

# Biochemistry (BIOSC 1000) Syllabus

University of Pittsburgh | Fall 2025

This biochemistry course is designed for undergraduate students, providing a comprehensive exploration of the chemical and physical principles governing living systems, the structure and function of biomolecules, enzyme catalysis, and metabolic pathways. The course emphasizes scaffolded learning, moving from foundational concepts to intermediate mastery and advanced application, integrating experimental and quantitative skills throughout.

## Prerequisites

Students must have received a C or above in the following classes to enroll in this course.

- Foundations of Biology 2 (BIOSC 0160 | 0165 | 0716 | 0180)
  - OR Introduction to Cell Biology 2 (BIOENG 1072 | 1072)
  - OR Discovering Life: An Introduction to the Biological World 2 (BIOSC 0191)
  - OR Introduction to Cell and Molecular Biology (BIOSC 0101)
  - OR General Biology 2 (BIOL 0120)
- General Chemistry 2 (CHEM 0120 | 0102 | 0112 | 0420 | 0720)
  - OR General Chemistry 2 for Engineers (CHEM 0151 | 0770 | 0970)
- Organic Chemistry 1 (CHEM 0206 | 0231 | 0310 | 0730)
  - OR Principles of Organic Chemistry (CHEM 0350)

## Teaching Team

The teaching team for this course is composed of individuals dedicated to supporting your mastery of biochemistry. Our collective role is to facilitate your learning and provide the guidance necessary to help you achieve the course objectives.

Position	Name	Pronouns	Email
Instructor	Alex Maldonado, PhD	he/him	alex.maldonado@pitt.edu
TA	May Ahmed	she/her	mma121@pitt.edu
UTA	Elise Berthold	she/her	eeb117@pitt.edu
UTA	Priya Vishnoid	she/her	prv32@pitt.edu
UTA	Janani Balasubramanian	she/her	jab738@pitt.edu

## Meetings

We have in-person lectures on **Tuesdays and Thursdays from 1:00 - 2:15 pm** every week in **232 Cathedral of Learning**. You are expected to attend all lectures.

You also must be enrolled in one of the following in-person recitations:

Day	Time	Location	Section
Monday	10:00 - 10:50 am	203 Lawrence	1201
Monday	2:00 - 2:50 pm	1501 Posvar	1202
Monday	3:00 - 3:50 pm	1501 Posvar	1203

## Course objectives

Upon successful completion of this course, students will be able to do the following.

1. *Comprehend fundamental biochemical principles.* Understand the chemical and physical foundations of living systems, including the properties of water, acids, bases, buffers, and the types of intra- and intermolecular forces that govern biomolecular interactions.
2. *Analyze Biomolecular Structure and Function.* Describe the structure, properties, and function of major biomolecules (amino acids, proteins, carbohydrates, and lipids) and explain how their structures dictate their biological roles and interactions.
3. *Explain Enzyme Catalysis and Kinetics.* Understand the mechanisms of enzyme catalysis, quantitatively analyze enzyme kinetics, and describe various modes of enzyme regulation and inhibition.
4. *Elucidate Metabolic Pathways and Bioenergetics.* Trace the major metabolic pathways involved in energy transduction (glycolysis, gluconeogenesis, citric acid cycle, oxidative phosphorylation) and biomolecule synthesis/degradation, and apply principles of bioenergetics to understand cellular energy flow.
5. *Describe Cellular Processes.* Explain the structure and function of biological membranes, and key mechanisms of molecular transport and biosignaling.
6. *Integrate Biochemical Concepts.* Connect disparate biochemical topics to understand the integrated nature of cellular processes and how they are regulated to maintain homeostasis.

## Textbooks

Textbooks serve as a reliable starting point for finding information about a topic. All information presented in textbooks is available somewhere on the internet. Navigating and finding that information is the challenging part, and is further compounded by the increasingly arduous task of verifying the correctness of information from anonymous sources.

As the instructor of this course, my role is to survey the available textbooks for this field and use my expertise to recommend textbooks that accomplish the following:

- Contain as much of the material covered in this course as possible;
- Provide correct scientific interpretations and explanations.

### Recommended

To provide a consistent and reliable foundation for the course, the material and key concepts are largely based on the text below. If you are looking for resources that align most closely with the lectures and topics, these are the ones to get. You are not required to purchase these books for the course, but they can be a valuable resource for understanding concepts and provide a great source of extra practice problems from the publisher.

