CHEM 3375: Principles of Biochemistry‡
Fall 2021
Tuesday and Thursday 9:30 am – 10:50 am
CHEM 100

Revised 8 September 2021 (office hours update)

Course Description (from catalog): Course provides biochemistry majors and minors with a rigorous introduction to biochemistry. Topics include the chemical function and structure of proteins, nucleic acids, lipids and carbohydrates; enzyme mechanisms, kinetics and regulation.

Instructor

Dr. Karen A Lewis Office: CENT 401B
Email: KAL137@txstate.edu Phone: 512-245-6391
Office Hours: Mon, Fri 10 – 11 am; Wed 9 – 10:30 am, and by appointment
Zoom Office: https://txstate.zoom.us/XXXXXX

Course Format

Course Day/Time: Tues/Thurs from 9:30-10:50 am
Location: CHEM 100
This is a *face-to-face* course for the Fall 2021 term that is meeting in CHEM 100 TR 9:30-10:50 am.

Prerequisites

You should have successfully mastered (C or better) two semesters of Organic Chemistry and prior completion of concurrent enrollment in Genetics (BIO 2450) is STRONGLY recommended.

Required Materials

1. **Lehninger Principles of Biochemistry, 8e**. Nelson and Cox, W.H Freeman/Macmillan Learning (included as an ebook with Macmillian Achieve Learning subscription)
2. **Achieve Learning** Biochemistry 3375 subscription. Achieve will be used for the completion of all online homework assignments. Registration instructions are posted on Canvas and appear at the end of this document.
4. **A Desktop computer, laptop, or tablet device** for accessing Canvas remotely (a mobile phone will not be sufficient)
5. **A non-programmable scientific calculator**.

Required Expectations

This course is taught using a mixed format designed to meet the needs of students with diverse learning styles. Students will formulate understanding through readings, oral presentations, interactive activities, and discussion. Note that the format in which topics are presented is not an indication of the importance of the topic. It simply means that certain topics may be better suited to particular format.

Assigned reading materials and videos: There is a considerable amount of information that will be covered during this course and it is impossible to cover every detail during the lecture sessions. Thus, the course is designed so that material is introduced in assigned readings and videos and will be examined more fully with classroom activities, discussion, and lecture. **It is imperative, therefore, that all assigned readings and videos be completed BEFORE the class meets to discuss the given topic.** To help you meet this requirement, you are required to prepare reading notes on each chapter AND bring them with you to each class session. This does not mean that you will fully comprehend the content of the entire reading assignment. Thus, you are also required to post to Canvas at least 1 question over the assigned reading – consider this your

opportunity to identify the "muddiest" part of the material so that I can address this in class. This, in combination with classroom participation is essential for success.

In-class activities: It has been shown that students working in small groups learn more and retain information longer than when the same material is presented in any other format. In-class activities will be performed where students in groups will work together to address the objectives for a given activity.

Interactive discussion/lecture: Many topics will be explained with in-class lectures and discussions.

To succeed in this course, you must participate actively in class sessions, either in-person or remotely. You cannot read or listen passively to absorb the information. It is essential that you be willing to put your ideas out for discussion and group problem solving. It is also essential that you keep up with all assignments. Plan to spend at least 1.5 hours preparing and reviewing material for each class session.

Texas State - Our Shared Values:
In pursuing our mission, we, the faculty, staff, and students of Texas State University, are guided by a shared collection of values - https://www.txstate.edu/about/mission.html

Take time to review our Honor Code - We are **CONSCIENTIOUS**, We are **RESPECTFUL**, We are **HONEST** https://www.txstate.edu/honorcodecouncil/Academic-Integrity.html

COVID-19 and Roadmap to Return

The continuing global pandemic caused by SARS-CoV-2 requires that we make plans and prepare institute contingency plans for if/when either the instructor or a student falls ill.

