

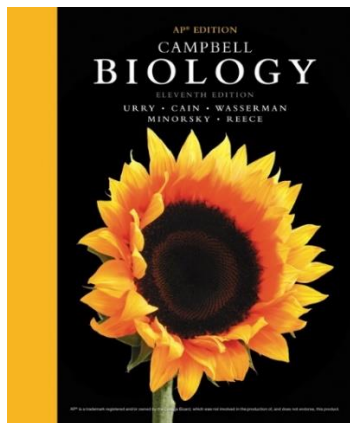
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DON BOSCO TECHNICAL INSTITUTE MISSION STATEMENT

Don Bosco Technical Institute is dedicated to creating leaders in engineering, science, and technology by presenting opportunities for real world experience that provide graduates an edge in university studies and career development. Established in 1955, Bosco Tech is a college preparatory Catholic high school guided by the educational philosophy of St. John Bosco and offers challenging academic exploration through project-based learning.

DBTI EXPECTED SCHOOL-WIDE LEARNING RESULTS

- A Bosco Tech graduate is . . .
- . . . spiritually aware.
 - . . . technologically distinguished.
 - . . . an emerging leader.
 - . . . academically prepared.
 - . . . an effective communicator.
 - . . . a responsible citizen.



REQUIRED TEXTBOOK

Title: AP[®] Edition, Campbell Biology, Eleventh Edition

Authors: Lisa Urry, Michael Cain, Steven Wasserman, Peter Minorsky, Jane Reece

Publisher: Pearson

Year: 2018

ISBN-13: 978-0-13-443369-1

Please make sure the book purchased has the correct ISBN-13. Other textbooks and editions will not be compatible with this course. ISBN-13: 978-0-13-443369-1

COURSE PHILOSOPHY

AP Biology is equivalent to **two semesters (or three quarters) of college level biology for science majors at a four-year university**. This AP Biology course is designed to offer students a solid curriculum in introductory college-level biology, and the course focuses on enduring conceptual understandings and the biological content that supports them. Science practices are employed to help students utilize inquiry-based learning that maximizes depth of learning. Therefore, the course is structured around big idea statements, enduring understandings, and science practices that allow students opportunities to develop an appreciation for the science of biology and to identify and understand unifying principles within a diversified biological world. The process of inquiry and the development of critical thinking skills are important components of my AP Biology course.

AP BIOLOGY COURSE INTRODUCTION AND OVERVIEW

The AP course is structured around **four big ideas**, enduring understandings within the big ideas, and essential knowledge within the enduring understandings. Students are given opportunities to develop skills utilized by biologists as they employ the science practices throughout the course. The course is organized into **eight units** of instruction.

Units of Instruction:

<u>UNITS</u>	<u>AP EXAM WEIGHTING</u>
Unit 1: Chemistry of Life	8-11 %
Unit 2: Cell Structure and Function	10-13 %
Unit 3: Cellular Energetics	12-16 %
Unit 4: Cell Communication and Cell Cycle	10-15 %
Unit 5: Heredity	8-11 %
Unit 6: Gene Expression and Regulation	12-16 %
Unit 7: Natural Selection	13-20 %
Unit 8: Ecology	10-15 %

The Big 4 Ideas (and how they are spiraled through the units):

<u>BIG IDEA</u>	<u>SUMMARY</u>	<u>UNITS</u>
Big Idea 1: Evolution (EVO)	The process of evolution drives the diversity and unity of life	Units 2, 5, 7, 8
Big Idea 2: Energetics (ENE)	Biological systems use energy and molecular building blocks to grow, reproduce, and maintain dynamic homeostasis.	Units 1, 2, 3, 4, 8
Big Idea 3: Information Storage and Transmission (IST)	Living systems store, receive, transmit, and respond to information essential to life processes	Units 1, 4, 5, 6, 8
Big Idea 4: Systems Interactions (SYI)	Biological systems interact, and these systems and their interactions exhibit complex properties	Units 1, 2, 3, 5, 7, 8

Scientific Practices:

The scientific practices form the basis of many tasks for AP Biology Exam and will be developed throughout your AP Biology course. These are the skills colleges and universities typically expect you to master to qualify for college placement. Here are the weighting that will be used on the multiple-choice portion of the exam.