- GG** Garrett, R. H., Grisham, C. M. (2024) *Biochemistry* (7th Ed.). Cengage Learning.
- KKW** Kuriyan, J., Konforti, B., Wemmer, D. (2013) *The molecules of life: Physical and chemical principles*. Garland Science.
- PC** Pratt, C. W., Cornely, K. (2021) *Essential biochemistry* (5th Ed.). John Wiley & Sons, Inc.

### Supplemental

These books are not required for the course, but can be excellent resources to deepen your understanding. They offer different perspectives, provide alternative explanations, or focus on specific topics in more detail than the core course material.

- AJ** Allen, J. P. (2008) *Biophysical chemistry*. Blackwell Publishing.
- BD** Baynes, J. W., Dominiczak, M. H. (2019) *Medical biochemistry* (5th Ed.). Elsevier Limited.
- BGHTS** Berg, J., Gatto Jr., G., Hines, J., Tymoczko, J. L., Stryer, L. (2023) *Biochemistry* (10th Ed.). Macmillan Learning.
- BJD** Bahar, I., Jernigan, R. L., Dill, K. A. (2017) *Protein actions: Principles and modeling*. Garland Science.
- CA** Cooksy, A. (2014) *Physical chemistry: Thermodynamics, statistical mechanics, and kinetics*. Pearson Education, Inc.
- DB** Dill, D. A., Bromberg, S. (2011) *Molecular driving forces: Statistical thermodynamics in biology, chemistry, physics, and nanoscience* (2nd Ed.). Garland Science.
- KBMRW** Kennelly, P. J., Botham, K. M., McGuinness, O. P, Rodwell, V. W., Weil, P. A. (2023) *Harper's illustrated biochemistry* (32nd Ed.). McGraw Hill.

- OGC** Oxtoby, D. W., Gillis, H. P., Campion, A. (2008) *Principles of modern chemistry* (6th Ed.). Thomson Brooks/Cole.
- TN** Tro, N. J. (2017) *Chemistry: A molecular approach* (4th Ed.). Pearson Education, Inc.
- PKTG** Phillips, R., Kondev, J., Theriot, J., Garcia, H. G. *Physical biology of the cell* (2nd Ed.). Garland Science.
- PS** Pal, S. (2020) *Fundamentals of molecular structural biology*. Elsevier Inc.
- VVP** Voet, D., Voet, J., Pratt, C. (2016) *Fundamentals of biochemistry: Life at the molecular level* (5th ed.). John Wiley & Sons, Inc.
- ZDM** Zuckerman, D. M. (2010) *Statistical physics of biomolecules: An introduction*. CRC Press.

## Assessments

As your instructor, my role is to guide your learning and fairly evaluate your grasp of the material on behalf of the University. Assessments serve as structured opportunities to demonstrate your understanding of the course material. Your final grade reflects the level of mastery you have demonstrated throughout the semester.

## Homeworks

Homework assignments will be given throughout the semester to reinforce the material. These assignments must be completed individually through Top Hat.

## Recitations

Weekly recitation sessions will reinforce and extend core course concepts through active, team-based learning. These sessions are designed to promote higher-order thinking and offer structured opportunities for collaborative problem-solving.

Students will work in teams of 3–4 during their assigned recitation time, guided by the TA and UTAs. This peer collaboration enhances learning, fosters diverse perspectives, and builds communication skills essential for future professional settings.

Although recitation activities are completed in teams, each student is individually responsible for submitting their own responses through Top Hat. A laptop or tablet is required for participation; while smartphones may suffice for in-class polling, they are not recommended for completing full recitation assignments.

Each recitation assignment is due by the end of the session. To provide flexibility, the two lowest recitation scores will be dropped. Late or missed assignments will receive a zero, and no make-up opportunities will be offered, regardless of the reason. Attending a different recitation than the one you are enrolled in is not permitted.

## Quizzes

There will be two quizzes—in addition to exams—that exclusively focus on the rote memorization portion of this course.

- **Quiz 1** (Sep 11): Amino acid structures, names, and abbreviations.
- **Quiz 2** (Nov 18): Enzymes and intermediates of glycolysis and the citrate cycle.

Dates for the quizzes are included in the schedule and will not change unless the University of Pittsburgh is closed. Under those circumstances, the quiz will be rescheduled for the next lecture.

