

General Biochemistry Lecture – BMCB 658 – Spring 2025

Syllabus

Instructor

Dr. Sarah Prescott (she/her), Associate Professor, Department of Life Sciences

Communication and Support

Preferred Contact for messages - Canvas inbox

Please use the inbox on Canvas to send any messages to me, as this allows me to keep all student messages centrally located and is the most efficient method for us to communicate.

Response Time - You can expect a response to your message usually the same day if sent during business hours, or the next business day if sent outside of business hours. Business hours are M-F from 9am-5pm ET, excluding university holidays and breaks.

Email address - sarah.prescott@unh.edu

Office Hours - Wednesdays 10-11am via [Zoom](#) and other times by appointment

My office is Room 567 on campus and I also hold office hours via Zoom (see course orientation for additional details). Message me to arrange another time if you need to meet and are not able to make the Wednesday time.

Course Materials

We will use the annotation tool Perusall in this course, which has our required course text embedded within it and is also where you will complete your problem-solving assignments. More details are provided in the course orientation on the course site.

Important!

This course is designed to create a deeper understanding of the integrated field of biochemistry. My hope is that you leave this class feeling accomplished, challenged, and excited about learning more. However, your safety and well-being are more important than this class. If you are facing any medical, family, housing, or food security challenges know that you can reach out and have support available (see links later in the syllabus). If you are comfortable, I hope that you will reach out to me as well and I will help you with anything I can.

My Promises

- I'm on your team - I want you to be successful and am willing to help you figure out what you need and I care about your goals.
- I will give you the tools and space to learn. I work very hard to figure out and understand the ways people learn best, embed those ways and structures in all my courses, and give you time to learn. I don't ask you to do things that do not generate a better understanding and connection to your learning. It also means that I challenge you to LEARN and not perform tasks for a grade.
- I will actively listen and encourage you to give me feedback and communicate openly. I make changes to my courses every time I teach them in response to my own reflection along with student feedback and ideas.

Course Catalog Description

BMCB 658 - General Biochemistry Lecture

Credits: 3.0

Term: Spring 2025 - Full Term (01/21/2025 - 05/05/2025)

Grade Mode: Letter Grading

CRNs: 54390 or 53659

Description: Comprehensive, introductory course emphasizing the cellular metabolism and the structure and function of proteins, nucleic acids, carbohydrates, and lipids. Prereq: BIOL 411; CHEM 545 and CHEM 546, or CHEM 547 and CHEM 548, or CHEM 651 and CHEM 652.

Co-Requisite: BMCB 659

Mutual Exclusion: BMCB 501

Student Learning Outcomes (SLOs)

Upon successful completion of this course, students will:

- Understand and be able to explain the fundamentals of biochemistry, including cellular metabolism and the structure and function of proteins, nucleic acids,

carbohydrates, and lipids. *Learning objectives specific to each of these general areas are available on the course site in each weekly module.*

- Make connections with past knowledge with the interdisciplinary knowledge gained in biochemistry and share this learning via the use of online technology.
- Increase their awareness and use of digital literacy and skills, and build teamwork and collaboration skills in the digital space.

You can find the [Program Student Learning Outcomes here](#).

Grading

The lecture and laboratory components of Biochemistry are two separate courses. A separate syllabus for the lab course will be distributed and a separate course site will contain all lab course materials.

Scale

Final grades in this course will be based on the following scale: 94-100=A; 90-93.9=A-; 87-89.9=B+; 83-86.9=B; 80-82.9=B-; 76-79=C+; 73-75=C; 70-72.9=C-; 66-69.9=D+; 63-65.9=D; 60-62.9=D-; Below 59.9=F.

Distribution

You can access your grades at any time via Canvas/Perusall. Below is a percentage distribution of all components toward your final course grade. An outline of each component is included in this syllabus. See course modules for more detailed information on each component. Please check your grades regularly and reach out to me with any questions.

