

Chemistry for Health Sciences

The University of Toledo College of Natural Sciences and Mathematics Department of Chemistry and Biochemistry CHEM1120–001, CRN 41749

Instructor: Dr. Kristi Mock Email: <u>kristi.mock@utoledo.edu</u> Student Drop-in Hours: MW 1-2:30, TR 1-2 Drop-in Hours Location: BO 2086F Instructor Phone: 419 530-4080 Term: Fall 2021 Course Website: <u>Blackboard Learn</u> Class Location: FH2100 Class Day/Time: MTWR 11:30 am-12:25 pm Credit Hours: 4

CATALOG/COURSE DESCRIPTION

The study of chemistry for students majoring in nursing and other health-related fields. This course includes general, organic, and biochemical topics in condensed form. The impact of chemistry in health fields will be emphasized.

COURSE OVERVIEW

CHEM 1120 is the second course in the Chemistry for Health Sciences series and builds upon the knowledge gained in CHEM1110. This course continues building a basic foundation in the principles of general chemistry, and then moves onto organic chemistry, and biological chemistry. CHEM 1120 is appropriate for non-chemistry majors who will require some knowledge of chemistry in their careers, but do not anticipate taking any further chemistry courses during their undergraduate career. This course is typically taken by nursing students, elementary education students, sports management students, and some science majors who do not want or need the more rigorous chemistry background that is provided by two or three years of chemistry courses. It is not appropriate for chemistry majors and may be too rigorous for non-science majors who are only interested in fulfilling their general education science core requirement. If you have any questions about course placement, please see me as soon as possible.

STUDENT LEARNING OUTCOMES

This course directly emphasizes the Ohio's Department of Higher Education's OTM Learning Outcomes related to:

- Effective communication
- Evaluation of arguments in a logical fashion; e.g. critical thinking
- Employing the methods of inquiry characteristics of natural sciences
- Acquiring an understanding of our global and diverse culture and society
- Engaging in our democratic society

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

- 1. Explain how chemical processes work in the body.
- 2. Use chemical concepts to explain how chemistry is used in health care.
- 3. Demonstrate the ability to think critically and employ critical thinking skills.
- 4. Read and interpret graphs and data.
- 5. Demonstrate an understanding of the impact of science on society.

General Education Courses: This course is part of our institutional General Education Program and supports the general education outcomes for *Critical Thinking and Integrative Learning* and *Scientific and Quantitative Reasoning and Literacy.*



TEACHING METHODOLOGY

Students entering chemistry are often nervous and unsure about whether they can do well. Being successful *will* require time and effort. However, you have met the pre-requisites for this course, you belong here and *are* in the position to learn, grow and meet the challenge: you *can* learn chemistry.

Because research has shown that learning occurs when the learner is actively involved in "doing" rather than just listening or watching, asking questions and solving lots of problems will be key elements in your success. With these ideas in mind, the following are used to facilitate learning in this course.

Readings: Even before coming to lecture, I recommend reading the textbook. <u>Repetition is one key to learning!</u> While doing this, it is beneficial if you write down definitions, equations, and small notes as you go along. I will post partial outlines of my lectures that include space for this. As you read attempt to work the problems through the chapter. Don't get discouraged if you can't do them. After watching the lecture and practicing there, come back and try again. If you are still struggling, there are tutors on campus and of course me!

Class sessions: During class you will be actively involved in the sessions by working through problems and calculations with my guidance, answering questions posed through a classroom polling system, writing on the white board, and chatting with your peers. A recording will be available if you cannot attend a class at the scheduled time or want to review our class session.

Class Participation Points: Throughout the lectures I ask polling questions through Learning Catalytics (LC). LC is packaged with your online HW system, Mastering Chemistry (MC) (information below). Each of these questions is worth 0.5 points if correct and 0.1 point if answered incorrectly. The LC questions are there to help you learn. You don't learn a sport by watching others play. You go on the field, fall, and pick yourself back up to learn it. Use the LC questions as a safe place to fall. Don't worry about getting them wrong there are so many extra (I offer not quite double) Participation Points, and we learn a lot by making mistakes.

Homework: We will be using the Modified Mastering Chemistry Homework System (MC). It is an online, web-based learning system that is packaged with your textbook. It is part of the inclusive access package for this course. You do NOT need to purchase an access code.

