

# **Biology 15 - Anatomy & Physiology**

Spring 2005

Gavilan College

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## **Lecture & Lab: Monday and Wednesday 6:00-9:30pm, Room LS103**

Survey of Human Anatomy and Physiology will study the structure and function of the human body. This is a fast-paced course and requires your full participation. This course is designed for admission to the LVN program at Gavilan and other community college nursing programs. It is also required for the P.E. degree at Gavilan and can be used to help fulfill the GE requirement for science.

Cadavers are used in this course and it is our obligation to inform you that they are preserved in a mutagenic. Students should protect themselves properly (lab coats, gloves and face masks) when observing the cadavers or specimens. Also, it is advised that students who may have concerns (particularly pregnant students) discuss this with their physicians.

### **Required Text:**

Hole's Essential of Human Anatomy & Physiology - 8<sup>TH</sup> Ed.  
Shier, Butler and Lewis; ISBN: 0-07-235118-7

Laboratory Manual - Hole's Essential of Human Anatomy & Physiology- 8<sup>th</sup> Ed  
Terry Martin; ISBN: 0-07-235120-9

Biological Science 15: Survey of Human Anatomy & Physiology Supplement  
Mary McKenna; Available at the Gavilan Bookstore

### **Recommended Supplemental text:**

A Photographic Atlas of Human Anatomy

Human Anatomy Coloring Book and/or Human Physiology Coloring Book

### **Grading Protocol: Your grade will be based on the following:**

<b>Exams (4 @ 100pts)</b>	<b>400</b>
<b>Final Exam</b>	<b>150</b>
<b>Lab Assignments</b>	<b>175</b>
<b>Homework</b>	<b>100</b>
<b>Lab Quizzes</b>	<b>150</b>
<b>Lab Participation</b>	<b>25</b>
<b>Total</b>	<b>1000</b>

A = 90-100%
B = 80-89%
C = 68-79%
D = 55-67%
F < 54%

Four Exams: (100pts each) Exams will include material covered during lab and lecture. The exams will contain some multiple choice questions, some short answer and some lab “practical” questions. Please bring a Scan-tron 882-E form to each exam.

Final Exam: (150 pts) The final exam will contain multiple-choice, short answer and lab “practical” questions. It will be heavily weighted towards the material presented since the last exam. Bring a Scan-tron 882-E.

Lab Assignments: (~175 pts) During each lab, you will complete a laboratory assignment. I will check these off for completeness **before you leave** the lab, but you will retain them for study. Late labs (within one week of the lab) will earn half credit. Late labs will not be accepted if not turned in within a week. **You must be present to get credit for these assignments.**

Weekly Lab Quizzes: (~150pts each) Quizzes will be based on material covered during the previous week and may be multiple choice, diagrams or fill-in. The quizzes will require the Scan-tron “quizstrips” 882-ES. **NOTE: If you are late for lab and no one has finished the quiz yet, you may take it. If anyone has finished the quiz, then you are too late and will not be allowed to take the quiz.**

Homework: (100pts) Homework assignments (5-10pts each) will be drawn from the lab manual, handouts and the McKenna course supplement. They will typically be due one week from the date assigned. Since you are given ample time to complete these assignments, **NO LATE HOMEWORK WILL BE ACCEPTED. NO EXCEPTIONS!** If you are going to be absent, arrange to have it turned in early or have a classmate bring it in for you. If you cannot arrange for that, mail it, e-mail it, what ever! Otherwise, you will not get credit for the assignment. Period. (Please note that if you choose to email and item, you are responsible that it is sent in a format that is downloadable and readable)

Lab Participation: (25pts) You will start out with 25 lab participation points. You can only lose them. Once lost you cannot earn them back. It is easy to keep all of your points. You can only lose points by being late to lab (-3pts each tardy), not participating in group work, not wearing a lab coat or not wearing gloves, not being ready to start lab, leaving a messy work area, etc.

### **Extra Credit:**

Perfect attendance- (10pts) Perfect attendance means no missed labs for ANY reason and no tardies.

Study Guides “Course Objectives”- up to 5pts each (20pts) Study Guides are optional but effective tools to help prepare for an exam. Students who write down information or draw diagrams while studying for exams tend to do better than those who do not. Study guides that are written out on separate sheets are worth up to 5 points toward the exam. You may work on study guides together however, each student must turn in their own work (no photocopies or double computer printouts).

Jeopardy- up to 5pts each (20pts) In the week preceding each exam we will play “Jeopardy” in class and you will have an opportunity to earn extra credit by correctly responding to the clues.

