# BIOL180

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### **Course Summary**

Course: BIOL180 Title: Introduction to Biology

Length of Course: 8

Prerequisites: N/A Credit Hours: 3

### **Description**

**Course Description:** This course introduces students to the biological systems within their associated environments. The course furnishes an understanding of biological principles and the properties of life. Topics covered in this course include the structure and function of plants and animals, cell biology principles, genetics, reproduction, development and growth, biological diversity, principles of evolution, and interactions among organisms and with their environment. Students will discuss the process of the scientific method and also demonstrate science information literacy skills through source selection and creation of a narrated presentation.

#### **Course Scope:**

This course is an introduction to the biological systems within their associated environments. It includes a basic introduction to biological systems, the interaction of these systems, and the structure and function of cells and animal organ systems. Because it is a survey course of a broad subject, it will out of necessity cover each topic with a broad brush. Specific topics will include basic principles in the study of life, cells and how they transform energy, DNA and cell reproduction, biological diversity and its evolution, anatomy and physiology of plants, anatomy and physiology of the various animal organ systems, ecology, and the biosphere. This course promises to give you a much greater understanding of the complexities that are the study of life.

## **Objectives**

The successful student will fulfill the following learning objectives:

- **CO-1** Describe the approaches used and the basic tenets of the science of biology.
- **CO-2** Identify the principles of evolution.
- **CO-3** Describe the structure and division of living cells.
- **CO-4** Explain DNA biology and how it influences cancer and other diseases.
- **CO-5** Compare and contrast the characteristics of viruses, bacteria, protists, fungi, plants, and animals.
- **CO-6** Describe the concepts of ecology, population, community and ecosystems.
- CO-7 Describe the human impact on the earth.

CO-8 Compare and contrast the basic functions, major components and the cell types found within humanorgan systems. **Outline** Week 1: **Learning Outcomes** CO-1, CO-2 Required Readings • BIOL 180 Course Project Guide • Open Stax Book: o Chapter 1 o Chapter 11 • Lecture Material • Scientific Process Material Assignments Academic Honesty Pledge Week 1 Forum Quiz 1 Week 2: **Learning Outcomes** CO-2 Required Readings Open Stax Book: o Chapter 2 o Chapter 12 Lecture Material

Scientific Process Material

#### Assignments

Week 2 Forum Quiz 2

#### Week 3:

**Learning Outcomes** 

CO-3

#### Required Readings

- Open Stax Text
  - o Chapter 3

- o Chapter 4
- o Chapter 5
- Lecture Material
- Scientific Process Material

#### Assignments

Assignment 1—Annotated Bibliography Week 3 Forum Quiz 3

#### Week 4:

**Learning Outcomes** 

CO-3, CO-4

#### Required Readings

- Open Stax Text:
  - o Chapter 6
  - o Chapter 7
  - o Chapter 8
- Lecture Material
- Scientific Process Material

#### Assignments

Week 4 Forum Quiz 4

#### Week 5:

Learning Outcomes

CO-4, CO-5

#### Required Readings

- Open Stax Text
  - o Chapter 9
  - Chapter 10
- Lecture Material
- Scientific Process Material

#### Assignments

Assignment 2: The Outline Week 5 Forum Quiz 5

#### Week 6:

**Learning Outcomes** 

CO-5

#### Required Readings

- Open Stax Text
  - o Chapter 13
  - o Chapter 14
  - o Chapter 15
- Lecture Material
- Scientific Process Material

#### Assignments

Week 6 Forum Quiz 6

#### Week 7:

#### **Learning Outcomes**

CO-3, CO-8, CO-6

#### Required Readings

- Open Stax Text
  - o Chapter 16
  - o Chapter 19
- Lecture Material
- Scientific Process Material

#### Assignments

Assignment 3—The Presentation Week 7 Forum
Quiz 7

#### Week 8:

#### **Learning Outcomes**

CO-6, CO-7

#### Required Readings

- Open Stax Text
  - o Chapter 20
  - o Chapter 21
- Lecture Material
- Scientific Process Material

#### Assignments

Week 8 Forum Quiz 8

### **Evaluation**

#### The grading will be based on the following:

- Eight Forum Assignments
- Eight Online Quizzes (lowest grade dropped)
- Three Part Course Project

Detailed directions on each of these assessments are provided in the classroom.