Problem sets will be posted in advance, feel free to work ahead. However, you must complete the assignments by the posted deadlines because I will not re-open the online homework assignment once the deadline passes!! For each problem in MC, you have 6 attempts to answer correctly. You will not have points taken away during these 6 attempts unless it is a multiple-choice question; a small deduction is made for each wrong answer to a multiple-choice question. If you do not exhaust your options or hit give up, MC may not assign points for that section; be sure to double-check for this before the submission deadline.

Additionally, I **strongly** encourage you to attempt the problems from the end of each chapter in your textbook until you are very familiar with that topic. If you are having difficulties working either the Mastering Chemistry assignments or the questions from the end of each chapter, you should either work with your classmates (a post on the discussion board of our class website on Blackboard is appropriate) or contact me.

Quizzes: Once you feel you have mastered the material for the week you can attempt the quiz. Weekly quizzes will open on Bb each week at midnight on Thursday and close midnight Sunday. You will have unlimited attempts to earn the grade you want, but each attempt will have a time limit. Unlimited quizzing allows you to practice with the material in timed environment without the stress of getting everything right the first time. I allow unlimited attempts so you can relax and make sure you LEARN the material.



Examinations *Make-up exams will not be given.* Excused absences will only be given based on conditions outlined below. If an excuse is acceptable, your missed exam score will be replaced with a score equal to the average of the other hour exams. The final exam cannot be excused. For all exams you must show a **photo ID card.** You may use a **non-programmable calculator**. You cannot use a programmable calculator or phone.

Exam Absence Policies: Students who will not be able to take an exam at the scheduled time due to an irresolvable conflict must provide **written** documentation to verify the conflict. This may occur for students on official university business. The exam will be given at another arranged time **before** the scheduled test date. *Approval must be obtained in advance.*

Students who unexpectedly miss an exam due to illness, car accident or similar **extreme** circumstance should inform their instructor *ASAP*. **Documentation** such as a physician's note, an accident report, etc. is required. An email to the instructor and a telephone call within 24 hours is expected. In all other cases a missed exam will result in 0 on the exam.

Communication: As your instructor, I am here to help! The best way to contact me is through email and I will do my best to respond to you within 48 hours (often more quickly). I have specific drop-in hours listed at the very beginning of this syllabus. I will be ready to meet with students at those times, but you are always welcome to just come by BO2086GF and see if I am around. You can also email me to make an appointment outside drop-in hours, including virtual appointments.

WORK WEEK

All assigned work is to be completed by 11:59 PM on the date specified in the Weekly Module on Blackboard. You are encouraged to work ahead so that if you have any difficulties with the material or your personal schedule you have enough time to meet the deadlines.

PREREQUISITES AND COREQUISITES

CHEM 1110 with a minimum grade of C, Health Science Chemistry Test with a score of 34, or ALEKS Health Sciences Placement test of 39%.

TEXTS AND ANCILLARY MATERIALS

Required Materials:

- Because this course is part of the inclusive access program you have already paid for access to the following items which can be accessed directly through Blackboard:
 - An electronic copy of the textbook, General, Organic, and Biological Chemistry: The Structures of Life, 6th edition by Timberlake
 - Mastering Chemistry
 - Learning Catalytics
- A laptop with LockDown Browser installed for use during exams. For students that do not own a laptop I am working with the University on a loan program.
 - Watch this brief video to get a basic understanding of LockDown Browser and the webcam feature <u>https://www.respondus.com/products/lockdown-browser/student-movie.shtml</u> You do not need the webcam for exams taken in the classroom.
 - Download and install LockDown Browser from this link: https://download.respondus.com/lockdown/download.php?id=213815819
- A <u>non-programmable</u> calculator. Only non-programmable calculators are allowed when you take exams in this course. Examples of non-programmable calculators include: TI-30XIIS, TI-30Xa, TI-30XS Multiview, TI-32, TI-34 II, TI-34 Multiview, TI-36, TI-36X Solar, Casio FX-77, Casio FX-260, Casio FX-65. Many of these can be purchased for about \$10. A calculator that has any of the following functions is <u>not</u> permitted for use



on General Chemistry exams: solver, integration, differentiation, unit conversions, or a calculator that allows you to type an equation. The TI-84 is NOT permitted. If you are not sure whether your calculator is acceptable, <u>contact me</u> and ask.

Optional Materials:

• A hard copy of *General, Organic, and Biological Chemistry: The Structures of Life,* 6th ed, 2019, Timberlake, Prentice Hall

TECHNOLOGY REQUIREMENTS

Please view the <u>technology considerations</u> for this course, including technical skills needed, general technology requirements, and technology privacy policies.

