CONTACT INFORMATION:
Instructor: Dr. Shane Evans
Office: Andalusia Campus - Administration Bldg 222
Telephone Number: (Office) 881-2234
E-mail: sevans@lbwcc.edu
Office Hours: TBA
Campus Mailing Address:
  Dr. Shane Evans
  LBW Community College
  P.O. Drawer 1418
  1000 Dannelly Blvd
  Andalusia, AL 36420
Instructor's Website: http://www.lbwcc.edu/cms/page.aspx?pageid=566

COURSE NUMBER AND TITLE:
BIO 201 Human Anatomy and Physiology I

PREREQUISITES:
BIO 103

DIVISION AND DEPARTMENT:
Math/Science - Biology

SEMESTER CREDIT HOURS:
4 Credit Hours

CATALOG DESCRIPTION:
This course covers the structure and function of the human body. Included is an orientation of the human body, a study of tissues, the integumentary, skeletal, articular, muscular, and nervous systems. Dissection, histological studies, and physiology experiments are featured in the lab experience.

TEXTBOOK:
*Human Anatomy and Physiology* by Elaine N. Marieb 8th edition

*My A&P Student Access Kit* (required)
  http://www.aw-bc.com/nyaandp/

  Class Name: BIO201FALL2010EVANS
  Class ID: cm972765

TECHNOLOGY REQUIREMENTS
General requirements
• A personal computer (not WebTV) with Windows 2000 or Windows XP (computer labs are available on all three campuses)
• A VGA (or equivalent) or better monitor
• Reliable Internet access. (If using a dial-up connection, at least 28.8k modem is recommended. Slower dial-up connections will affect course performance. If you are an AOL user: You will need AOL version 7.0 or higher)
• Netscape Navigator/Communicator 7.1 higher or Internet Explorer 6.0 or higher
• Sound Card
• Most recent versions of plug-ins and viewers. These are free additions to browsers that allow students to view special course components such as video, clips, or animations.

Browsers, Plug-ins, Players and Viewers
To take full advantage of all the features in this course, be sure you have the right technology at your fingertips. This includes a good Web browser and appropriate plug-ins.

Browsers
The Web and the tools used to publish on it are changing every day. If you are using an older version of a browser that cannot handle advanced features of HTML, then some portions of this course may not work for you. We recommend that you use the latest version of Netscape Communicator, or Microsoft Internet Explorer.

Plug-ins, Players and Viewers
Browsers also use plug-ins and other helper applications to help them display Web documents. If you encounter an element (such as video or animation) that requires one of these helpers, you may see a message that your browser isn't equipped for that content type. Viewers are required to display certain file formats, such as a PowerPoint slide show. These are common plug-ins, players, and viewers that are used on the Web in general, and that may also be used in this course. We recommend that you download all of them.
• Adobe Acrobat Reader is free, and freely distributable, software that lets you view and print Adobe Portable Document Format (PDF) files.
• Apple QuickTime player is for viewing video in Apple's QuickTime format. Works with over 30 audio, video and image formats.
• Microsoft PowerPoint Viewer 97 is for viewing and printing PowerPoint presentations. Download this if you do not already have PowerPoint installed on your computer.
• Macromedia Shockwave and Flash is for viewing interactive content in various Macromedia formats.
• Real Player is for streaming audio and video content.

Technical Support
Technology Director- Greg Aplin—222-2227 jgaplin@lbwcc.edu
Blackboard--- Alan Cobb- 493-5340 agcobb@lbwcc.edu
Tegrity—Chuck White 222-2222 cwhite@lbwcc.edu
Jerry Wishum 222-8944 jwishum@lbwcc.edu
TOOLS AND SUPPLIES
Pencil

LEARNING OBJECTIVES
BIO 201 Learning Outcomes
Upon completion of BIO 201, the student will be able to:

MODULE 1
The Human Body: An Orientation
1.1. Define anatomy and physiology, and describe the various subspecialties of each discipline.
1.2. Identify the major levels of organization in living organisms.
1.3. Identify the organ systems of the human body and the major components of each system.
1.4. Explain the significance of homeostasis.
1.5. Describe how positive and negative feedback are involved in homeostatic regulation.
1.6. Use anatomical terms to describe body sections, body regions, and relative positions.
1.7. Identify the major body cavities and their subdivisions.

Tissue: The Living Fabric
4.1 Identify the four major tissue types of the body and their roles.
4.2 Discuss the types and functions of epithelial cells.
4.3 Describe the relationship between form and function for each epithelial type.
4.4 Compare the structures and functions of various types of connective tissues.
4.5 Describe the three types of muscle and the special structural features of each.
4.6 Discuss the basic structure and role of neural tissue.