	<u>SCIENCE PRACTICE</u>		<u>AP EXAM WEIGHTING</u>
1	Concept Explanation	Explain biological concepts, processes, and models presented in written format.	25-33%
2	Visual Representations	Analyze visual representations of biological concepts and processes.	16-24%
3	Questions and Methods	Determine scientific questions and methods.	8-14%
4	Representing and Describing Data	Represent and describe data.	8-14%
5	Statistical Tests and Data Analysis	Perform statistical tests and mathematical calculations to analyze and interpret data.	8-14%
6	Argumentation	Develop and justify scientific arguments using evidence.	20-26%

UNDERSTANDING THE AP BIOLOGY EXAM

The AP Biology Exam takes 3 hours and includes both a 90 minute multiple-choice section and a 90-minute free-response (essay) section that begins with a 10-minute optional reading period. The multiple-choice section will be one-half of your AP Biology Exam grade, and the free response will account for the other half. Both sections include questions that assess students' understanding of the Big Ideas, Enduring Understandings, and Essential Knowledge statements. The exam is designed to measure students' knowledge and understanding of modern biology; students should be prepared to recall basic facts and concepts, to apply scientific facts and concepts to particular problems.

For more information on AP Biology Course and Exam Description please visit:

<https://apcentral.collegeboard.org/>

STUDENT PREPARATION FOR AP BIOLOGY EXAM

In order to do well and pass the AP Biology exam students will need to put in a considerable amount of time and effort **independently** of the instruction and assignments assigned in class. This is a **college level course** and **students are expected to read** their Campbell Biology textbook with regular frequency to keep up with class material and instruction. I strongly recommend students put in two to three of hours on the weekend studying each week leading up to the exam. I also strongly recommend students purchase a AP Biology test prep book of their preference from a local bookstore. I recommend they browse through a few different ones in person before making a final decision on the one they want to purchase.

ACADEMIC INTEGRITY POLICIES & PROCEDURES

• DBTI values academic integrity. DBTI students should uphold that value, and avoid academic misconduct and its consequences. Academic misconduct is any act that improperly distorts (or could distort) a student's grades or other academic records:

- **Cheating** - Fraud, deceit, or dishonesty in an academic assignment, or using or attempting to use materials, or assisting others in using materials that are prohibited or inappropriate in the context of the academic assignment in question.
- **Facilitating Academic Misconduct** - Assisting another in violating the policy of Academic Integrity, such as taking an exam for another student or providing coursework for another student to turn in as his own effort.
- **Fabrication** - Making up data or results and recording or reporting them, including laboratory or field research results. In the context of student academic integrity, this also includes falsifying academic documents, and providing false information or testimony in connection with any investigation or hearing under this policy.
- **Plagiarism** - The appropriation of another person's ideas, processes, results, or words without giving appropriate credit. This includes the copying of language, structure, or ideas of another and attributing (explicitly or implicitly) the work to one's own efforts. Plagiarism means using another's work without giving credit.
- **Unauthorized Collaboration** - Working with others without the specific permission of the instructor on assignments that will be submitted for a grade. This applies to in-class or take-home tests, papers, labs, or homework assignments. Students may not collaborate without prior approval.
- **Interference or Sabotage** - Damaging, removing, or otherwise harming another student's work or school materials and systems to affect the academic performance of others.
- **Retaliation** - Retaliation of any kind against a person who reported or provided information about suspected or alleged misconduct and who has not acted in bad faith.

LATE POLICY

Late assignments will not be accepted except in cases of serious, documented illness or other hardship beyond the student's control. It is the responsibility of the student to plan for the on-time submission of all work.

REASONABLE ACCOMMODATIONS

Students with who require accommodations per an IEP or 504 plan in this course should contact me early and keep an open dialog of communication with me throughout the year as to how I can best assist them. Parents/Guardians if your son has an IEP or 504 plan or anything else you'd like to discuss in regards to accommodations please email me as soon as possible so we can set up a meeting: ssedky@boscotech.edu