Blackboard (<u>https://blackboard.utdl.edu</u>) and Modified Mastering Chemistry (available through the Blackboard course) will be used on a regular basis in this course. Students need to have access to a properly functioning computer throughout the semester. Student computers need to be capable of running the latest versions of plugins, recent software and have the necessary tools to be kept free of viruses and spyware. Updated software is available from the <u>Online Learning Download Center</u>. Other resources from UToledo Online can be found at <u>http://www.utoledo.edu/dl/students/required-info-online-learners.html</u>

For exams, students may use an approved calculator. Any calculator that is programmable, whether graphing or nongraphing, and any calculator based on a phone or other device that can receive or transmit data, are prohibited.

ACCESSIBILITY OF COURSE TECHNOLOGIES

Please view <u>Accessibility of Course Technologies</u> for information regarding the accessibility of Blackboard and other technologies used in this course.

ACADEMIC POLICIES

The University of Toledo has a number of academic policies intended to promote fairness and equity among students. These are wide ranging and include policies on adding and dropping a course, duel degree requirements, graduation with honors, academic dishonesty, confidentiality of student records and veteran assistance to name just a few. Please use the following URL to read a comprehensive list of academic policies that may pertain to you in this class and throughout your academic journey: <u>Undergraduate Academic Policies</u>. If you have any questions after reading through the policies, please let me know.

Refer to the university's policy on Academic Dishonesty in the university catalogue. Violation of this policy can result in a course grade of **F** with additional university sanctions possible. You will be required to formally acknowledge the terms of our <u>Academic Honesty Statement</u>, by providing a statement through our Blackboard course page.

COURSE EXPECTATIONS

- 1. Check Blackboard and your UT email every day.
- 2.Log into Collaborate before each class session starts. Follow along and actively work problems throughout lecture.
- 3. Finish assignments in a timely manner.
- 4. At a minimum, answer the assigned HW and quiz questions. There are many problems found throughout the book that should be worked if you are having difficulty with a certain concept.
- 5. If you need extra help, make an appointment with your professor or reach out through email. You will not be graded or judged based on the questions that you ask! Additional resources are listed on page 6.



As your instructor, I am here to help, and will do my best to respond to email within 48 hours. Students are expected to check their UT email account and blackboard frequently for important course information.

Examinations

If you cannot take an exam at the scheduled time due to an irresolvable conflict with a major University related responsibility, you must provide written documentation to verify the conflict <u>before</u> the exam date and obtain instructor approval before the exam. This situation may occur for students on official university business. If the documentation is approved, you will be given an opportunity to take the exam at an arranged time <u>before</u> the scheduled test date.

The final exam cannot be excused. For all exams you must show a **photo ID card.** You may use a **non-programmable** calculator. You cannot use a programmable calculator or phone.

Students who unexpectedly miss an exam due to illness, car accident or similar **extreme** circumstance should inform their instructor *ASAP*. **Documentation** such as a physician's note, an accident report, etc. is required. An email to the instructor or a telephone call within 24 hours is expected. In all other cases a missed exam will result in 0 on the exam.

OVERVIEW OF COURSE GRADE ASSIGNMENT

It is a very high priority to your instructor to ensure fairness and equity in all grading aspects of the course. There is nothing about this class that requires a certain number of students to get a certain grade. We don't use a curve, so every one of you can achieve the grade that you are willing to earn!

If you decide you are not going to attend this class (or any other class you have registered for), you must formally withdraw (drop) from the course. You can do this by logging onto the myUT portal, clicking on the "Student" tab, and then under "My Toolkit" click on Register/Drop/Withdraw.

Midterm Grading: Midterm grades are assigned the 8th week of class and are used to assist students with determining their academic standing. Your midterm grade in will be assigned based on your quiz average up through Week 6, and your first exam score. Letter ranges corresponding to percentages of points earned, are given under Final Grading.

To meet state and federal laws regarding financial aid disbursement, attendance is also recorded during the 8th week to. Please note, if you are not attending class and completing assignments it could affect your financial aid (scholarships, grants, loans, or Federal Work Study). If you decide you are not going to attend this class (or any other class you have registered for), you must formally withdraw (drop) from the course. You can do this by logging onto the myUT portal, clicking on the "Student" tab, and then under "My Toolkit" click on Register/Drop/Withdraw.