Lecture Course Grade (658)

Perusall Assignments	20%
Discussion Boards	20%
Quizzes	20%
Exams	40%

Course Structure/Format

Asynchronous Online Format

The course is run in an asynchronous online format, meaning we do not meet together online for the entirety of the course. Instead, you will be working on self-guided interactive modules that are completed in order every week. It is the student's responsibility to read all class materials and complete assignments on time. As there is no formal class session, you must keep up with all assigned tasks. Recorded lectures and other course content have been specifically designed and chosen to aid in your learning in the course. Students who are most successful in this type of course are those who are motivated to learn and willing to learn independently.

- It is the student's responsibility to have access to a desktop/laptop computer and reliable internet connection for this course. A tablet device or phone is insufficient to complete the work.
 - My role as your instructor throughout the semester will be to act as a guide and mentor, answering questions you have to support and encourage your learning.
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Course Description - Foundational Survey Course

This course is designed as a foundational survey course ideally to be taken during the middle (sophomore/junior) of a Bachelor's degree program, to prepare you with the foundational concepts that will support your exploration of more specialized topics in upper-level courses. If you are taking this course as a student with upper-class status (Senior), you may find the material to be review.

Course Assignments/Assessments

General Notes

- You may print out assignments and course materials for your use.
- An outline of assignments is below, but more details on all course assignments are contained on the course site.

- All assignments must be solely your own work. The use of AI-assisted writing (such as ChatGPT) is strictly prohibited on any assignment in this course or in the lab course unless otherwise instructed.
- Late assignments do not receive credit unless you have made arrangements with me ahead of time. That said -- please reach out if you are falling behind -- I understand that life happens and will do my best to work with you.

Perusall - Assigned Reading and Problem posing and solving - 20%

- You will use the annotation tool Perusall to complete assigned text reading and activities in weekly assignments
- Enhances your learning experience, and allows you to engage and learn with others in a supportive learning environment
- Overall average score used for course grade - see Perusall site throughout the course for your individual assignment and running average scores
 - You must pass this course component overall with a 60% or higher score to pass the course.

Discussion Boards -Community Engagement and Learning Application - 20%

- Assignments will allow you to apply what you are learning in the course and share your discoveries with your peers
- Weekly entries will also serve to help you reflect upon your learning in the course
- Used to evaluate formative understanding of concepts in the course
- Evaluated for grading periodically
 - Late submissions will reduce the grade.

Quizzes – 20%

- Evaluate your understanding of key concepts presented in the course and give feedback on your learning.
- Two attempts on the first quiz only (highest score recorded), all others a single attempt will be allowed.

- Lowest two scores will automatically be dropped from computing overall course grade.
- Timed and must be completed in one sitting.

Exams-40% (Midterm Exam 20%, Final Exam 20%)

- Summative evaluation of your understanding and application of key concepts
 - Midterm exam will be fully online
 - Final Exam consists of two segments, an in person exam and an online segment
 - You must pass each exam with a score of 60% or greater to pass the course.
 - More details will be provided on course site.
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Course Policies

Class Cancellation

As this is an asynchronous course, if UNH Manchester cancels classes, it does not affect this course. Due dates will remain in effect regardless of the in-person courses' status.

Academic Conduct

You are encouraged to share with classmates and others the discoveries you are making and collaborative learning is built into the format of this course. However, when you submit answers to any assignments, make sure all answers are in your own words and express your own thoughts. The use of AI-assisted writing (such as ChatGPT) is strictly prohibited on any assignment in this course unless otherwise instructed.

Submitting another's work as your own is plagiarism and may result in course failure and possible further administrative action. Please ask me if you have any questions.

Courtesy and respect towards your classmates and the instructor will always be required. All online discussions must be done courteously and respectfully.

Course Technology and Requirements

- You will need to have a desktop/laptop and reliable internet access for this course.

