



# **Biology 12 Course Outline Winter 2026**

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## **Course Overview:**

In this course, we will explore the intricate and fascinating world of the human body. Our study will revolve around three big ideas to help us understand how the body functions and responds to environmental changes. The first is homeostasis, which is maintaining a stable internal environment through various physiological processes. The second is gene expression and protein synthesis, which involves the complex interaction between genes and the environment, producing proteins that carry out vital functions in the body. The third is organ system interrelationships to maintain homeostasis and how disruptions in one system can affect the function of others, leading to disease and dysfunction. By the end of the course, students will have gained a comprehensive understanding of these three big ideas and the physiological processes that govern the human body.

**BIG IDEA 1:** Homeostasis is maintained through physiological processes.

Biomolecules; metabolism; enzymes; feedback loops; transports across cell membranes.

**BIG IDEA 2:** Gene expression, through protein synthesis, is an interaction between genes and the environment.

DNA; gene expression; proteins and their relationship to the structure and function of all cells; genomics and biotechnology.

**BIG IDEA 3:** Organ systems have complex interrelationships to maintain homeostasis.

Micro to macro organization; organ systems structural and functional interdependence; maintenance of homeostasis; lifestyle differences and their effects on human health; a holistic approach to health; disease as an imbalance in homeostasis.

## **Course Materials:**

Students are required to bring a binder, notebook, pens, pencils, and the Biology 12 textbook to every class.

## **Class Participation:**

Active daily engagement and participation are expected and will be assessed using a participation rubric. Students are encouraged to contribute respectfully to discussions and learning activities.

## **Attendance Policy:**

Students are expected to arrive on time and prepared to participate in class.

- Arrival within 5 minutes after the scheduled start time will be recorded as late.
- Arrival 15 minutes after the scheduled start time will be recorded as absent (late).

If you are absent, it is your responsibility to check Microsoft Teams for any notes, handouts, or announcements. Missed assignments must be completed and submitted in a timely manner to be eligible for full credit.

**Language Policy (English-Only):**

English is the language of instruction and communication in this classroom. Students are expected to use English at all times during class activities, discussions, and group work to support academic language development and ensure inclusive participation.

**Academic Honesty Policy:**

All submitted work must be original and completed with integrity. Academic dishonesty, including copying or plagiarism, will result in consequences such as a mark of zero or no credit for the assignment.

**Technology Policy:**

The use of technology, including cell phones and personal devices, is permitted only at the discretion of the teacher and for educational purposes.

**Grading:**

<b>Coursework</b>	<b>Value</b>
Participation	5%
Exit ticket	5%
Quizzes	20%
Worksheets and Labs	20%
Projects/Presentations	10%
Unit Tests	20%
Final Exam	20%
<b>Total</b>	<b>100%</b>

**Final Reminder:**

This course is an opportunity not only to pass, but to reach your full potential. Show up prepared, put in honest effort, and ask for help when you need it. If you stay committed and keep trying, you can succeed and be proud of how much you grow.