You will have 15 minutes to finish the quiz at the beginning of the scheduled lecture. No additional time will be given if you arrive late, and no makeups will be provided under any circumstances. Students who add the course late are expected to take Quiz 1 at the scheduled time.

## Exams

There will be five in-person exams throughout the semester: four unit exams and one cumulative final. Each exam will take place during the regular class period (75 minutes) on the dates listed in the schedule. These dates are firm and will not change; students are expected to plan accordingly.

### Module exams

Module exams will assess the material covered in lectures and recitations associated with each module. Content from the textbook will only be tested if explicitly discussed in class. While unit exams are not formally cumulative, the course is designed in a progressive manner: later material builds upon foundational concepts introduced earlier. Students should be prepared to apply prior knowledge throughout the term. The instructor may revisit earlier topics in exams if they were widely misunderstood.

Module	Date
1 Forces to Form	September 16, 2025
2 Proteins in Action	October 14, 2025
3 Enzymes	November 4, 2025
4 Metabolism	December 4, 2025

### Final exam

The final exam is cumulative and will be administered at the university-designated time. No early or make-up finals will be permitted for any reason. Students with three or more finals on the same day must follow the [university registrar's official exam conflict procedure](#) failure to do so will result in the expectation to sit for the final as scheduled.

To support flexibility, the lowest exam score will be dropped at the end of the semester. Accordingly, there will be no make-up exams. If an exam is missed for any reason (including illness, religious observance, university obligations, or personal emergencies), the resulting zero will serve as the dropped score. Students who miss more than one exam must meet with the instructor to discuss their standing in the course.

If all unit exams are completed and a student is satisfied with their performance, the final exam may be skipped and counted as the dropped score.

Our final exam is scheduled for **December 12, 2025 from 12:00 to 1:50 pm in 232 Cathedral of Learning.**<sup>1</sup>

### Distribution

There are 400 total possible points for this course. No makeups will be provided under any circumstance.

Assessment	Points Each	Quantity	Number of Drops	Cumulative Points
Homework	2	12	2	20
Recitations	2	12	2	20
Quizzes	30	2	0	60
Exams	75	5	1	300

### Late policy

Assignments will **never** be accepted more than 24 hours after the due date. No exceptions to this policy will be made because you have two drops.

However, it is noteworthy that the scientific community frequently submits manuscripts and reviews days, weeks, or months after the editor's request. Such practices are widely understood. Conversely, submitting a grant application even a minute past the deadline makes it ineligible for review.

I will follow the late assignment and extension policy outlined below. It encourages timely submissions while acknowledging the influence of external commitments and unforeseen circumstances.

- Each assignment has a specified due date and time.
- Assignments submitted after the due date will incur a late penalty.
- The late penalty for that assignment is calculated using the function: % Penalty =  $(25/144) \times (\text{hours late})^2$  rounded to the nearest tenth. This results in approximately:

Hours Late	1	6	9	12	18	21	24
------------	---	---	---	----	----	----	----

---

<sup>1</sup>Last verified on November 6, 2025.

<b>Penalty (%)</b>	0.2	6.3	14.1	25.0	56.3	76.6	100.0
--------------------	-----	-----	------	------	------	------	-------

Submitting all assignments on time can earn you up to a 1% bonus added directly to your final grade. For each assignment you submit on time, you will receive a proportional percentage of this bonus. If you submit 7 out of 12 assignments on time, you would receive a 0.583% boost to your final grade. The two dropped assignments are still counted towards this percentage. Since this bonus is automatically available to everyone, I will not provide an additional adjustment to your final grade.

## **Tiered Competencies**

This course employs a tiered grading system, designed to reward your mastery of concepts, rather than just your ability to accumulate points. The goal is to shift our focus from “How many points is this worth?” to “What do I need to understand and do to demonstrate my knowledge?” This structure ensures that you build a strong foundation before moving on to more complex applications, which is essential for success in scientific disciplines.

### **Defining the Tiers**

The four tiers are based on well-established learning principles and reflect the skills you will develop in this course.

**C-Tier (Core Competency)** Questions at this tier assess your understanding of the essential, non-negotiable knowledge of foundational concepts.

**B-Tier (Broadening Application)** Questions at this tier require you to apply core concepts to solve clearly defined problems.