Final Grading:

The following is the distribution of possible points in the course:

Participation points*		60 pts	9 %
Mastering Chemistry (online HW)*		100 pts	14 %
Quizzes		100 pts	14 %
Midterm Exams – 2 @100 points each		200 pts	29 %
Final Exam		240 pts	34 %
	Total:	700 pts	

*These categories will have extra points available to allow students a chance to reach the total points. However, points added to the total grade will not exceed total points for a category.



The grading scale for this class is:

		А	93%	A-	90%
B+	87%	В	83%	B-	80%
C+	77%	С	73%	C-	70%
D+	67%	D	63%	D-	60%

Drop, Withdrawal and Incomplete Grades: Dropped courses do not appear on your transcript. The deadline for dropping is September 13th. You may withdraw from the course and receive a grade of W. The deadline for withdrawal is November 5th. *W's do not affect your GPA but do appear on your transcript*. A course grade of Incomplete is given only to those who have completed all but a small percentage of course requirements for an acceptable reason. You will retain all of your previously determined grades.

UNIVERSITY POLICIES

Institutional Classroom Attendance Policy

Please be aware that the university has implemented an attendance policy, which requires faculty to verify student participation in every class a student is registered at the start of each new semester/course. For this course, if you have not attended/participated in class (completed any course activities or assignments) within the first 14 days, I am required by federal law to report you as not attended. Unfortunately, not attending/participating in class impacts your eligibility to receive financial aid, so it is VERY important that you attend class and complete course work in these first two weeks. Please contact me as soon as possible to discuss options and/or possible accommodations if you have any difficulty completing assignments within the first two weeks.

Policy Statement on Non-Discrimination on the Basis of Disability (ADA)

The University is an equal opportunity educational institution. Please read <u>The University's Policy Statement on</u> <u>Nondiscrimination on the Basis of Disability Americans with Disability Act Compliance.</u>

Academic Accommodations

The University of Toledo embraces the inclusion of students with disabilities. We are committed to ensuring equal opportunity and seamless access for full participation in all courses. For students who have an accommodations memo from Student Disability Services, I invite you to correspond with me as soon as possible so that we can communicate confidentially about implementing accommodations in this course. For students who have not established affiliation with Student Disability Services and are experiencing disability access barriers or are interested in a referral to healthcare resources for a potential disability or would like information regarding eligibility for academic accommodations, please contact the Student Disability Services Office (http://www.utoledo.edu/offices/student-disability-services/) by calling 419.530.4981 or sending an email to StudentDisability@utoledo.edu.

Additional Policy Statements

Students can find other university policies listed by audience on the University Policy webpage (<u>http://www.utoledo.edu/policies/audience.html/#students</u>).

ACADEMIC AND SUPPORT SERVICES

Please view the <u>Learner Support</u> page for links and descriptions of the technical, academic, and student support services available to UT students. The university provides a variety of academic and support services on campus to help you succeed and reach your fullest potential. Whether you need to ask a question, get help with an



assignment, seek advice from a counselor, find a job or join a club, UToledo is there for you! Just use the following URLs to find the academic support or service you need:

Chemistry Department Help Center is where the teaching assistants (TAs) have drop-in hours and is a great place to receive assistance. A schedule and virtual link will be posted on Blackboard early in the term. No appointment is necessary during drop-in hours and you are welcome to ask question of the TA in your recitation section or any others that are staffing the center.

Tutoring through the Learning Enhancement Center: http://www.utoledo.edu/success/lec/

Supplemental Instruction (SI) is a FREE service that provides regularly scheduled, out-of-class study sessions. The SI sessions are led by trained students who have previously taken the course and attend every lecture with you. They are well-informed about what's happening in the course and maintain a strong understanding of the course content. SI Sessions—open to all students in the class—review important course concepts, practice test items, develop test prep strategies, and discuss readings. No credit is offered for attending SI sessions

Library: http://www.utoledo.edu/library/

Success Coaching: https://www.utoledo.edu/successcoach/

Student Affairs: http://www.utoledo.edu/studentaffairs/

Career Services: http://www.utoledo.edu/success/career/

Course scheduling assistance: Chemistry Department Secretary, Ms. Samples. You can find her in Room BO 2022, email: pamela.samples@utoledo.edu, or telephone 419-530-2698. Ms. Samples takes care of all scheduling changes.

