

Biomedical Innovation Syllabus

Torah High School 2025-2026

Instructor: Tracey Milani, Ph.D.

Student Contact: Canvas Inbox

Parent Contact: tmilani@gmail.com

Welcome seniors! Biomedical Innovation (BI) is the capstone course for the Project Lead the Way (PLTW) Biomedical Pathway. In this course, students apply their knowledge and skills to answer questions and solve problems related to the biomedical sciences. Students design innovative solutions for the health challenges of the 21st century as they work through progressively challenging open-ended problems, addressing topics such as clinical medicine, physiology, biomedical engineering, and public health.

Units of Study

In the fall, students will have the ability to choose 2-3 projects based on their collective interests. Possible projects include:

- Exploring Human Physiology
- Design of a Medical Innovation
- Investigating Environmental Health
- Combating a Public Health Issue
- Forensic Autopsy

In the spring, students will register at Miramar College for Biol277L, a 1-unit course, where they will have the opportunity to work in a biotechnology lab to produce kit materials for local high schools and learn about the biotechnology field. Note: Students will need to pay "Student Fees" to Miramar College to attend this class. The fees are typically around \$35. Additionally, students will carpool to Miramar for the class and will share parking permits. One permit costs \$40 for the semester, which can be shared by all riders in the car. Students do not pay any tuition for the course.

Required Materials

Please bring these items to class every day:

- *Something to take notes in/on (digital or hardbound is acceptable),*
- *calculator, and*
- *a computer.*

Coursework will be accessed using mypltw.com and Canvas.

Communication

The best way for students to reach me is through the Canvas Inbox. I encourage students to be proactive in communicating with me. If you know that you will miss a day, let me know ahead of time. If you have any questions at all, send me a message in Canvas or ask before or after class.

Parents, please feel free to reach out via email at any time. My goal is for each student to be successful in this course and to foster a love of the sciences. I will typically respond to emails within 24 hours on weekdays. It may take me a little longer to respond if I am contacted over the weekend.

Grading Scale

All course work will be awarded point values. All grades will be posted in Canvas.

A	90-100%
B	80-89.99%
C	70-79.99%
D	60-69.99%
F	<59.99%

Formative Work

Formative work includes pre-reading summaries, research summaries, pre-labs, etc., and is assigned to help students learn concepts in preparation for summative work.

Summative Work

Summative work in BI includes presentations, lab practicals, posters, papers, projects, etc.

Attendance and Late Work

Attendance is critical. All classwork requires students to work in groups. Most things that we do in lab cannot be made up. Please understand that students are responsible for all class content, even if they are absent.

Any student will be able to clear absences/truancies by following the Torah High School guidelines.

Whenever a student is absent for any reason it is their responsibility to find out what they missed/how to make up work. In the case of an excused absence:

- Formative Work is due by the start of the class day after your return. It is the student's responsibility to check for missed work and make up any missed assignments. Make sure absences are excused in a timely manner or full credit will not be received.
- Summative Work can be made up the class day that the student returns. Please note that this means the student will miss what we are working on in class that day.
- It is the student's responsibility to arrange to make up missed assessments and in-class work. Labs may not be available to makeup. An alternative lab will be assigned, if possible.

In the case of truancies/unexcused absences, late work will not be accepted, and the student will earn 0 points on the graded item(s) (formative and/or summative).

General late work: If a student attended class but did not turn in a graded item by the due date/time, late work will be accepted for a period of one week after the due date/time for a reduced point value. Typically, there is a 5% deduction on the earned score per day late up to the 7-day mark, after which no work will be accepted.

Tardiness

Please see the Torah High School policy on attendance.

Academic Honesty

Do your own work. Plagiarism/cheating earns 0 points on the assignment, a phone call home, and a possible conference. **You always need to do your own work and write answers in your own words even if you are working with a partner.** If you turn in an identical assignment as another person, it is cheating. If someone takes your work and copies it, both parties will still be held accountable. Unless expressly designated in the assignment instructions, use of AI is not allowed in this course.

Safety

Goggles and other personal protective equipment must always be worn during lab activities. **Students who are negligent during lab activities (safety violations) will receive a 0 on the lab assignment, and a phone call home.**

A note to parents/guardians

Thank you for taking the time to review this syllabus with your student. This should be a fun and engaging course. If you have any questions or concerns at all, please contact me. I look forward to working with you to help your student succeed.

Sincerely,



Tracey Milani, Ph.D.
Biomedical Innovation Instructor

Course Contract
Parents/Guardians and Students
Please Complete and Return to Dr. Milani

Student Section:

I have read, understand, and will follow all classroom rules and procedures for Dr. Milani's Biomedical Innovation course. I agree that all safety rules must be followed, and that violation of safety rules will result in loss of laboratory privileges/referral. I have discussed the course requirements with my parent or guardian.

Student's Printed Last Name _____ First Name _____

Student's Cell _____

Student's Email _____

Student's Signature _____ Date _____

Parent/Guardian Section:

I have read, understand, and will support the classroom policies, rules, and procedures for Dr. Milani's Biomedical Innovation course as described above. I have discussed the course requirements and expectations with my student and will support my student in the achievement of these expectations.

In addition, I understand my student must follow all safety requirements and rules during lab activities. Failure to follow rules will result in a referral and other consequences deemed appropriate by Dr. Milani. I give permission to have my student engage in laboratory activities using a variety of science equipment and materials, including chemicals and biological materials.

Parent/Guardian Printed Name _____

Parent/Guardian Signature _____

Parent/Guardian Contact Information

Name _____

Best Contact Number _____

Email _____

Additional Names/Phone Numbers/Email Addresses _____

Student allergies:

Parent comments/questions: