor may be dropped from the class. In addition, an instructor may drop a student during the first 30% of the term for excessive absences. Nevertheless, **IT IS ALWAYS THE STUDENT'S RESPONSIBILITY TO OFFICIALLY DROP OR WITHDRAW** from the class. Students who fail to file the necessary forms, even though they stop attending class, will be assigned a course grade.