SAFETY AND HEALTH SERVICES FOR UT STUDENTS

Many students face obstacles to their education because of work, family obligations or unforeseen personal difficulties. If you are experiencing challenges throughout the term that are impacting your ability to succeed in this course, or in your undergraduate career more broadly, please reach out to me or your TA immediately so that we can work together to form a plan for your academic success. Also consider this comprehensive list of <u>Campus Health</u> and <u>Safety Services</u>.

INCLUSIVE CLASSROOM STATEMENT

In this class, we will work together to develop a learning community that is inclusive and respectful. Our diversity may be reflected by differences in race, culture, age, religion, sexual orientation, gender identity/expression, socioeconomic background, and a myriad of other social identities and life experiences. I will encourage expression and appreciation of different ideas, opinions, and beliefs so that conversations and interactions that could potentially be divisive turn, instead, into opportunities for intellectual and personal development. If I ever miss the mark please don't hesitate to come and talk to me. We are all learning together.

SPECIAL COURSE EXPECTATIONS DURING COVID-19

Maintaining a safe campus during the ongoing COVID-19 pandemic remains a top priority. UToledo continues to follow the guidance of the U.S. Centers for Disease Control and Prevention and Ohio Department of Health to keep our campus safe.



ATTENDANCE

The University of Toledo has a missed class policy. It is important that students and instructors discuss attendance requirements for the course. Before coming to campus each day, students should take their temperature and complete a self-assessment for symptoms of COVID-19, such as cough, chills, fatigue or shortness of breath. Anyone with a temperature at or above 100.0 degrees Fahrenheit or who is experiencing symptoms consistent with COVID-19 should not come to campus and contact their primary care physician or the University Health Center at 419.530.5549. For more information on the symptoms of COVID-19, please go to https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html

COVID-19 testing for sick students is available on both Main Campus and Health Science Campus. Call 419.383.4545 for an appointment. Absences due to COVID-19 quarantine or isolation requirements <u>are</u> considered excused absences. Students should notify their instructors and follow the protocols summarized in this document on <u>Navigating COVID-Related Course Concerns</u>.

In the event that you have tested positive for COVID-19 or have been diagnosed as a probable case, please review the <u>CDC guidance</u> on self-isolation and symptom monitoring, and report the disclosure to the Division of Student Affairs by emailing <u>StudentAffairs@utoledo.edu</u> or by connecting with their on-call representative at 419.343.9946. Disclosure is voluntary and will only be shared on a need to know basis with staff such as in the Office of Student Advocacy and Support, The Office of Residence Life, and/or the Office of Accessibility and Disability Resources to coordinate supportive measures and meet contact tracing requirements.

FACE COVERINGS

Face coverings are required while on campus, except while eating, alone in an enclosed space, or outdoors practicing social distancing. Students will not be permitted in class without a face covering. If you have a medical reason preventing you from wearing a face covering due to a health condition deemed high-risk by the CDC, submit an <u>online application</u> to request an accommodation through the Office of Accessibility and Disability Resources. Students will need to provide documentation that verifies their health condition or disability and supports the need for accommodations. Students already affiliated with the Office of Accessibility and Disability Resources who would like to request additional accommodations due to the impact of COVID-19, should contact their accessibility specialist to discuss their specific needs. You may connect with the office by calling 419.530.4981 or sending an email to <u>StudentDisability@utoledo.edu</u>.

VACCINATION

Doctors and other health care professionals agree that the best way to protect ourselves and each other is to get vaccinated. Case data clearly show that vaccines remain highly effective at preventing serious illness from COVID, including the highly contagious delta variant. If you have not yet received your COVID vaccine, the University encourages you do so as soon as possible. No appointment is needed to get the shot at the UTMC Outpatient Pharmacy, University Health Clinic or Main Campus Pharmacy. Once you receive the COVID vaccination, please register on the COVID Vaccine Registry site at: https://utvaccinereg.utoledo.edu/.

SPECIAL NOTES

It's important to note, that based on the unpredictability of the COVID-19 virus, things can change at any time. So please be patient and understanding as we move through the semester. I also ask that you keep me informed of



concerns you may have about class, completing course work/assignments timely and/or health concerns related to COVID.

COPYRIGHT NOTICE

The materials in the course website are only for the use of students enrolled in this course for purposes associated with this course and may not be retained or further disseminated.

A summary of the weekly assignments and anticipated course schedule are provided on the following pages. Note the Exam date. As instructor, I reserve the right to modify the schedule of topics if I believe it to be in the best interest of the class, however, the Exam dates will NOT change.

