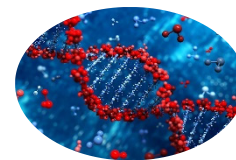




BMB 101: Frontiers in Biochemistry

Professor: Dr. Sophia Lunt



Lecture Information

Time: **Wednesdays 3:00 – 3:50 PM**

Location: **Veterinary Medical Center, Lecture Hall E100**

Instructor and Course Coordinator

Dr. Sophia Lunt
Professor
Department of Biochemistry & Molecular Biology (BMB)



Teaching Assistant

Amber Crawford, Graduate Student, BMB
Email: crawf398@msu.edu (include "BMB101" in the subject line)



BMB Academic Advisor

Heather Wilson, BMB
105A Biochemistry Building
Schedule an appointment:
<https://bmb.natsci.msu.edu/undergraduate/advising.aspx>

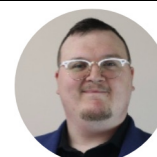


Career Services

Christina Igl
Career Exploration Advisor
College of Natural Science



Kyle Thompson
Career Consultant
College of Natural Science



Course Description

Biochemistry is the study of chemical processes that occur in living organisms and impacts many fields including medicine, biotechnology, pharmacology, agriculture and environmental science. A major in Biochemistry will provide you with an understanding of fundamental concepts in the field, including matter and energy transformation, homeostasis, biological information, evolution, and macromolecular structure and function. The major will prepare you for diverse career paths such as healthcare, public health, pharmaceuticals, food science, agriculture, research, forensics, cosmetics, environment, science writing, patent law, education, and sales. Successful completion of your degree will provide excellent preparation for biotechnology, pharmaceutical industry, graduate school, medical school, dentistry school, veterinary school, law school, and many others. In this course, you will:

- Learn about biochemistry topics covered in major courses
- Learn graduation requirements for a degree in Biochemistry & Molecular Biology/Biotechnology
- Learn about resources available to you to succeed
- Develop a plan for acquiring necessary skills for your future career
- Compare possible career paths in biochemistry

Required Technologies

- High speed internet access (minimum internet speed of 25 Mbps recommended).
- D2L (<http://d2l.msu.edu>). You will access online lectures, course materials, homework assignments, and additional resources through D2L.
- **iClicker:** Use link or QR code to join “**2026 BMB 101: Frontiers in Biochemistry**”
 - **Join link:** <https://join.iclicker.com/RDTT>
 - Click “Create an Account” to make a new account, or “Sign In” if you already have an account with your MSU ID. You must **use your MSU email address** for us to grade you.
 - If you need to create an account, enter your information using your MSU EMAIL to register for the account. Once you have entered your information, click “Create Account”.
 - You should now be added to the class. There is no content yet, so if it says “Nothing to see here”, that is normal.
 - You should not be prompted for payment. If you have used iClicker Reef in the past, the interface may say that your subscription has expired. However, you do not need to purchase a subscription as long as you are taking courses at MSU. If you have paid for iClicker Reef accidentally, contact iClicker support for a refund at <https://www.iclicker.com/support>
 - Instructions to create an iClicker cloud account and register a remote: <https://mhe.my.site.com/iclicker/s/article/How-to-Create-an-iClicker-Student-Account>



Technical Assistance

If you need technical assistance at any time during the course, or to report a problem, you can:

- Visit the MSU Help site at <http://help.msu.edu>
- Visit the Desire2Learn Help Site at <http://help.d2l.msu.edu>
- Call the MSU IT Service Desk at (517) 432-6200, (844)678-6200, or e-mail at ithelp@msu.edu

Expectations

- Lectures will be delivered in person in E100 Veterinary Medical Center on Wednesdays at 3pm.
- Your attendance is expected for all classes. If you are unable to come to class, you must study the lecture slides posted on D2L and complete the homework. You may make up for missed attendance credit by completing extra credit assignments.
- You are expected to complete the weekly assignment and the final exam.
- For illness, please provide a doctor's note to Dr. Lunt via email.
- Academic honesty is central to the educational process. Honor yourself and your peers by following the code of academic honesty. Acts of academic dishonesty are serious offenses within the University community. Suspension from the University could be the consequence for acts of academic dishonesty. At MSU, [General Student Regulation 1.00](#) states in part that “no student shall claim or submit the academic work of another as one's own.”