Considering rising infection rates and recent Centers for Disease Control and Prevention guidelines, Texas State is requesting all members of the university community to take these five additional steps:

1. **Get tested.** Regardless of vaccination status, get tested before the start of the fall semester and when selected to participate in Texas State's random COVID-19 testing program. Testing information can be found on the Texas State's COVID-19 Testing, Reporting, and Response Steps webpage.
2. **Stay home and get tested if you develop cold-like or other COVID-19 symptoms,** regardless of vaccination status.
3. **Promptly Report to Bobcat Trace** if you test positive for COVID-19 or have had close contact with someone who received a positive test result. Reporting information can be found on the Texas State's COVID-19 Testing, Reporting, and Response Steps webpage.
4. **Isolate if you test positive for COVID-19.** Stay home and away from others for 10 days from the start of symptoms or the positive test if you have no symptoms.
5. **Quarantine if you have been identified as a close contact** and stay home for the prescribed time period.
   - Fully vaccinated Bobcats who are asymptomatic are not required to quarantine but should get tested for COVID-19 three to five days after last exposure. They should also wear a face mask when indoors in public spaces for 14 days since the exposure or until a negative test result is obtained three to five days after exposure.
   - Unvaccinated Bobcats are required to quarantine for 10 days since the time of last exposure.

It is vital that we all follow the Bobcat Pledge, including the shared responsibility to practice healthy behaviors and follow the health and safety guidelines, which shows respect for others and helps prevent the spread of COVID-19 on campus and in the surrounding community.

Specific plans for CHEM 3375: Principles of Biochemistry

Instructor gets sick: The core materials for CHEM 3375 (pre-class lectures and in-class problem sets) will be prepared well ahead of time to buffer any potential delays due to instructor illness. If Dr. Lewis falls ill, she will self-isolate and find a substitute instructor who will facilitate the in-person class, while Dr. Lewis joins via Zoom. Through these efforts, students will be able to continue to work through problem sets and concept maps. In particular, she will continue to host office hours as scheduled.

If Dr. Lewis' symptoms interfere with her ability to host either the synchronous class meetings or office hours, a substitute faculty will take her place both as the in-class problem set guide, and provide substitute office hours until Dr. Lewis recovers. The Department of Chemistry and Biochemistry has built a strong system of backup instructors for all courses, and CHEM 3375 has an especially deep bench from which to pull a substitute! The identity of the substitute faculty will depend on when in the semester they are needed, and their own course and personal commitments. (Insider scoop: many of us faculty are backup for multiple courses, and so if multiple faculty or their families fall ill simultaneously, our department is in a highly adaptable position to distribute substitute assignments.) **Take-home message: class will keep going even if Dr. Lewis gets sick.**

Student gets sick: All students should follow the 10 Guiding Principles for Health, Safety, and Wellness at Texas State. **Students are strongly encouraged to a cloth face covering, regardless of vaccination status**, and are advised to perform a self-assessment each day before coming to campus. If you are sick, **do not go to school or work**. If you have COVID-19 symptoms, contact your healthcare provider or the Student Health Center (512-245-2161) for evaluation and testing for COVID-19. The Student Roadmap contains valuable information regarding safe practices and procedure for a successful Fall Semester on our campus. If any illness impacts your ability to participate in this course, contact the Dean of Students Office with appropriate documentation.

Take-home message: in most cases, the existing learning opportunities and grading policies for CHEM 3375 are sufficient to handle an illness, including COVID-19, without any additional adjustment. In extraordinary circumstances, as determined by Dr. Lewis, documentation through the Dean of Students Office will be required before any special allowance can be considered.

Communicating with Dr. Lewis

Office Hours

I will hold office hours both via Zoom and face-to-face in my office on Mondays, Wednesdays, and Thursdays 9 am – 10 am.

Discussions Versus Email

If you have a question about course content or implementation, I encourage you to post it to the Course Questions discussion page in Canvas. Doing so gives students in the course an opportunity to help one another and allows everyone to benefit from answers to your questions. Of course, don't hesitate to email me directly if your concern is of a personal nature.