Be Sure That Your Travel & Employment Plans Do Not Conflict with the Exam Schedule.

CHEM 1120 – Chemistry for Health Sciences

University of Toledo TENTATIVE Course Schedule – Fall 2021

Week	Dates	Chapter Sections and Topics	Assignments*	SLOs
1	Aug 30- Sept 3	Welcome 6.6-6.9 Ionic and Molecular Compounds	Getting Started Quiz Read Ch 6.6-6.9 Guided Note-Taking LC questions Intro & Ch 6 HW in MC Ch 6 quiz in Bb	1,2,3,4,5
2	Sept 6- 10	Labor Day (No class Sept 6) 9. Solutions	Read Ch 9 Guided Note-Taking LC questions	1,2,3,4,5
3	Sept 13- 17	Last day to Drop via the web is Mon Sept 13 9. Solutions (Continued) 10. Reaction Rates and Chemical Equilibrium	Read Ch 10 Guided Note-Taking LC questions Ch 9&10 HW in MC Ch 9&10 quizzes in Bb	1,2,3,4,5
4	Sept 20- 24	11. Acids and Bases	Read Ch 11 Guided Note-Taking LC questions Review - Gen Chem in MC	1,2,3,4,5
5	Sept 27- Oct 1	11. Acids and Bases (Continued)12. Intro to Organic Chemistry: Hydrocarbons	Midterm Exam 1: Mon. Sept 27 Ch 1-10 Read Ch 12 Guided Note-Taking LC questions Ch 11 HW in MC Ch 11 quiz in Bb	1,2,3,4,5



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6	Oct 4-8	12. Intro to Organic Chemistry: Hydrocarbons (Continued)	Guided Note-Taking LC questions Ch 12 HW in MC	1,2,3,4,5
7	Oct 11- 15	 Fall Break (No classes Oct 14-15) 13. Alcohols, Phenols, Thiols, and Ethers 14. Aldehydes, Ketones, and Chiral Molecules 	Ch 12 quiz in Bb Read Ch 13&14 Guided Note-Taking LC questions Ch 13 HW in MC	1,2,3,4,5
8	Oct 18- 22	Break, Wed. Mar 10 – no class 14. Aldehydes, Ketones, and Chiral Molecules (Continued) 15. Carbohydrates	Ch 13 quiz in Bb Read Ch 15 Guided Note-Taking LC questions Ch 14&15 HW in MC Ch 14&15 quizzes in Bb	1,2,3,4,5
9	Oct 25- 29	16. Carboxylic Acids and Esters17. Lipids	Read Ch 16&17 Guided Note-Taking LC questions Ch 16HW in MC Ch 16quizzes in Bb	1,2,3,4,5
10	Nov 1-5	Last day to Withdraw via the web is Friday <u>11/5</u> 18. Amines and Amides 19: Amino Acids and Proteins	Read Ch 18&19 Guided Note-Taking LC questions Ch 17&18 HW in MC Ch 17&18 quiz in Bb	1,2,3,4,5
11	Nov 8-12	Veteran's Day (No class Nov 11) 19: Amino Acids and Proteins (Continued) 20. Enzymes and Vitamins	Read Ch 20 Guided Note-Taking LC questions Ch 19&20 HW in MC Ch 19&20 quizzes in Bb	1,2,3,4,5
12	Nov 15- 19	21. Nucleic Acids and Protein Synthesis	Read Ch 21 Guided Note-Taking LC questions Ch 21 HW in MC Ch 21 quiz in Bb	1,2,3,4,5
13	Nov 22- 26	Thanksgiving Break (No classes Nov 24-26) 22. Metabolic Pathways for Carbohydrates	Midterm Exam 2: Mon. Nov 22 Ch 11-21	1,2,3,4,5
14	Nov 29- Dec 3	23. Metabolism and Energy Production	Read Ch 23 Guided Note-Taking LC questions Ch 23 HW in MC	1,2,3,4,5



			Ch 23 quizzes in Bb	12245
15	Dec 6-10	24. Metabolic Pathways for Lipids and Amino Acids	Read Ch 24 Guided Note-Taking LC questions Ch 24 HW in MC Final Reviews due in MC	1,2,3,4,5
Finals Week	Dec 13- 17	***** Comprehensive Final Exam Ch 1-24**** Monday, Dec. 13 from 12:30-2:30 PM You Must Take the Final at This Time.		