Integumentary System
5.1 Describe the general functions of the integumentary system.
5.2. Describe the main structural features of the epidermis and explain their functional significance. Explain what accounts for individual and racial difference in skin, such as skin color. Discuss the effects of ultraviolet radiation on the skin and the role played by melanocytes.
5.3. Discuss the functions of the skin's accessory structures.
5.4. Describe the mechanisms that product hair and that determine hair texture and color.
5.5 Describe burns and the common forms of skin cancer

MODULE 2
Bones and Skeletal Tissue
6.1 Describe the functions of the skeletal system. Compare the structures and functions of compact and spongy bones.
6.2 Discuss the processes by which bones develop grow and account for variations in their internal structure.
6.3 Describe the remodeling and repair of the skeleton and discuss homeostatic mechanisms responsible for regulating mineral deposition.

Skeletal System
7.1 Name the components of the axial and appendicular skeletons and their functions.
7.2. Identify the bones of the skull. Discuss the differences in structure and function of the various vertebrae. Relate the structural differences between the pectoral and pelvic girdles to their various functional roles.

Joints
8.1 Distinguish among different types of joints and link structural features to joint functions. Describe the dynamic movements of the skeleton and the structure of representative articulations.

MODULE 3
Muscles and Muscle Tissue
9.1 Describe the properties and functions of muscle tissue. Describe the organization of muscle at the tissue level.
9.2 Identify the structural components of a sarcomere. Explain the key steps involved in the contraction of a skeletal muscle fiber. Compare the different types of muscle contractions.
9.3 Describe the mechanisms by which muscles obtain and use energy to power contractions. Relate types of muscle fibers to muscular performance.
9.4 Distinguish between aerobic and anaerobic endurance and explain their implications for muscular performance.

The Muscular System
10.1 Identify the principal axial muscles of the body together with their actions. Identify the principal appendicular muscles of the body, together with their actions.

Fundamentals of the Nervous System and Nervous Tissue
11.1 Describe the anatomical organization and general functions of the nervous system. Distinguish between neurons and neuroglia and compare their structures and functions.
11.2 Discuss the events that generate action potentials in the membranes of nerve cells.
11.3 Explain the mechanism of nerve impulse transmission at the synapse.
11.4 Describe the diversity and functions of neurotransmitters.

MODULE 4
The Central Nervous System
12.1 Describe the three meningeal layers that surround the central nervous system.
12.2 Discuss the structure and functions of the spinal cord.
12.3 Name the major regions of the brain and describe their functions. Locate the motor, sensory, and association areas of the cerebral cortex and discuss their functions.

The Peripheral Nervous System
13.1 Name the 12 pairs of cranial nerves; indicate the body region and structures innervated by each.
13.2 Compare and contrast stretch, flexor, crossed-extensor, and Golgi tendon reflexes.

Special Senses
15.1 Distinguish between the general senses and the special senses. Identify the receptors for the general senses, and describe how they function.
15.2 Describe the receptors and processes involved in the sense of smell. Discuss the receptors and processes involved in the sense of taste.
15.3 Identify the parts of the eye and their functions. Explain how we are able to see objects and distinguish colors.
15.4 Discuss how the central nervous system processes information related to vision. Discuss the receptors and processes involved in the sense of equilibrium.
15.5 Describe the parts of the ear and their roles in the process of hearing.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EXAM I</strong> assesses your comprehension of:</td>
<td></td>
</tr>
<tr>
<td>The Human Body: An Orientation</td>
<td>1</td>
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<tr>
<td>Tissues: The Living Fabric</td>
<td>4</td>
</tr>
<tr>
<td>The Integumentary System</td>
<td>5</td>
</tr>
<tr>
<td><strong>EXAM II</strong> assesses your comprehension of:</td>
<td></td>
</tr>
<tr>
<td>Bones and Skeletal Tissue</td>
<td>6</td>
</tr>
<tr>
<td>The Skeleton</td>
<td>7</td>
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<tr>
<td>Joints</td>
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<tr>
<td><strong>EXAM III</strong> assesses your comprehension of:</td>
<td></td>
</tr>
<tr>
<td>Muscles and Muscle Tissue</td>
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<tr>
<td>Muscular System</td>
<td>10</td>
</tr>
<tr>
<td>Fundamentals of the Nervous System</td>
<td>11</td>
</tr>
<tr>
<td><strong>EXAM IV</strong> assesses your comprehension of:</td>
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<tr>
<td>The Central Nervous System</td>
<td>12</td>
</tr>
<tr>
<td>The Peripheral Nervous System</td>
<td>13</td>
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<tr>
<td>Special Senses</td>
<td>15</td>
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</tbody>
</table>

**Grading Policy**

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Exams</td>
<td>60%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>15%</td>
</tr>
<tr>
<td>Practical Examinations</td>
<td>20%</td>
</tr>
<tr>
<td>Lab assignments</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100%</td>
</tr>
</tbody>
</table>

**Grading Scale:**

The college grading scale will be used. It is as follows:

- 100 - 90...........A
- 89 - 80...........B
- 79 - 70...........C
- 69 - 60...........D
- 59 - 0...........F
DEADLINES

Exams
There are four exams. The exams count for 60% of your grade. Each exam is worth 110 percentage points which means that you can miss a few questions and still score a 100%. This bonus rewards students who take the exam on the scheduled date and adds a small buffer against poor performance.