- You will need a scientific calculator in this course, that can perform calculations using exponents and scientific notation.
- Canvas and Perusall will be used extensively in this course. Zoom will be used for online office hours.
 - Canvas will be used to post weekly course announcements and contain course information. For any formal course communications (grades, accessibility, etc.) please use the canvas inbox to message me.
 - Perusall is where you will access your text and weekly reading and problem-solving assignments.
 - An orientation to the onboarding and use of Perusall are provided in the course orientation module.
 - Teams is an optional way for you to send messages and questions to me.
- You will need to be able to use general online technologies, including Google Docs and Sheets, varying file types (.doc, .docx, .pdf), website searching and navigation, and screenshot capture. Supplemental resources and tutorials are provided on the course site to assist you. If you need additional assistance, drop in during office hours or message me, and I will be happy to help.
- If you wait until just before the deadline to submit your work, you assume the risks associated with technological problems or a lack of familiarity with the platform. Please plan ahead and save your work in a backup form. I recommend using Google Drive or other cloud-based drives that autosave as you work. Google Docs are a great way to draft posts or assignment information that you can copy and paste into whatever format is needed.

BMCB 658 Spring 2025 Lecture Course Schedule

Week	Lecture Topic	Week	Lecture Topic

1	Intro to Biochem/Water	9	Spring Break Week
2	Amino acids/Protein Structure	10	Glycolysis and Gluconeogenesis
3	Proteins as enzymes/Enzyme mechanisms	11	Storage Mechanisms
4	Lipids and Membranes	12	TCA Cycle
5	Nucleic acid structure/DNA replication	13	Electron transport/Ox Phos
6	Transcription	14	Fatty acid metabolism
7	Translation	15	Photosynthesis/N metabolism
8	Carbohydrates/Intro Metabolism		

Additional Policies, Resources, and Information

Temporary Academic Supports for Extended Absences

If you are dealing with an unexpected, extenuating circumstance that will keep you out of class or affect your performance for more than a day or two, reach out to Lisa Enright, Assistant Dean of Student Success, at lisa.enright@unh.edu to request a letter be sent to all your faculty.

If you are required to miss significant class time, you will be provided temporary academic supports so that you can continue to make satisfactory progress in this course. Please contact me to discuss the specific types of supports that will be implemented during your absence.

Mental Health and Wellness

Your academic success and overall mental health are very important. If, during the course, you find you are experiencing emotional or mental health issues, please reach out. In partnership with The Mental Health Center of Greater Manchester, UNH Manchester offers consultation visits on a walk-in basis and through telehealth appointments. Services include:

- Free confidential screening & consultation with a licensed mental health therapist.
- Referrals to mental health or substance misuse treatment. And assistance in understanding how to afford additional treatment (with or without insurance!) or find free services.

Students can schedule an appointment to meet with a mental health therapist through an online booking link located on the [UNH Manchester Student Wellness page](#).

If you would like to connect to counseling services directly, you may do so by contacting The Greater Manchester Mental Health Center at (603) 668 - 4111.

The National Suicide Prevention Lifeline provides 24/7, free and confidential support via phone or chat for people in distress, resources for you or your loved ones, and best practices for professionals. Call (800) 273-TALK (8255).

Here is a [list of other general resources](#).

Financial Literacy Resources

All students benefit from understanding their mindset about money, how to build and use a personal budget, as well as understanding interest rates, loans, insurance, investing, and more. UNH has wonderful free resources for students in [Library Resource Guides](#), and every student (and faculty!) can access [CASH COURSE](#) by creating a free account. Find more information on the [Financial Wellness](#) site of Health & Wellness.

Basic Needs

It can be challenging to do your best in class if you have trouble meeting basic needs like safe shelter, sleep, and nutrition. If you have difficulty affording groceries or accessing sufficient food to eat every day or lack a safe and stable place to live, I urge you to contact The Dean of Students and/or me if you are comfortable. You can also find a [list of resources](#). We are here to help.

NameCoach

We have a new tool in Canvas, NameCoach, that will help us pronounce each other's names properly. Please join me in making our learning environment as inclusive as possible by recording your name (instructions [here](#)) and taking advantage of the opportunity to learn to pronounce each other's names correctly.

Needs of Students of all Faiths

If you need accommodation for a religious or cultural holiday or observance, please let me know as soon as possible.