NOTE: There will be no other extra credit or “make-up” projects as a means of raising grades. If your grade is not what you would like it to be, come see me EARLY in the semester, not at the end of the course. I cannot change your grade, ONLY YOU CAN. If you come see me early, I may be able to help you find study partners, tools and habits to improve your grades. If you wait to the end of the course, not much can be done.

### **Class Information:**

The Website: You will find the website to be a required element to this course. If you do not have access to a computer at home, please find a study partner who does or make arrangements to use a library computer to access the website at least once or twice per week. The website will contain study guides, the lecture and lab schedules, HW and reading assignments, study links and a FORUM link.

The FORUM: This is a means of communicating as a class. You must register so that you can log in at the FORUM website. Be sure to check your messages at least a couple times a week. You are responsible for any communications from me on the FORUM.

### **Important Dates**

January 28 <sup>th</sup>	Last day to add a class
February 7 <sup>th</sup>	Last day to drop w/refund
February 18-21st	Presidents Day – No classes
February 25 <sup>th</sup>	Last day to drop w/o a “W”
March 26 <sup>th</sup> -April 1 <sup>st</sup>	Spring Break- No Classes
April 21 <sup>st</sup>	Last day to drop with a “W”
May 21 <sup>st</sup>	Last day of classes
<b>May 23<sup>rd</sup></b>	<b>6-8pm Final Exam</b>

**MISSED EXAMS:** If you miss an exam (for a valid & documented reason), you will receive a grade of your lowest exam grade minus 10%. If you miss more than one exam or if you miss the final you will not pass the course.

Drop Policy: Students are responsible for dropping a class and must fill out the appropriate paperwork by the above deadline to officially drop the course. I reserve the right to drop students who have missed 2 or more exams or 3 or more labs.

Special Needs: If you need special accommodations (for learning or physical disabilities), please see me after the first class so that I can make appropriate adjustments in the class to meet your needs. You may visit the Learning Disability Center if you have any questions.

Cheating Policy: Gavilan College (and this instructor) has a strict no cheating policy. Students found cheating on class examinations, quizzes or homework may be expelled from this class.

### Biology 15 - Tentative Schedule

Week	Day/Date	Lecture/Lab Topic	Reading/Lab/HW
<b>1</b>	<b>M 1/24</b>	Introduction to Anatomy & Physiology Characteristics of Life & Homeostasis	Hole's Ch. 1
	<b>LAB</b>	Scientific Method: The Medical Exam Anatomical Terminology	Handout Martin #2 p.9-20 In class <b>Martin #2 p.17-20 due 1/31</b>
	<b>W 1/26</b>	Cell Theory, Cell Division (Mitosis) Cell Types & Organelles	Hole's Ch. 3.1, 3.2, 3.4 Review Martin Lab #6
		Chemistry & Biochemistry: Biological Molecules	Hole's Ch. 2
<b>2</b>	<b>M 1/31</b>	Cellular Metabolism: Enzymes & Energy	Hole's Ch. 4.1-4.5
	<b>LAB</b>	Microscopy: Introduction Cells, Tissues and Microbes	Martin Lab #3 & #4 MK Lab HO p.103
	<b>W 2/2</b>	Membrane Transport: How Molecules Move	Hole's Ch. 3.3 <b>HW #1 (MK) DUE</b>
	<b>LAB</b>	Osmosis & Diffusion	Handout
<b>3</b>	<b>M 2/7</b>	Introduction to Tissues: Epithelium & Connective	Hole's Ch. 5.1-5.2
	<b>LAB</b>	Histology	MK HO #3 p.114-115 Martin Lab #7
	<b>W 2/9</b>	Tissues: Muscular & Neural Introduction to Integumentary System <b>Jeopardy</b>	Hole's Ch. 4.6-4.8
	<b>LAB</b>	Histology	Hole's Ch. 5.3-5.5 Martin Lab #8 & #9
<b>4</b>	<b>M 2/14</b>	<b>EXAM I: Units 1-6</b>	<b>Study Guide Due for E.C.</b>
	<b>LAB</b>	Finish Integumentary System	Hole's Ch. 6 Martin #10
	<b>W 2/16</b>	Introduction to Skeletal System	Hole's Ch. 7.1-7.2 <b>HW #2 (MK) DUE</b>
	<b>LAB</b>	Osteotology: Cells & Growth	Martin #11, 12
<b>5</b>	<b>M 2/21</b>	<b>President's Day- NO CLASS</b>	
	<b>W 2/23</b>	Skeletal System: Organization	Hole's Ch. 7.3-7.8
	<b>LAB</b>	Axial Skeleton	Martin #13 & #14
<b>6</b>	<b>M 2/28</b>	Skeletal System: Organization	Hole's Ch. 7.9-7.13
	<b>LAB</b>	Appendicular Skeleton	Martin #15, #16 & #17
	<b>W 3/2</b>	Muscular System: Muscle Physiology	Hole's Ch. 8.1-8.4
	<b>LAB</b>	Head, Neck, Face	Martin #18-19
<b>7</b>	<b>M 3/7</b>	Muscular System: Organization	Hole's Ch. 8.5-8.8
	<b>LAB</b>	Upper Limbs, Trunk & Lower Limbs	Martin #20-22
	<b>W 3/9</b>	Nervous System: Nerve Physiology <b>Jeopardy</b>	Hole's Ch. 9.1-9.8 <b>HW #4 (MK) DUE</b>