Email – You must include "CHEM 3375" in the subject line of your email in order to get a response.

Generally, I will respond to emails within 1-2 days of receiving them, not including weekends. I will check email and questions posted on the Discussions pages of Canvas *prior* to class times. If I need to be away from my computer for more than a day (in the event of illness), I will let you know in advance.

Course Goals

As the first major-specific course for biochemistry majors, this course will focus not only on the subject mater of biochemistry, but will also serve as an introduction to the profession of biochemistry. The goals of this course include both professional and course-specific areas:

Professional Goals:

- Adhere to the highest standards of scientific integrity
- Demonstrate professional behavior
- Be familiar with the scope and impact of biochemical employment
- Work cooperatively and demonstrate commitment to a group
- Listen to and learn from peers and value others
- Become self-directed: Initiate the learning process
- Become self-reflective: Review goals, purposes, outcomes, new learning etc.
- Become a self-assessor: Assess one's own progress for strengths, areas for improvement and insights into your learning process to continuously improve

Course-specific Measurable Outcomes: upon successfully completing this course the student should:

- have a working vocabulary (can give a definition, use terms in context, apply the term to a new context) of biochemical terms.
- be able to identify/explain the biochemical structure of proteins, carbohydrates, and lipids.
- be able to list and explain the various functions of proteins, carbohydrates, and lipids.
- be able to predict/explain the behavior of biomolecules and biomolecular systems by applying chemical principles to these systems.
- be able to explain and interpret data generated from application of biochemical techniques.
- be able to transform written descriptions of quantitative behaviors of biomolecules into graphical representations and vice versa.
- be able to understand, interpret, and formulate models that represent the current understanding of a biomolecule or biological system.
- be able to interpret experimental data and relate the interpretation to the current knowledge of biological systems.
- be able to use a methodology to read and interpret a scientific research article and be able to articulate its contents in written and oral formats.
- be able to use a problem-solving methodology to solve problems involving biomolecules and utilizing biochemical techniques.
- be able to work cooperatively in teams to identify a problem, formulate a plan, and be able to do quality assessments of the performance of others and her/himself.

This course covers chapters 1-8 and 10-12 in the assigned text.

Course Organization & Online Tools

Canvas. The course is organized into modules of instruction, as outlined in the Course Schedule. Each module corresponds to a portion of the chapter text, videos, presentations, in-class group assignment, and in-class quiz. Modules are grouped by chapter and associated Achieve homework assignment. It is recommended that you set up your permissions in Canvas to receive course emails and announcements frequently so that you don't miss important information. Canvas works best in Chrome or Firefox browsers.

Note: *Most materials used in conjunction with the course are subject to copyright protection*.

Chimera is a freely available, state-of-the-art molecular modeling program available from UCSF (http://www.cgl.ucsf.edu/chimera/). Chimera runs on Microsoft Windows, Mac OS X, and Linux systems. You should download and install Chimera on your computer.

Text readings

There is a considerable amount of information that will be covered during this course and it is impossible to cover every detail during the video lectures, in-class, during problem-solving, etc. Thus, for each module there will be assigned readings from the textbook and occasional assigned videos. You must complete these *ahead of time* so you will know what questions you need to discuss in class or on the Discussions. In any case, material from all reading assignments may be subject matter for exam questions – so make sure you complete all reading assignments prior to the exams.

Discussions

You will find the following discussions in the course Canvas site:

- Course Questions: Post any questions or comments you may have about the course mechanics or technical issues to this discussion.
- Fun Facts: Use this discussion to celebrate your personal accomplishments, encourage each other, etc. We are a learning community.
- Unit Discussions: These discussions are for questions associated with individual course topics.

My role in discussions is that of a *facilitator*. As such, I will read the messages you post, but will not be responding to every post. Instead, I want the class to be the driving force behind the discussion. **Be *professional*. Online bullying will not be tolerated** and any instance of such will result in you being prohibited from contributing or receiving any points associated with participation. I will occasionally correct misconceptions and/or redirect conversations that need redirecting. I may also post comments following the completion of a discussion indicating my general impressions of the comments and conclusions.