Policies and Resources

- **Inclusive classroom:** We are committed to creating a supportive and welcoming environment where all students can pursue academic and personal success. If you have a concern about the something that occurs in class, please contact one of us to so that we can address the situation.
- **Chosen Name and Pronoun Policy:** All people have the right to be addressed and referred to in accordance with their personal identity. Many people do not identify with the name on their birth certificate, school ID, or other forms of identification. Please advise us at any point if you need to update your name and/or pronouns in my records. If you would like to change your name, you can

do that through StuInfo. Your gender marker can be changed by filing a request through the Office of the Registrar. More information: <https://lbgtcr.msu.edu/trans-msu/msu-name-and-gender.html>.

- **Policy on religious observance:** MSU permits students to observe religious holidays. If you will be absent on your religious holiday, please make arrangements with Dr. Lunt in advance.
- **Mental health concerns** or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. Services are available to assist you with addressing these and other concerns you may be experiencing. You can learn more about the broad range of confidential mental health services available via the Counseling & Psychiatric Services (CAPS) website at <https://caps.msu.edu/>
- **Mandatory Reporting Policy:** As employees of MSU, we have the responsibility to report any instances of sexual harassment, sexual violence and/or other forms of prohibited discrimination. If you would rather share information about sexual harassment, sexual violence or discrimination to a confidential employee who does not have this reporting responsibility, you can find a list of those individuals here: <https://centerforsurvivors.msu.edu/resources-and-coping/resources-and-coping-2/>.
- **The Spartan Code of Honor Academic Pledge:** "As a Spartan, I will strive to uphold values of the highest ethical standard. I will practice honesty in my work, foster honesty in my peers, and take pride in knowing that honor in ownership is worth more than grades. I will carry these values beyond my time as a student at Michigan State University, continuing the endeavor to build personal integrity in all that I do." Spartan Code of Honor Academic Pledge and Student Rights and Responsibilities: <http://splife.studentlife.msu.edu/spartan-code-of-honor-academic-pledge>.
- **Policy on Accommodations for Students with Disabilities:** MSU is committed to providing equal opportunity for participation in all programs, services and activities. Requests for accommodations by persons with disabilities may be made by contacting the Resource Center for Persons with Disabilities at 517-884-RCPD or on the web at <https://www.rcpd.msu.edu/>. Once your eligibility for an accommodation has been determined, you will be issued a verified individual services accommodation ("VISA") form. Please present this form to me at the start of the term.
- **Grief Policy:** If you experience death of a family member or emotional distress from a similar tragedy, please review the Grief Absence Policy: <https://msu.edu/unit/ombud./classroom-policies/index.html#GriefAbsencePolicy>.
- **The Office of the University Ombudsperson** (<https://ombud.msu.edu/>) offers students a confidential and impartial place to discuss academic and nonacademic concerns. Staff will assist students to define problems, explore options, outline strategies, review policies, find resources, and manage expectations while upholding the values of respect, integrity, diversity and freedom from bias or harassment.
- **The Office of Institutional Equity (OIE)** reviews concerns related to discrimination and harassment under the University Anti-Discrimination Policy (https://hr.msu.edu/policies-procedures/university-wide/ADP_policy.html) and Policy on Relationship Violence and Sexual Misconduct (https://hr.msu.edu/policies-procedures/university-wide/RVSM_policy.html). If you experience or witness acts of bias, discrimination, or harassment, you can report these to: <https://oie.msu.edu/>
- **The Dean of Students Office** (<https://www.deanofstudents.msu.edu/>) supports student success by ensuring a civil and inclusive learning environment based on academic and personal integrity. All community members have a responsibility for establishing, maintaining, and fostering a commitment to our shared values, ethical decision-making, and personal and collective excellence. The Dean of Students Office supports personal and community accountability and addresses conduct inconsistent with the Spartan Code of Honor with honesty, respect, and fairness.