	<b>LAB</b>	Nerves: CNS	Martin #23, #25, #26
<b>8</b>	<b>M 3/14</b>	<b>EXAM II: Units 7-10</b> Nervous System: Organization	<b>Study Guide Due for EC</b> Hole's Ch. 9.9-9.15
	<b>LAB</b>	Nerves: Sheep Brain Dissection	Martin, #27
	<b>W 3/16</b>	Somatic & Special Senses: Touch, Smell & Taste	Hole's Ch. 10.1-10.6
	<b>LAB</b>	Nerves: Reflexes, Hearing & Balance	Martin #24, #28
<b>9</b>	<b>M 3/21</b>	Special Senses: Vision & Hearing	Hole's Ch. 10.7-10.9
	<b>LAB</b>	Special Senses: Vision	Martin #29-30
	<b>W 3/23</b>	Endocrine System: Hormones	Hole's Ch. 11
	<b>LAB</b>	Anatomy of the Endocrine Glands	Martin #31
<b>10</b>	<b>3/28-4/1</b>	<b>SPRING BREAK: NO CLASSES</b>	
<b>11</b>	<b>M 4/4</b>	Cardiovascular System: Blood & Vessels	Hole's Ch. 12, Ch. 13.4 <b>HW #5 (MK) DUE</b>
	<b>LAB</b>	Blood Cells and Transport	Martin #32, #37, #38
	<b>W 4/6</b>	Cardiovascular System: The Heart & Circulation	Hole's Ch. 13
	<b>LAB</b>	Heart Anatomy & Major Blood Vessels	Martin #35, #36, #39
<b>12</b>	<b>M 4/11</b>	Respiratory System: Physiology	Hole's Ch. 16.1, 16.5-16.6
	<b>LAB</b>	Lung Function	Martin #44
	<b>W 4/13</b>	Respiratory System: Anatomy <b>Jeopardy</b>	Hole's Ch. 16.2-16.4
	<b>LAB</b>	Lung Anatomy	Martin #43
<b>13</b>	<b>M 4/18</b>	<b>EXAM III: Unit 11-14 &amp; 17</b> Lymphatic System	Study Guide Due for EC Hole's Ch. 14.1-14.5
	<b>LAB</b>	Anatomy of Lymphatic System	Martin #40
	<b>W 4/20</b>	Immune System	Hole's Ch. 14.6-14.9 <b>HW #6 (MK) DUE</b>
	<b>LAB</b>		
<b>14</b>	<b>M 4/25</b>	Digestive System: Physiology	Hole's Ch. 15.1-15.10
	<b>LAB</b>		Martin #41
	<b>W 4/27</b>	Digestive System: Nutrition	Hole's Ch. 15.11
	<b>LAB</b>		Martin #42
<b>15</b>	<b>M 5/2</b>	Urinary System: Anatomy	Hole's Ch. 17.1-17.2 <b>HW #7 (MK) DUE</b>
	<b>LAB</b>		Martin #45
	<b>W 5/4</b>	Urinary System: Physiology	Hole's Ch. 17.3-17.4
	<b>LAB</b>		Martin #46
<b>16</b>	<b>M 5/9</b>	Male Reproductive System STD's	Hole's Ch. 19.1-19.3
	<b>LAB</b>	Male Reproductive Anatomy	Martin #47
	<b>W 5/11</b>	Finish STD's	Hole's Ch. 19.4-19.8

		Female Reproductive System	
	<b>LAB</b>	Female Reproductive Anatomy	Martin #48
<b>17</b>	<b>M 5/16</b>	Pregnancy, Birth & Development	Hole's Chapter 20 <b>HW #8 (MK) DUE</b>
	<b>LAB</b>	Development & Review	
	<b>W 5/18</b>	Parasites & Pathologies <b>Jeopardy</b>	
	<b>LAB</b>	Microbiology & Review	
	<b>M 5/23</b>	<b>Final Exam: Units 15, 16, 18, &amp; 19</b> <b>6:00-8:00pm</b>	<b>Study Guide Due for EC</b>