Class attendance

Students attending in-person are advised to bring a laptop, tablet, or electronic device to complete daily work through Canvas. Seating will be assigned to ensure social distancing and contact-tracing ability.

Problem-solving and daily participation

It has been shown that students working actively in small groups learn more and retain information longer than when the same material is presented in any other format. We will divide into small groups to collaborate and problem-solve. You will work as a group on these problems and be scored on completion and evidence of collaborative effort, rather than on the specific answers.

Homework

Homework is administered through Macmillan Achieve (formerly Sapling Learning). Homework assignments will be given for each unit topic. Due dates are provided in Achieve under the "Activities and Due Dates" tab on the left-hand menu. **Students are responsible for keeping track of due dates**. Late homework will NOT be accepted. Learning Curve and Reading Quizzes for each topic (chapter) will be available for *extra credit.* These will be available all semester and due the day before the final exam. Students are encouraged to work together on these homework assignments; however, it is imperative that you learn the material individually to prepare for exams. No work of any kind is accepted after the final exam.

Exams

Three Exams and a Final Exam for this course will be administered **in-person** (in the classroom). Students who need ODS-approved accommodations should contact both ODS and Dr. Lewis as early as possible in the semester, and arrange to take extended-time and otherwise assisted exams in the Testing Center.

Evaluation Criteria

Questions over Reading

It is very important that you complete the assigned reading before class. For each reading, you will submit a question on Canvas (as an Assignment) over the "muddiest" part of the reading – that is, the concepts, ideas, or material that you found most difficult to grasp. The deadline for these questions is 6 pm on the day before class (Monday and Wednesday). I will use these questions to tailor the presentation of the module material in class; therefore, I must receive the questions the night before class. Each question you submit is worth 1 point, and in total these questions will be worth 5% of your course grade. Also note that you must take notes over your reading. You must have these notes available to you as you take the formative quizzes (see below); the better your notes, the better you will perform on the quizzes.

Problem-solving and formative quizzes

An important part of your class investment/participation grade will be based on your participation in class,. This activity will be assessed by your grades on the formative quizzes or class problems, in which you can collaborate with other members in the class. The **15 best** daily grades on these quizzes and group problems will combined comprise 20% of your total grade. Since only the top 15 grades will count, there will be no makeup daily grades. You do not need to clear absences with Dr. Lewis. If the event that you become ill during the semester, such that you are *unable to attend class for a total of 10 times*, contact Dr. Lewis at that point.

Homework

Homework grades will be directly imported from Macmillan Achieve Learning. As stated earlier, late homework is NOT accepted for credit. The lowest homework grade will be dropped and the remaining assignments will comprise 10% of your total grade.

Exams

The 3 course exams covering unit topics will each be worth 100 points, and consist of a combination of multiple choice/matching and short answer questions. The lowest exam grade will be dropped; the two best exams (200 points total) will comprise 45% of the final grade.

The Final exam (Dec. 10, 2020) will be cumulative. The Final exam will include matching and multiple-choice questions to facilitate timely grading. The Final exam will be worth 20% of your grade.

Assignments and Weights

Exams: Three exams and a cumulative final exam will be completed by all students individually. Exams will focus on problem solving and applying factual knowledge to more complex problems. Each chapter has a list of specific objectives (on Canvas) that should be used as study tools. These learning objectives are directly correlated to the material covered on the exams.

Assignments and Activities: Since students learn in many different ways, a wide variety of teaching and learning tools will be used both in and out of the classroom. Grading will be based on completion, participation, and/or correctness depending on the assignment. Some will be completed individually, while other will be completed working as a group. The type of activity and grading method will be clearly indicated when it is assigned.

