This is a 16 week course. You can complete this course at your own pace provided you meet the critical dates imposed by the Extended Learning Institute and you are finished in 16 weeks. The weekly assignments are found by clicking the "assignments" button on the left side of your screen. These assignments are arranged in the order that you are required to do them and if you follow this schedule your work will be paced to finish in 16 weeks. However we have also provided you with alternate schedules that will pace your work so that you can finish the course in either 12 weeks or 8 weeks. You can find these alternate schedules in the "Overview of Assignments" folder below. If you start the course using the 8-week schedule and are unable to complete the course in that time frame, you may follow the 12 or 16 week schedule at any time.

Be sure to be aware of your critical dates found by clicking the "Critical Dates" button on the left side of your screen or found in the syllabus below and in the "Overview of Assignments."

This course is an introductory college transfer level offering designed to meet the anatomy and physiology needs of students pursuing programs in medical or paramedical careers, or a degree in physical education.

This is a shared course site. That means several sections of BIO 141 are using this site. You'll see a table below so you can be sure which instructor is your instructor.

To get started, read through each section of this syllabus carefully. Then click the ASSIGNMENTS button and begin completing the assignments. Feel free to contact us if you have questions or problems. Good luck. We hope you enjoy the course.

Course Prerequisites

Students should have an expressed interest in biology and be able to read and express themselves orally and in writing.

Course Objectives

If you complete this course and do well, you will be able to:

1. Diagram and describe the atomic structure of biologically important elements.

2. Explain the principles of chemical bonding and apply those principles to the formation of both inorganic and organic molecules.

3. Describe the composition and organization of water, acids, bases, salts, buffers, carbohydrates, lipids, proteins, and nucleic acids and explain the biological role of each.

4. Describe the fundamental principles involved in chemical reactions and apply them to specific examples.

5. List the following anatomical terminology:
   - The systems of the human body and the organs comprising each system.
   - The levels of structural organization.
   - Directional terms.
   - Body cavities and their membranes.
   - Quadrants of the abdominopelvic cavity.
   - Surface areas of the body.
   - Sectional planes of the body.

6. Diagram a typical animal cell, label the component parts and explain their functions.

7. Outline the movement of materials across the cell membrane.

8. Compare and contrast mitosis and meiosis.
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<th>Question</th>
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<tr>
<td>9</td>
<td>Diagram the types of tissues and state the function of each of the tissue types.</td>
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<td>10</td>
<td>Describe the anatomy and physiology of the respiratory system of man and related clinical disorders.</td>
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<tr>
<td>11</td>
<td>Describe the anatomy and physiology of the circulatory system of man and related clinical disorders.</td>
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<tr>
<td>12</td>
<td>Discuss the composition of human blood and the functions of each of the individual constituents.</td>
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<td>13</td>
<td>Describe the anatomy and physiology of the integumentary system of man.</td>
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<tr>
<td>14</td>
<td>Describe the anatomy of bone and cartilage and name the major bones of the skeletal system of man and their associated anatomical landmarks. Classify each of these bones according to their shape and then according to the subdivision of the skeletal system to which they belong.</td>
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<tr>
<td>15</td>
<td>List the signs, symptoms, and complications of a fracture. Then describe the different types of fractures.</td>
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<tr>
<td>16</td>
<td>List the major types of joints and their several subtypes.</td>
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<tr>
<td>17</td>
<td>List the major muscles of the muscular system and state their location, origin, insertion, action, and innervation.</td>
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<tr>
<td>18</td>
<td>List the types of muscle tissue and state their location, appearance, and physiology.</td>
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<tr>
<td>19</td>
<td>Describe the structure of the motor unit and identify the mechanism whereby the neuron activates the muscle cell and the mechanism whereby the muscle cell contracts.</td>
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Required Textbooks and Materials

Please make a hard copy of the list of course materials and take it with you when you go to the bookstore.


Your Study Guide is divided into chapters which correspond to the names and numbers of the chapters in your textbook. Each chapter is further subdivided into 4 parts - Objectives, Class Notes, Drill, and Answers to Chapter Drill. The first section, "Objectives," presents highly specific numbered objectives which identify the exact material that is going to be covered in your readings. Following the "Objectives" in each chapter is the second section, "Class Notes" which contains the answers to the course objectives and reflects what you would be writing down if you were taking notes in BIO 141 in a classroom setting. They are in outline form and indicate exactly what you are expected to know and what you are going be tested on. Accordingly, you must study these until you know them thoroughly. Following the "Class Notes" in each chapter is the third section, "Drill," which is designed to test you on how well you have learned your "Class Notes" (the answers to the objectives). You must write in the answer (in the space provided in the left margin) to each drill question. The fourth section, "Answers to Chapter Drill," provides you with the answers to all the drill questions. You must check your answers against the ones provided at the end of the chapter. If you have any wrong answers, go back and restudy that section in your "Class Notes" until you have a complete understanding of the material.


The lecture component of this course is covered in readings in this textbook. This book is designed to help you to successfully grasp the fundamental concepts of human anatomy and the inner workings of the body. It serves as background information for helping you understand and learn the "Class Notes." Take advantage of the summaries and review questions at the end of each chapter.


The interactive CD is an interactive program that provides a friendly and educational environment that allows you to: (1) navigate through body systems via detailed graphics, animations and sound; (2) explore concepts in a logical order from simple to more complex; and (3) visualize physiological processes and their relationships.

You may purchase the CD ROM through ELI or the Alexandria Bookstore. Or you may purchase a 24 month access to an online version of the same material directly from the publisher by clicking on this link: [www.aprevealed.com](http://www.aprevealed.com) and then on the Purchase button.


This accompanying lab guide helps you get the most out of the A&P Revealed software program. It contains images from the CD-ROMs (so that you can label structures that you see on-screen) and answer questions to test your understanding. Answers to the workbook exercises are available to you on your Blackboard site by clicking on the Publisher's Site button on the left side of your screen.


This book is self-paced and provides you with all the chemistry background that you will need in this class.
Discussion Boards
Discussion boards are an integral and critical part of this course.

When online instruction originated, it was noted that students would be somewhat isolated and would not be able to ask questions in a classroom setting and also wouldn't be able to benefit from the questions other students might ask the instructor, nor would they hear the answers. You discussion boards are intended to serve this purpose and are integral to the course.

This is a common course site, but each of your instructors has his/her own board. Access to the discussion boards is by clicking on the "Discussion Boards" button on the left side of your screen, and then on your instructor's name. You will find two kinds of forums on each board.

The first kind is for your use to ask and answer questions in the course. It will be titled "Ask Those Questions". If you have general content or policy questions or any comments about the course, you should post them to this board. This board is monitored by your professor and your classmates and any one can participate in it. It is meant for the free and open exchange of information. It is ungraded.

The second kind is for your professor to ask you to discuss specific information. There are four of these in this course, listed as Forum 1, Forum 2, Forum 3, and Forum 4. You will be assigned participation in them as your progress through the course. These are graded.

The discussion boards are asynchronous. That means that you can access them at your convenience anytime and read what others have asked and had answered without worrying about a set time of day to do it. You can also respond at any time.

Just a note: Do NOT try to access these boards through the communications button listed under tools on the left side of your screen. It will take you to the wrong place.