Early Alerts Report

The University is invested in your academic success. If I am concerned about your academic behavior or performance, I may submit an academic alert -- particularly around Week 5. Academic alerts are not punitive. The goal is to provide you with support and resources to support your success. They act as an important check-in point and, if you receive an academic alert, you will receive an email to your UNH email address. It is strongly recommended that you meet with a professional advisor and connect with me to discuss the reason for the alert.

Netiquette Guidelines

Netiquette is the socially and professionally acceptable way to communicate on the Internet. When using online communication tools with classmates and instructors, we are all expected to abide by these guidelines. Guidelines can be found through the [Teaching and Learning Resource Hub](#) and at this [Academic Technology resource](#). More general guidance can be found [here](#).

Academic Honesty

The Biology Program at UNH Manchester will strictly adhere to the University policy on academic honesty, as published in the UNH Student Rights, Rules, and Responsibilities Handbook (<http://unh.edu/vpsas/handbook/academic-honesty>). By turning in any piece of work in this course, you declare that you have read and understood the policy and that you did not engage in any form of academic dishonesty as defined in the Handbook.

Plagiarism can take many forms, such as: submitting someone else's work - in whole or in part - as your own; collaborating on answers for individual assignments or allowing your own work to be used by another student; copying information from a website or other text without proper documentation; buying a pre-written paper or lab report.

Cheating is mainly concerned with copying on exams or in the lab, bringing crib notes into an exam, or referring to notes, the textbook or any other source, such as a programmable calculator, tablet, or cell phone, during an exam.

Any instances of cheating or plagiarism will result in consequences that can range from a failing grade on the assignment for all students involved to dismissal from the University, as defined in the UNH Student Rights, Rules, and Responsibilities Handbook.

Any form of academic misconduct on any graded work in this course (including assignments, quizzes, or exams) will result in an automatic zero on the assignment. Additional consequences may result at the discretion of the instructor.

UNH Land, Water, and Life Acknowledgement

As we all journey on the trail of life, we wish to acknowledge the spiritual and physical connection the Pennacook, Abenaki, and Wabanaki Peoples have maintained to N'dakinna (homeland) and the aki (land), nebi (water), olakwika (flora), and awaasak (fauna) which the University of New Hampshire community is honored to steward today. We also acknowledge the hardships they continue to endure after the loss of unceded homelands and champion the university's responsibility to foster relationships and opportunities that

strengthen the well-being of the Indigenous People who carry forward the traditions of their ancestors.

Credit Hour Policy

This syllabus reflects the federal definition of a credit hour, which entails a minimum 3 hours of engaged time per week per credit over a 15-week semester. Examples of engaged time include class time, assignments, examinations, laboratories, participation in course-related experiences (attending a talk or performance, speakers and events, fieldwork, etc.), conferences, and office hours. Student work reflects intended learning outcomes and is verified through evidence of student achievement. For more information, please see: [Pp111 Policy On Credits-And-Degrees.pdf \(neche.org\)](https://www.neche.org/Pp111_Policy_On_Credits-And-Degrees.pdf)

Class Recording

Class lectures and activities may be recorded in order to make this course more accessible, and recordings may be made available to students presently enrolled in the class to assist in reviewing material and preparing for assessments. Recordings are to be used for educational use/purposes only. Students may not record class activities (including screenshots showing instructors and students) without express permission from their instructor. If permission is granted, student-initiated recordings may only be used for educational purposes in this class and only during the period in which the student is enrolled in the class; authorized student-initiated recordings may not be posted or shared in any fashion outside of the class. The University and Zoom have FERPA-compliant agreements in place to protect the security and privacy of UNH Zoom accounts. Students may not share recordings outside of their course.

Confidentiality and Mandatory Reporting

The University of New Hampshire and its faculty are committed to ensuring a safe and productive educational environment for all students and the university as a whole. To this end, the university requires faculty members to report to the [Title IX Coordinator](#) (Bo Zarycky, Bo.Zarycky@unh.edu, 603-862-2930/1527 TTY). Faculty, staff or students on the Manchester campus can also contact Lisa Enright, the Deputy Title IX Coordinator (lisa.enright@unh.edu; 603-641-4336; Room 439), to report any incidents of sexual violence and harassment shared by students.