• **Homework Assignments:** Homework assignments for each chapter will be completed on-line using Macmillan Achieve. The due dates for the homework assignments are given on the course schedule and listed within the Achieve on-line system. Ideally, every Tues/Thurs evening each student should complete homework problems that are related to that day's lecture. Due to potential complications with the Achieve platform, **it is recommended that the homework assignments be completed and submitted for grading well in advance of the deadline**. Homework deadlines for individual students will not be extended. At the end of the semester, the lowest homework assignment score will be dropped. Students are encouraged to work together on these homework assignments; however, it is essential that each student learn the material thoroughly to prepare for exams and quizzes. The amount of time needed for each homework assignment varies tremendously so PLAN AHEAD by looking at the homework as soon as it is available.

• **Concept Maps & Questions:** The success of individual student's understanding of course material and activities requires that all students come prepared. Therefore, it is essential that you produce a concept map on chapters associated with a given activity BEFORE coming to class. To help you meet this requirement, you are required to prepare a concept map of each chapter AND bring them with you to each class session. You are also required to post on Canvas at least one question covering the assigned reading BEFORE class. Refer to the tentative schedule for chapter sections associated with lectures.

• **In-class Activities:** On most class days, group in-class activities will be carried out. Grades will be assigned for participation in these activities.

• **Quizzes:** Individual quizzes will be given during every class period, typically, at the beginning of every class. Quizzes will be used to assess student knowledge from readings as well as prior lectures/activities.

Grading Issues: Any questions regarding the grading of a homework, quiz, or examination must be brought to my attention within two weeks of the date that the item was handed back in class. The only exception to this are cases in which there was an arithmetic mistake made in recording the assignment or exam grade.

Course Grade: Your overall course grade will be based on the components listed above, as follows:

Component	Weight	Pts
"Daily" posted questions over readings	5%	50
"Daily" quizzes (Top 15)	10%	100
Group Problems (Top 15)	10%	100
Macmillan Achieve Homework (Lowest dropped)	10%	100
Exams (Lowest Can Be Replaced By Final)	45%	150
Final Exam	20%	200
Total	**100.00%**	**1000**

A conventional grading scale will be used to determine your final grade:

A: ≥ 89.45
B: $79.45 \geq 89.44\%$
C: $69.45 \geq 79.44\%$
D: $59.45 \geq 69.44\%$
F: $< 59.45\%$

Note: The assigned final course grades may, at the instructors sole discretion, be more lenient (but not more stringent) than shown above.

Late Work Policy

Late homework will NOT be accepted for credit. There will be NO makeup "daily" work. If you need to miss a quiz or in-class problem you will have many other opportunities to earn credit on the 15 best "daily" grades that make up 20% of your grade. **Late exams or missed exams are not allowed**. Exams will only be administered during the scheduled time and date and will be proctored as detailed earlier.

Exam Grade Replacement: At the end of the semester, students will be given the option to replace their lowest exam score with their final exam score (scaled to the semester exam points). Note that this is strictly an opt-in policy; the lowest exam grade will not automatically be replaced.

In the unfortunate event that you become ill for an extended amount of time and are not able to take multiple exams, please email Dr. Lewis for further assistance.

Macmillan Achieve Learning

Homework will be done through Achieve, an online product from Macmillan.

Before you sign up for Achieve, add these two email addresses to your Bobcat Mail safe senders list. The first address will send you a confirmation link as you set up your account. The second address will send you messages if you request tech support online. If these addresses are not in your safe senders list, our email system quarantines them as malware (even though they are not), and you may never see them!

noreply@macmillan.com
techsupport@bfwpub.com

To add them to your safe senders list, log in to Bobcat Mail through a browser. Click on the gear icon for settings, search for safe senders and domains, and then click on the "+ Add" button to add these addresses.

To connect with Achieve, go to our course in Canvas, and then click on the MacMillan Learning tool in the blue navigation bar on the left side of the screen. MacMillan will open in a new tab of your browser. Follow the prompts to sign up for the homework. The cost should be $100 if you purchase it directly from Macmillan online. Access cards at a higher price are available from the bookstore, but come with 4 full terms of Achieve access (which you will also be using for CHEM 4385: Metabolism at some points). Achieve also offers an initial trial period for free.