Grading

Class participation	20 points (2 points per class. Must attend 10 classes.)
D2L assignments	60 points (5 points per assignment. Must complete all 12.)
Final exam (open note)	20 points
TOTAL	100 points

Grade	Points
4.0	≥ 90
3.5	≥ 85

Grade	Points
3.0	≥ 80
2.5	≥ 75

Grade	Points
2.0	≥ 70
1.5	≥ 65

Grade	Points
1.0	≥ 60
0.0	< 60

- **Participation** (20 points: 2 points per class x 10 classes)
 - You must attend at least 10 classes to receive full class participation credit.
 - Your top 10 scores will be used to calculate your participation grade.
 - Participation will be recorded using **iClicker**. You must attend class and use your clicker to receive points. Having a friend use your clicker or participating in clicker questions while not in the classroom is a breach of academic integrity. Through the semester, there may be unannounced attendance checks to verify in-person attendance.
 - If you are unable to come to class, please study the lecture notes on D2L, catch up with classmates, and complete the homework.
 - You may make up for missed attendance credit by completing extra credit assignments.
- **D2L assignments** (60 points: 5 points per assignment x 12 assignments)
 - Must be completed in D2L and is due before the beginning of next class.
 - Each assignment consists of 10 questions. You will receive 0.5 point per correct answer.
 - Late assignments will not be accepted. If you miss a homework assignment, you may make up for it by completing extra credit assignments.
- **Final exam** (20 points) – **Wednesday, December 9, 3-3:50pm.**
 - The final will be administered through D2L. You may take the exam from any location.
 - Please use a laptop, tablet, or smart phone to take the online final exam.
 - You may use your notes, internet, and laptop, but NOT your classmates.
- **Extra credit:** You may get up to 15 extra credit points (3 points per event) by attending/completing up to 5 of the events below and writing a 250-word essay describing the event, what you learned, and how it relates to biochemistry. To obtain extra credit, please email your essay to the TA within 1 week of participating in the event. Extra credit assignments will be accepted until **December 9.**
 - Meet with a Student Ambassador from the MSU Undergraduate Research Office. Details here: <https://venture.msu.edu/ambassadors>
 - Undergraduate Research Workshops: <https://urca.msu.edu/workshops>
 - BMB Colloquia: <https://bmb.natsci.msu.edu/research/seminars/bmb-colloquium-series.aspx>
 - Biochemistry Club: <https://bmb.natsci.msu.edu/undergraduate/undergraduate-club.aspx>
 - MSU Career Fair or other career events: <https://careernetwork.msu.edu/events/>
 - Other department seminars (Physiology, Pharmacology & Toxicology, Molecular Plant Science, Microbiology and Molecular Genetics, Plant Biology, Science At The Edge, Integrative Biology, Institute for Quantitative Health Science and Engineering, Computational Math Science and Engineering, Horticulture, etc.)

- Watch documentary "Picture a Scientist":
<http://catalog.lib.msu.edu/record=b14200933~S39a>
 Click link under "Available Online" & log on with MSU credentials.



Important Dates

- D2L homework assignments are due **before the beginning of next class**. Late assignments will not be accepted. If you miss a homework assignment, you may make up for it by completing extra credit assignments.
- **December 9:** Open note final exam on D2L. Please use your laptop, tablet, or smart phone. This is the last day extra credit assignments will be accepted.

Week	Date	Topic	Homework	Due
1	9/2	Topics in Biochemistry	Quiz 1 on D2L	9/9
2	9/9	BMB Major & 4-Year Plan	Quiz 2 on D2L	9/16
3	9/16	Biofuels	Quiz 3 on D2L	9/23
4	9/23	Global Nitrogen Cycling	Quiz 4 on D2L	9/30
5	9/30	Career Exploration	Quiz 5 on D2L	10/7
6	10/7	Surviving & Thriving in BMB labs	Quiz 6 on D2L	10/14
7	10/14	Finding Opportunities	Quiz 7 on D2L	10/21
8	10/21	Panel: Upperclassmen	Quiz 8 on D2L	11/4
9	10/28	No class – Mid-semester break		
10	11/4	Resumes and LinkedIn	Quiz 9 on D2L	11/11
11	11/11	Graduate & Professional Schools	Quiz 10 on D2L	11/18
12	11/18	Interviewing	Quiz 11 on D2L	12/2
13	11/25	No class – Thanksgiving break		
14	12/2	Biochemistry & History of Bread	Quiz 12 on D2L	12/9
15	12/9	Final exam (open note)		