**A-Tier (Analytical Integration)** Questions at this tier challenge you to analyze complex scenarios, interpret new data, and connect multiple concepts to solve multi-step problems.

**S-Tier (Synthesis & Evaluation)** Questions at this tier ask you to synthesize information to generate new hypotheses or critically evaluate complex scientific arguments.

### **How Tiers Determine Your Grade**

While your grade in this course is determined by points, the system is designed to reward a mastery of foundational concepts rather than a simple accumulation of points from scattered topics. The tiers build upon one another, and this principle is reflected in the weighting of points on every assessment.

To ensure you build a strong and comprehensive understanding, the tiers contribute to the total score according to the following ideal weighting.

	<b>Tier</b>	<b>C</b>	<b>B</b>	<b>A</b>	<b>S</b>
<b>Assessment percentage</b>		73%	14%	8%	5%

This structure makes the C-Tier concepts the most valuable in the course, as they form the vast majority of your grade. In contrast, higher-tier questions (A and S) collectively account for a smaller percentage of the total score. This design makes it impossible to achieve a high grade by only answering the most difficult questions; success requires demonstrating a solid command of all core material first. To reduce anxiety on challenging problems, A- and S-tier questions on homework assignments and recitations are given full credit for any relevant attempt.

You will likely notice that missing a single foundational C-Tier question can have a greater impact on your score than correctly answering a difficult S-Tier question. *This is intentional.* The C-Tier questions are designed to assess your understanding across all concepts covered in the assessment. In contrast, due to practical constraints, fewer higher-tier questions can only test a narrow selection of advanced topics. Success on a few of these problems, which may align with your personal strengths, does not compensate for a lack of fundamental understanding across the entire curriculum. Furthermore, this system is designed to be more forgiving. If C-Tier questions were worth less, the more difficult A- and S-Tier questions would have to be weighted far more heavily, meaning that missing a single, very challenging problem would unfairly decrease your grade. By mastering the fundamentals, the high point value of the C-Tier questions you answer correctly provides a strong foundation for your grade, acting as a buffer against the risk of the more difficult questions.

If a tier is absent from an assignment, its corresponding point percentage is reallocated to the next highest tier present on the assessment.

## Grading Scale

Letter grades for this course will be assigned based on Pitt's recommended scale<sup>2</sup>.

<b>Letter</b>	<b>Percentage</b>	<b>GPA</b>	<b>Attainment</b>
A +	97.0 - 100.0%	4.00	Superior
A	93.0 - 96.9%	4.00	
A –	90.0 - 92.9%	3.75	
B +	87.0 - 89.9%	3.25	Meritorious
B	83.0 - 86.9%	3.00	
B –	80.0 - 82.9%	2.75	

---

<sup>2</sup>University of Pittsburgh's [grading system](#).



Letter	Percentage	GPA	Attainment
C +	77.0 - 79.9%	2.25	Adequate
C	73.0 - 76.9%	2.20	
C –	70.0 - 72.9%	1.75	
D +	67.0 - 69.9%	1.25	Minimal
D	63.0 - 66.9%	1.00	
D –	60.0 - 62.9%	0.75	
F	0.0 - 59.9%	0.00	Failure

## Artificial Intelligence

### Summary

Because of the unknown long-term impact of generative artificial intelligence (AI) on higher education, the use of such models to assist the completion of any assessment is strictly prohibited. We cannot reliably and effectively monitor its usage outside the classroom; thus, using a generative AI model as an on-demand tutor is permitted at your own risk.

We are in an exciting era of generative artificial intelligence (AI) development, marked by the release of tools such as Gemini, ChatGPT, Claude, Grok, and Copilot, among many others. While these tools can be powerful aids for learning, their use in this course is subject to strict guidelines to ensure academic integrity and meaningful engagement with the material.

### My philosophy

Generative AI is a powerful tool with immense potential when used ethically and critically. It enables individuals to produce outcomes that exceed their traditional skill sets, which can be particularly beneficial for completing specific tasks. If the primary value of an activity is to generate an output as fast as possible, then AI can be beneficial.

However, the purpose of education, especially in a university setting, is fundamentally different. Our goal is not just to produce a final product; it is to equip you with the critical thinking skills and foundational knowledge necessary for you to achieve your ambitions. Your degree is not merely a golden ticket. Your degree is a rigorous endorsement by the university and your professors that you possess the capabilities and understanding described by your major. Learning here is an active process of acquiring tools and developing your intellect, not passively attending classes to receive a credential.