In Achieve, the course name is **XXXX**; the course ID is **XXXX**.

All homework assignments must be submitted on-line. Printed out or e-mailed answers will not be graded. Due to potential complications with internet connectivity, etc., it is recommended that the homework assignments be completed and submitted for grading in advance.

Need Help? Our technical support team can be reached by phone or by webform via the Student Support Community. Here are their hours and contact information:

- 800-936-6899
- https://community.macmillan.com/docs/DOC-6915-students-still-need-help.

Homework assignments will be completed on-line using Achieve (a Macmillan online learning product). The lowest homework score will be dropped before the final homework average is calculated. The due dates for the

homework assignments are on the course calendar. The due dates are also posted on each assignment in the Achieve site. Due dates may be changed if needed, and any changes will be announced in class and/or by announcements on Canvas.

All homework assignments must be submitted on-line. Printed out or e-mailed answers will not be graded. Due to potential complications with the Achieve platform, it is recommended that the homework assignments be completed and submitted for grading in advance. ***NOTE:*** *Late homework assignments will not be accepted under any circumstances. Each assignment is typically open for a week or more. Start early!!!*

Additional Course Policies

Special Needs

Students with special needs (as documented by the Office of Disability Services) should identify themselves to Dr. Lewis at the beginning of the semester to coordinate any accommodations that need to occur.

Academic Misconduct

Any compromise or violation of academic integrity will not be tolerated in this course. **This includes the sharing of any course material on third-party collaborative and/or "tutoring" sites (e.g., Chegg, Reddit, social media, etc).**

More broadly, the practice of science is founded upon principles of honesty, trust, accountability, and respect. Without such a foundation, the entire enterprise would crumble. Therefore, the Honor Code is strictly enforced in this course and any violations will be pursued.

Some assignments (in particular, the problem sets and concept maps) are intended to be collaborative. All other assignments, including quizzes and exams are to be completed individually, unless you are explicitly otherwise instructed. ***Violation of the honor code <u>will</u> result in academic penalties at the instructor's discretion, up to and including failure in the course.***

A student accused of academic misconduct has the right to appeal. Details about the Honor Code System at Texas State can be found at https://www.txstate.edu/honorcodecouncil/The-Honor-Code-Council.html

Statement on Civility and Compliance in the Classroom

Both the University and Dr. Lewis are committed to an educational community in which each individual is respected, appreciated, and valued. Civility in the classroom is very important for the educational process and it is everyone's responsibility.

<u>Preferred name/pronouns:</u> Class rosters are provided with the student's legal name. All requests to address you by an alternate name, pronunciation, and/or gender pronoun will be honored. Please advise Dr. Lewis (in person, "in person" via a Zoom meeting, or by email) of this preference early in the semester.

<u>Active Participation:</u> During class meetings, it will be very important to create the opportunity for everyone to actively and meaningfully participate in whole-class discussions and small group work.

<u>Audio/Visual Professionalism:</u> Per University policy, students are expected to dress and act appropriately and professionally for all video and synchronous sessions. This includes creating videos for classes and participating in real-time video conferences or exams. It is expected that the video be turned on and you be in a private setting. Please do not plan to join Zoom meetings while you are driving or not in a

confidential environment, to respect your privacy and ensure your safety. It is also recommended that you use headphones with a microphone to minimize audio interference.

Your display name should be professional, and you are encouraged to also have an appropriate picture as your Zoom profile picture. (Insider tip: "appropriate" does not equal a fancy professionally-photographed headshot, so don't stress over that! However, do avoid extremely casual pictures – such as those that may include red plastic cups, swimwear, *etc.*)

If your circumstances are such that the video feed is *at all* difficult (*e.g.*, unstable internet connection, personal physical surroundings, *etc.*), please know that you are not required to activate your video feed. You may fully participate in office hours via audio and/or the Zoom chat function; if you have specific concerns, please do not hesitate to discuss them with Dr. Lewis. There are almost always solutions!