#### **Grading:**

Name Grade %

#### **Materials**

**Book Title:** Concepts of Biology - e-book available online, link provided inside the classroom in the Lessons

section

Author: OpenStax College

**Publication Info:** 

**ISBN:** 9781938168116

#### **Required Technology**

- See the Technology Requirements section of the undergraduate catalog for the minimum hardware and software requirements.
- Microsoft Office 365 is available to APUS students for free. To sign up, visit
   http://products.office.com/en-us/student. If you have questions about accessing the software, please
   contact Classroom support at classroomsupport@apus.edu.

#### **Course Guidelines**

#### Citation and Reference Style

 Attention Please: Students will follow the APA Format as the sole citation and reference style used in written work submitted as part of coursework to the University. Assignments completed in a narrative essay or composition format must follow the citation style cited in the APA Format.

#### **Tutoring**

Tutor.com offers online homework help and learning resources by connecting students to certified
tutors for one-on-one help. AMU and APU students are eligible for 10 free hours\* of tutoring provided
by APUS. Tutors are available 24/7 unless otherwise noted. Tutor.com also has a SkillCenter
Resource Library offering educational resources, worksheets, videos, websites and career help.
Accessing these resources does not count against tutoring hours and is also available 24/7. Please
visit the APUS Library and search for 'Tutor' to create an account.

#### Late Assignments

Students are expected to submit classroom assignments by the posted due date and to complete the
course according to the published class schedule. The due date for each assignment is listed under
each Assignment.

- Generally speaking, late work may result in a deduction up to 15% of the grade for each day late, not to exceed 5 days.
- As a working adult I know your time is limited and often out of your control. Faculty may be more flexible if they know ahead of time of any potential late assignments.

#### Turn It In

Faculty may require assignments be submitted to Turnitin.com. Turnitin.com will analyze a paper and
report instances of potential plagiarism for the student to edit before submitting it for a grade. In some
cases professors may require students to use Turnitin.com. This is automatically processed through the
Assignments area of the course.

#### **Academic Dishonesty**

Academic Dishonesty incorporates more than plagiarism, which is using the work of others without
citation. Academic dishonesty includes any use of content purchased or retrieved from web services
such as CourseHero.com. Additionally, allowing your work to be placed on such web services is
academic dishonesty, as it is enabling the dishonesty of others. The copy and pasting of content from
any web page, without citation as a direct quote, is academic dishonesty. When in doubt, do not
copy/paste, and always cite.

#### **Submission Guidelines**

 Some assignments may have very specific requirements for formatting (such as font, margins, etc) and submission file type (such as .docx, .pdf, etc) See the assignment instructions for details. In general, standard file types such as those associated with Microsoft Office are preferred, unless otherwise specified.

#### **Disclaimer Statement**

• Course content may vary from the outline to meet the needs of this particular group.

#### **Communicating on the Forum**

- Forums are the heart of the interaction in this course. The more engaged and lively the exchanges, the
  more interesting and fun the course will be. Only substantive comments will receive credit. Although
  there is a final posting time after which the instructor will grade comments, it is not sufficient to wait until
  the last day to contribute your comments/questions on the forum. The purpose of the forums is to
  actively participate in an on-going discussion about the assigned content.
- "Substantive" means comments that contribute something new and hopefully important to the
  discussion. Thus a message that simply says "I agree" is not substantive. A substantive comment
  contributes a new idea or perspective, a good follow-up question to a point made, offers a response to
  a question, provides an example or illustration of a key point, points out an inconsistency in an
  argument, etc.
- As a class, if we run into conflicting view points, we must respect each individual's own opinion. Hateful
  and hurtful comments towards other individuals, students, groups, peoples, and/or societies will not be
  tolerated.

## **University Policies**

#### Student Handbook

- Drop/Withdrawal policy
- Extension Requests
- Academic Probation

- Appeals
- <u>Disability Accommodations</u>

The mission of American Public University System is to provide high quality higher education with emphasis on educating the nation's military and public service communities by offering respected, relevant, accessible, affordable, and student-focused online programs that prepare students for service and leadership in a diverse, global society.

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