If you wish to speak to a confidential support service provider who does not have this reporting responsibility because their discussions with clients are subject to legal privilege, you can contact the [SHARPP Center for Interpersonal Violence Awareness, Prevention, and](#)

[Advocacy](#) at (603) 862-7233/TTY (800) 735-2964, as well as, Caroline Young, SHARRP Center Advocacy Expanded Services Coordinator for UNH Manchester (caroline.young1@unh.edu; room 417; Available in person Mondays 9 am to 4-pm and available by appointment (in person and virtually) by emailing caroline.young1@unh.edu). Individuals can also access Reach Crisis Services NH 603-668-2299 (24 hours), 77 Sundial Ave., Suite 306W, Manchester, NH.

For more information about what happens when you report, how the university treats your information once you report to the Title IX Coordinator, your rights and reporting options at UNH (including anonymous reporting options), please visit [student reporting options](#). [The uSafeUS app](#) is also available for students to keep reporting options and resources easily accessible on their phones.

Help us improve our campus and community climate. If you have observed or experienced an incident of bias, discrimination or harassment, please report the incident by contacting the Civil Rights & Equity Office at UNH.civilrights@unh.edu or TEL # (603) 862-2930 voice/ (603) 862-1527 TTY / 7-1-1 Relay NH, or [visit the CREO website](#). Anonymous reports may be submitted.

Accessibility Services

According to the Americans with Disabilities Act (as amended, 2008), each student with a disability has the right to request services from UNH to accommodate his/her/their disability. If you are a student with a documented disability or believe you may have a disability that requires accommodations, please contact Student Accessibility Services (SAS) located on the Manchester campus in room 417 or sas.office@unh.edu.

Accommodation letters are created by SAS with the student. Please follow-up with me as soon as possible to ensure timely implementation of the identified accommodations in the letter. Faculty have an obligation to respond once they receive official notice of accommodations from SAS but are under no obligation to provide retroactive accommodations.

For more information refer to www.unh.edu/sas or contact SAS at 603.862.2607, 711 (Relay NH) or sas.office@unh.edu.

Additional Resources

Library

The UNH Manchester librarians are available to assist you with the research process. Visit the library's website at <https://cps.unh.edu/library> to learn about library services and to search for reliable academic sources. You can contact the library at 603-641-4173 or at unhm.library@unh.edu.

The links below guide you to useful online library resources:

- Make a Research Appointment with a librarian:
<https://libraryguides.unh.edu/remotearchive/researchhelp>
- Use the Library Search Box to find information:
https://libraryguides.unh.edu/librarysearchbox_unhmanchester
- Reserve a Study Room: <https://cps.unh.edu/library/support-services>
- Discover resources for Citing Sources:
<https://libraryguides.unh.edu/unhmcitingsources>
- Learn strategies for Evaluating Sources:
<https://libraryguides.unh.edu/ENGL401UNHManchester/evaluatingresources>.

Center for Academic Enrichment (CAE)

The Center for Academic Enrichment (CAE) professionals and peers are available to support all UNH Manchester students in maximizing their learning potential through individual in-person and online tutoring, in-class workshops, and study groups in math, writing, course content, study skills, time management, and personal statements. All students registered for UNH Manchester courses are entitled to one hour of individual tutoring, per course, per week. Appointments are available at <https://caetutor.unh.edu>; for more information, contact the CAE at (603) 641-4113, or unhm.cae@unh.edu.

Food Pantry

UNH Manchester Food Pantry- located in room 437, is open Tuesdays and Thursdays. Students can sign up for individual appointment times to shop the pantry throughout the academic year.

Should you have any questions regarding any of the above policies, it is your responsibility to contact me to discuss any concerns. This syllabus serves as a contract whereby you agree to all of the policies herein. This syllabus is subject to change at the discretion of the instructor.