Netiquette: Texas State policy (PPS 4.02) states that disruptive behaviors will not be tolerated in any type of learning environment. Examples of such behaviors include but are not limited to: making loud noises, speaking without recognition, making personal threats or insults, eating or drinking in classrooms, sleeping during class, using electronic equipment prohibited by the instructor or disrespectful of other students, using inappropriate or vulgar language, or taking other actions that others might find offensive, demeaning, or disrespectful.

If you have questions about appropriate behavior in a particular class, please address them with your instructor first. Disciplinary procedures may be implemented for refusing to follow an instructor's directive, refusing to leave the classroom, and refusing to implement health and safety measures as required by the university. Additionally, the instructor, in consultation with the department chair/school director, may refer the student to the Office of the Dean of Students for further disciplinary review. Such reviews may result in consequences ranging from warnings to sanctions from the university.

Any violations of this policy will be dealt with according to TXST policy UPPS No. 07.10.05, Student Behavior Assessment Team. For further guidance, please see AA/PPS No. 02.03.02 (4.02) and Section 2.02 of Texas State's Code of Student Conduct.

Emergency Management

In the event of an emergency, students, faculty, and staff should monitor the Safety and Emergency Communications web page. This page will be updated with the latest information available to the university, in addition to providing links to information concerning safety resources and emergency procedures. Faculty, staff, and students are encouraged to sign up for the TXState Alert system.

Sexual Misconduct Reporting (SB 212)

Effective January 2, 2020, state law (SB 212) requires all university employees, acting in the course and scope of employment, who witness or receive information concerning an incident of sexual misconduct involving an enrolled student or employee to report all relevant information known about the incident to the university's Title IX Coordinator or Deputy Title IX coordinator. According to SB 212, employees who knowingly fail to report or knowingly file a false report shall be terminated in accordance with university policy and The Texas State University System Rules and Regulations.

‡**Disclaimer:** This syllabus and the attached calendar of topics are subject to change, including modifications made necessary due to weather, COVID-19, or other events.

Course Schedule and Due Dates

Day	Date	Lecture – Questions Due day before by 6pm	Quiz	Activity
1	24-Aug	Intro, Chapter 1.1	"About Me"	1. Functional Groups
2	26-Aug	Chapter 1.2	Chapter 1.2	2. Accessing Primary Lit.
3	31-Aug	Chapter 1.3	Chapter 1.3	3. Lactic Acid/Thermo
4	2-Sep	Chapter 1.4 & 1.5	Chapter 1.4 & 1.5	4. Virus Life Cycles
5[a]	7-Sep	Chapter 2.1, 2.4-2.5	Chapter 2.1	5. Water/ Amphiphiles
6	9-Sep	Chapter 2.2-2.3	Chapter 2.2&2.3	6. Buffers
7	14-Sep	Chapter 3.1-3.2	Chapter 3.1-3.2	7. Amino Acids
8	16-Sep	Chapter 3.3-3.4	Chapter 3.3-3.4	8. Sequence Analysis
9	21-Sep	Chapter 4.1-4.2	Chapter 4.1-4.2	9. AA KIT/Wheel
10	23-Sep	Chapter 4.3	Chapter 4.3	10. Mol. Vis* & Review 1
11	28-Sept	Chapter 4.4	Chapter 4.4	11. Tm
12	**30-Sept**	**EXAM 1 (Ch 1 - 4)**		
13	5-Oct	Chapter 5.1	Chapter 5.1	12. Binding Curves
14	7-Oct	Chapter 5.2-5.3	Chapter 5.2-5.3	13. Hemoglobin
15	12-Oct	Chapter 7.1-7.2	Chapter 7.1-7.2	14. Fischer
16	14-Oct	Chapter 7.3-7.4	Chapter 7.3-7.4	15. Haworth
17	19-Oct	Chapter 10.1-10.2	Chapter 10.1-10.2	16. Lipids
18	21-Oct	Chapter 10.3	Chapter 10.3	17. LDL
19[b]	26-Oct	Chapter 11.1-11.2	Chapter 11.1-11.2	18. Flippase
20	**28-Oct**	**EXAM 2 (Ch 5,10,11)**		
21	2-Nov	Chapter 6.1	Chapter 6.1	19. Enzymes 1 – Rxn curves
22	4-Nov	Chapter 6.2	Chapter 6.2	20. Enzymes 2 – MM (HW)
23	9-Nov	Chapter 6.3	Chapter 6.3	21a. LB (HW)/Bisubstrate
24	11-Nov	Chapter 6.4	Chapter 6.4	22. Covalent Catalysis
25	16-Nov	Chapter 6.5	Chapter 6.5	22. Serine Proteases
26[c]	18-Nov	Chapter 8.1-8.2	Chapter 8.1-8.2	23. DNA
27	23-Nov	Chapter 12.1-12.2	Chapter 12.1, 12.2, 12.4	24. Biological Signaling
28	**25-Nov**	**EXAM 3 (Ch 6, 8, 12)**		
29	30-Nov	Review for Final		