All students are expected to take the test on the scheduled date. If you cannot take an exam on the scheduled date, you will need to make arrangements with the instructor to take a make-up exam. Make-up exams have no bonus percentage points.

Quizzes
Frequent quizzes will be given over material recently covered in lecture and lab. There are no make-up quizzes. The lowest quiz grade will be dropped.

Laboratory Assignments and Practical Examinations
The laboratory portion of the course counts for one-fourth of your grade. A few laboratory assignments will be assigned during the semester. Each assignment will be due at the end of lab.

Three major practical examinations are scheduled for the semester. It is very important that you make every effort to take the practical examinations at their scheduled time. The practical examinations are extremely labor-intensive and take a long time to set up. Nevertheless, make-up practical examinations will be available during finals week. Please make arrangements with the instructor if needed.

Practical Examinations
Tissues and Skin Practical .........................................................5%

Bones of the Body Practical.......................................................8%

Muscle Practical .................................................................7%

<table>
<thead>
<tr>
<th>Laboratory</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Language of Anatomy/Organ Systems Overview</td>
<td>Activity</td>
</tr>
<tr>
<td>Classification of Tissues</td>
<td>Practical</td>
</tr>
<tr>
<td>The Integumentary System</td>
<td>Practical</td>
</tr>
<tr>
<td>The Bones of the Body</td>
<td>Practical</td>
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<tr>
<td>Joints</td>
<td>Activity</td>
</tr>
<tr>
<td>Skeletal Muscle Physiology: Computer Simulation</td>
<td>Activity</td>
</tr>
<tr>
<td>Gross Anatomy of the Muscular System</td>
<td>Practical</td>
</tr>
</tbody>
</table>
ATTENDANCE POLICY
In a hybrid class students are expected to accept responsibility for covering the assigned material on time. This requires a mature attitude and self-discipline. Attendance is very important to passing this class. Students who are unable to attend class regularly, regardless of the reason or circumstance, should withdraw from that class before poor attendance interferes with the student's ability to achieve the objectives required in the course.

ACADEMIC HONESTY
All students are expected to do their own work. If caught cheating on any quiz, practical, or exam the violating students will get a zero on the assignment and possible dismissal from course. This includes those who allow others to copy off them. Copying is cheating.

INCOMPLETE (I) GRADE
A grade of Incomplete (I) may be assigned when the quality of work has been passing but the student has been prevented by illness or other justifiable cause from completing the required work or taking the final examinations. A student who must miss a final examination has the responsibility of notifying the instructor prior to the examination or as soon thereafter as possible and of furnishing acceptable evidence concerning the cause of the absence upon return. If the cause is personal illness, the student should present the instructor a statement signed by the appropriate health care professional. A grade of Incomplete (I) must be cleared by the last class day of the following term or the grade automatically becomes an —F. It is the student’s responsibility to contact the instructor and to make up missed course assignments and/or examinations.

WITHDRAWAL
A student may withdraw from a course or all courses without a grade penalty up to fourteen (14) days prior to the first day of final exams for the fall and spring terms. For the summer term, students may withdraw from classes us to seven (7) days prior to the first day of final exams for each session. The final date for official withdrawal is printed in the college calendar and published in each class schedule. A student who receives Title IV Federal Financial Aid (ex. Pell Grant) may have to repay funds if he/she withdraws prior to completing 60 percent of the semester. See the Director of Financial Aid for more specific information.

AMERICANS WITH DISABILITIES
LBW Community College complies with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. If you have a disability that might require special materials, services, or assistance, or if you have any questions relating

<table>
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<tr>
<th>Neurophysiology of Nerve Impulses: Computer Simulation</th>
<th>Activity</th>
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<tr>
<td>Sheep Brain Dissection</td>
<td>Activity</td>
</tr>
<tr>
<td>Human Reflex Physiology and Cranial Nerves</td>
<td>Activity</td>
</tr>
<tr>
<td>Special Senses</td>
<td>Activity</td>
</tr>
</tbody>
</table>
to accessibility, please contact the ADA Coordinator on the respective campuses. For TDD users in Alabama, the Alabama Relay Center is available by calling 1-800-548-2456. All materials related to compliance with the Americans with Disabilities Act are maintained by the college coordinators.

Andalusia Campus       Greenville Campus       MacArthur Campus
Bridges Anderson       Dr. Jean Thompson       Jason Cain
334-881-2247           334-382-2133 ext. 3102     334-493-3573 ext. 5363

SAFETY
Students are expected to follow all safety guidelines issued by the instructor.

OTHER
Additional course information may be announced by the instructor, and the instructor may make changes to this syllabus.