It's also important to consider the real-world implications of generative AI. Many companies currently prohibit or heavily restrict their use due to ongoing uncertainties surrounding copyright and intellectual property. This means there's a significant chance

you won't be able to rely on these technologies in your professional life. Furthermore, while generative AI can make output accessible to many, employers seek individuals who add unique value and solve problems. Why would an employer hire someone whose primary skill is operating a large language model when they could outsource that task for a fraction of the cost? The value you bring to an organization lies in your ability to evaluate information critically, adapt to new challenges, and innovate beyond what AI can generate.

From my perspective, relying on generative AI in your role as a student actively harms your prospects and diminishes your education. While it might seem like an easier route to complete assignments, that convenience comes at the cost of genuine learning and skill development. It undermines the very purpose of this course, which is to build your capabilities.

Given the current environment and the unknown long-term effects of generative AI on learning, in-person evaluations remain the most reliable way for me to assess your proper understanding of the material. This approach ensures that your knowledge and skills are genuinely your own, providing a more accurate measure of your capabilities. We will continue to evaluate and adapt our assessment methods as we gain a clearer understanding of how generative AI impacts education.

### **Permitted Uses**

You are welcome to use generative AI tools to enhance your learning and understanding, but never as a substitute for your intellectual effort. Think of these tools as a study aid, not a shortcut. These uses are permitted because I cannot effectively monitor these use cases.

Here's how you could use them effectively:

- **Clarifying Complex Topics and Concepts.** If you're struggling to grasp a difficult concept from a lecture or reading, you can ask a generative AI to explain it in simpler terms or provide different analogies. For example, if we're discussing a complex algorithm, you might ask, "Explain *[algorithm name]* in a way a beginner could understand," or "What are some real-world examples of *[concept]*?" This can help solidify your understanding before you tackle problems independently.
- **Exploring Alternative Explanations for Difficult Material.** Sometimes, a different perspective can make all the difference. If you're stuck on a particular problem or explanation, you can prompt the AI for alternative viewpoints or methods. For instance, you could ask, "Are there other ways to approach this type of problem?" or "Can you provide a different explanation for *[specific theory]*?" This can broaden your understanding and provide new insights.

The key here is that AI should supplement, not supplant, your own thinking. Your goal is to engage with the material and develop your problem-solving skills. You must always

complete assignments and assessments based on your own understanding and work, not by relying on AI-generated solutions.

**Warning:** Remember, generative AI is a massive word probability model. After observing millions of biased examples of materials, generative AI will predict what word it often sees after the current one. There are computational techniques to try to maintain the accuracy of these probability models, but they are far from achieving this reliably.

## Prohibited Uses

To ensure academic integrity and genuine learning, the following uses of generative AI are strictly prohibited and will be treated as academic integrity violations:

- **Generating or Modifying Assignments.** You cannot use generative AI to produce or alter any part of your homework assignments, projects, papers, or any other graded work. This includes generating entire responses, crafting paragraphs, or even rephrasing significant portions of your work that you didn't write. For example, using an AI to write an answer for you or to generate code that you then submit as your own falls under this prohibition.
- **Using AI-Generated Answers as Direct Solutions.** Simply put, you cannot copy and paste or transcribe answers directly from a generative AI tool as solutions to problems or questions. The purpose of this course is for you to develop your problem-solving skills, not to have an AI solve them for you. If a problem asks you to derive a formula, you must show your own derivation, not just paste an AI-generated result.
- **Submitting AI-Generated Work.** Any work you submit must be entirely your own. Submitting content created by generative AI, regardless of how minor the contribution, is considered a form of academic dishonesty. This means you cannot submit AI-generated text, images, code, or any other output as if it were your original creation.
- **Circumventing Course Policies.** You cannot use generative AI to bypass any course policies. For example, if a policy requires you to show your work or explain your reasoning, using AI to generate only the final answer without demonstrating your thought process is a violation.
- **Uploading Course Materials to Generative AI Models.** You are strictly prohibited from uploading any course-specific materials (e.g., lecture notes, assignment prompts, readings, exam questions, solutions, or discussions from the learning management system) to any generative AI model or platform. This includes, but is not limited to, pasting text into chat interfaces or uploading documents. This prohibition is crucial for several reasons:
  - Course materials are often copyrighted and proprietary. Uploading them to a third-party AI model may violate intellectual property rights and the university's licensing

agreements with content providers, potentially leading to legal issues for both you and the university.