a. September 8: 12th class day/Last day to drop with 100% refund; ends at 11:59 pm
b. October 25: Last day to drop/Automatic "W" deadline 11:59 pm
c. November 18: Last day to fully withdraw from the university; ends at 11:59 pm

AUGUST 2020

S	M	T	W	T	F	S
25	23	24 Intro Ch 1.1	25	26 Ch. 1.2	27	28
29	30	31 Ch. 1.3				

SEPTEMBER 2020

S	M	T	W	T	F	S
			1	2 Ch. 1.4-1.5	3	4
5	6 Ch 1 Hmwk Due	7 Ch. 2.1	8	9 Ch. 2.2-2.3	10	11
12	13 Ch 2 Hmwk Due	14 Ch 3.1-3.2	15	16 Ch 3.3-3.4	17	18
19	20 Ch 3 Hmwk Due	21 Ch 4.1-4.2	22	23 Ch 4.3	24	25
26	27 Ch 4 Hmwk Due	28 Ch 4.4	29	30 **Exam 2**		

OCTOBER 2020

S	M	T	W	T	F	S
					1	2
3	4	5 Ch 5.1	6	7 Ch 5.2- 5.3	8	9
10	11 Ch 5 Hmwk Due	12 Ch 7.1-7.2	13	14 Ch 7.3- 7.4	15	16
17	18 Ch 7 Hmwk Due	19 Ch 10.1	20	21 Ch 10.2- 10.3	22	23
24 / 31	25 Ch 10 Hmwk Due	26 Ch 11.1- 11.2	27	28 **EXAM 2**	29	30

NOVEMBER 2020

S	M	T	W	T	F	S
	1	2 Ch 6.1	3	4 Ch 6.2	5	6
7	8	9 Ch 6.3	10	11 Ch 6.4	12	13
14	15	16 Ch 6.5	17	18 Ch 8.1-8.2	19	20
21	22 Ch 6 Hmwk Due	23 Ch 12.1- 12.2, 12.4	24	25	26	27
28	29 Ch 8, 12 Hmwk Due	30 **EXAM 3**				

DECEMBER 2020

S	M	T	W	T	F	S
			1	2 **Review**	3	4
6	6	7 **FINAL EXAM 8 am**	8	9	10	11

IMPORTANT DATES:

August 23	First day of class
September 4	Labor Day Holiday
September 8	Add/Drop Deadline
September 30	Exam 1
October 25	Automatic W Deadline
October 30	EXAM 2
November 24-28	Thanksgiving Holiday
December 30	EXAM 3
December 2	Last Class Day
December 7	FINAL EXAM @ 8AM