- The information you upload to AI models may become part of their training data, making it potentially accessible to others or used for purposes beyond your control. This risks compromising the privacy of course content and potentially exposing sensitive or confidential academic information.
- Uploading course materials could inadvertently “train” the AI model on course-specific content, potentially making it easier for future users (including other students) to generate answers or solutions to assignments, undermining the integrity of the course and its assessments.
- To ensure fair and valid assessments, it is essential that the content of assignments and exams remains contained within the learning environment. Uploading these materials to external AI platforms compromises the integrity of current and future assessments.

In essence, if you’re using AI to think or write for you or share course materials in a way that could compromise academic integrity or intellectual property, it’s prohibited. Your work should reflect your understanding, effort, and critical engagement with the course material.

## Academic integrity

Students in this course will be expected to comply with the [University of Pittsburgh’s Policy on Academic Integrity](#). Any student suspected of violating this obligation during the semester will be required to participate in the procedural process initiated at the instructor level, as outlined in the University Guidelines on Academic Integrity. This may include, but is not limited to, the confiscation of the examination of any individual suspected of violating University Policy. Furthermore, no student may bring unauthorized materials to an exam, including dictionaries and programmable calculators.

To learn more about Academic Integrity, visit the [Academic Integrity Guide](#) for an overview. For hands-on practice, complete the [Understanding and Avoiding Plagiarism tutorial](#).

## Disability services

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and [Disability Resources and Services](#) (DRS), 140 William Pitt Union, (412) 648-7890, [drsrecep@pitt.edu](mailto:drsrecep@pitt.edu), (412) 228-5347 for P3 ASL users, as early as possible in the term. DRS will verify your disability and determine reasonable accommodations for this course.

## Email communication

Upon admittance, each student is issued a University email address (username@pitt.edu). The University may use this email address for official communication with students. Students are expected to read emails sent to this account regularly. Failure to read and react to University communications promptly does not absolve the student from knowing and complying with the content of the communications. The University provides an email forwarding service that allows students to read their email via other service providers (e.g., Gmail, AOL, Yahoo). Students who forward their email from their pitt.edu address to another address do so at their own risk. If email is lost due to forwarding, it does not absolve the student from responding to official communications sent to their University email address.

## Equity, diversity, and inclusion

The University of Pittsburgh does not tolerate any form of discrimination, harassment, or retaliation based on disability, race, color, religion, national origin, ancestry, genetic information, marital status, familial status, sex, age, sexual orientation, veteran status or gender identity or other factors as stated in the University's Title IX policy. The University is committed to taking prompt action to end a hostile environment that interferes with the University's mission. For more information about policies, procedures, and practices, visit the [Civil Rights & Title IX Compliance web page](#).

I ask that everyone in the class strive to help ensure that other members of this class can learn in a supportive and respectful environment. If there are instances of the aforementioned issues, please contact the Title IX Coordinator, by calling 412-648-7860 or emailing [titleixcoordinator@pitt.edu](mailto:titleixcoordinator@pitt.edu). Reports can also be [filed online](#). You may also choose to report this to a faculty/staff member; they are required to communicate this to the University's Office of Diversity and Inclusion. If you wish to maintain complete confidentiality, you may also contact the University Counseling Center (412-648-7930).

## Religious Observance

The observance of religious holidays (activities observed by a religious group of which a student is a member) and cultural practices are an important reflection of diversity. As your instructor, I am committed to providing equivalent educational opportunities to students of all belief systems. At the beginning of the semester, you should review the course requirements to identify foreseeable conflicts with assignments, exams, or other required attendance. If possible, please contact me (your course coordinator/s) within the first two weeks of the first class meeting to allow time for us to discuss and make fair and reasonable adjustments to the schedule and/or tasks.

## **Sexual misconduct, required reporting, and Title IX**

If you are experiencing sexual assault, sexual harassment, domestic violence, and stalking, please report it to me and I will connect you to University resources to support you.

University faculty and staff members are required to report all instances of sexual misconduct, including harassment and sexual violence to the Office of Civil Rights and Title IX. When a report is made, individuals can expect to be contacted by the Title IX Office with information about support resources and options related to safety, accommodations, process, and policy. I encourage you to use the services and resources that may be most helpful to you.

As your instructor, I am required to report any incidents of sexual misconduct that are directly reported to me. You can also report directly to Office of Civil Rights and Title IX: 412-648-7860 (M-F; 8:30am-5:00pm) or via the Pitt Concern Connection at: [Make A Report](#).

An important exception to the reporting requirement exists for academic work. Disclosures about sexual misconduct that are shared as a relevant part of an academic project, classroom discussion, or course assignment, are not required to be disclosed to the University's Title IX office.

If you wish to make a confidential report, Pitt encourages you to reach out to these resources:

- The University Counseling Center: 412-648-7930 (8:30 A.M. TO 5 P.M. M-F) and 412-648-7856 (AFTER BUSINESS HOURS)
- Pittsburgh Action Against Rape (community resource): 1-866-363-7273 (24/7)

If you have an immediate safety concern, please contact the University of Pittsburgh Police, 412-624-2121

Any form of sexual harassment or violence will not be excused or tolerated at the University of Pittsburgh.

For additional information, please visit the [full syllabus statement](#) on the Office of Diversity, Equity, and Inclusion webpage.

## **Statement on classroom recording**

To ensure the free and open discussion of ideas, students may not record classroom lectures, discussions and/or activities without the advance written permission of the instructor, and any such recording properly approved in advance can be used solely for the student's private use.

## Tentative Schedule

	Date	Event	Topic
Mon	Aug 25	R1.0	Course Overview
Tue	Aug 26	L1.1	Internal Energy
Thu	Aug 28	L1.2	Entropy
Mon	Sep 1		<b>Labor Day</b> (No Recitations)
Tue	Sep 2	L1.3	Free Energy
Thu	Sep 4	L1.4	Proton Landscapes
Mon	Sep 8	R1.1	<i>Review</i>
Tue	Sep 9	L1.5	Protein Backbone
Thu	Sep 11	L1.6	Protein Folding and <b>Quiz 1</b>
Mon	Sep 15	R1.2	<i>Review</i>
Tue	Sep 16		<b>Exam 1</b>
Thu	Sep 18	L2.1	Molecular Recognition
Mon	Sep 22	R2.1	<i>Review</i>
Tue	Sep 23	L2.2	Cooperativity & Allostery
Thu	Sep 25	L2.3	Intrinsically Disordered Proteins
Mon	Sep 29	R2.2	<i>Review</i>
Tue	Sep 30	L2.4	Molecular Motors
Thu	Oct 2	L2.5	Membranes
Mon	Oct 6	R2.3	<i>Review</i>
Tue	Oct 7	L2.6	Membrane Transport
Thu	Oct 9	L2.7	Membrane Signaling
Mon	Oct 13	R2.4	<i>Review</i>
Tue	Oct 14		<b>Exam 2</b>
Thu	Oct 16	L3.1	Catalysis
Mon	Oct 20	R3.1	<i>Review</i>
Tue	Oct 21	L3.2	Enzyme Mechanisms
Thu	Oct 23	L3.3	Enzyme Kinetics
Mon	Oct 27	R3.2	<i>Review</i>
Tue	Oct 28	L3.4	Enzyme Inhibition
Thu	Oct 30	L3.5	Enzyme Regulation
Mon	Nov 3	R3.3	<i>Review</i>
Tue	Nov 4		<b>Exam 3</b>

	<b>Date</b>	<b>Event</b>	<b>Topic</b>
Thu	Nov 6	L4.1	Glycolysis
Mon	Nov 10	R4.1	<i>Review</i>
Tue	Nov 11	L4.2	Citric Acid Cycle
Thu	Nov 13	L4.3	Oxidative Phosphorylation
Mon	Nov 17	R4.2	<i>Review</i>
Tue	Nov 18	R4.3	Gluconeogenesis & Pentose Phosphate Pathway and <b>Quiz 2</b>
Thu	Nov 20	L4.4	Lipid Metabolism
N/A	Nov 24-28		<b>Thanksgiving Break (No class)</b>
Mon	Dec 1	R4.4	<i>Review</i>
Tue	Dec 2	L4.5	Amino Acid Metabolism
Thu	Dec 4		<b>Exam 4</b>