

Course Code & No. - Section: BIOL 331/335- Section 1
Course Title (Credits): Anatomy and Physiology I (3)/ A&P I Lab (1)
Term & Year: Fall / 2014
Course Ref. No. (CRN): 80052, 80053

Instructor: Dr. Debi Walker
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Office: Tables in front of TCES Lab Rooms
Office Hours: By appointment

Class Meeting Time: Lecture MW 5:30 – 6:45pm; Lab W 1:00 – 3:45 pm
Location: Lecture CSC 206 Lab TCES 204 (Biology Lab)

Prerequisites: Biology 101, 102
Corequisites: BIOL 335 is a corequisite for BIOL 331

Course Description

BIOL 331: Study of cell physiology and histology, and skeletal, muscular, nervous, and sensory systems with accompanying laboratory.

BIOL 335: Corequisite lab for Anatomy and Physiology I.

Student Outcomes

- Students mastering the material of Anatomy and Physiology I will have sufficient understanding and recall of facts and concepts of cell structure and function, tissue structure and physiology, and the structure and function of skeletal, muscular, nervous and sensory systems to score well on related topics on pre-professional exams, such as the MCAT and GRE, and to be successful at related post-graduate course work.
- Students will demonstrate skill at reading and comprehending science texts.
- Students will demonstrate ability to answer questions about anatomy and physiology like those on standardized exams (such as the GRE, MCAT, or senior exit exams).
- Students will communicate about and critique scientific concepts in paragraph form.
- Students will demonstrate skill at critical analysis, logic, and problem solving involving facts and concepts of cell structure and function, tissue structure and physiology, and the structure and function of skeletal, muscular, and nervous systems.
- Students will demonstrate mastery in basic compound (brightfield) microscopy techniques.

Methods of Assessing Student

Mastery of Anatomy and Physiology I material, writing, and laboratory skills will be assessed through:

- Homework assignments coordinated with each text chapter
- Exams (covering 3 to 4 chapters) in multiple choice, matching, true or false, and short answer format
- A comprehensive final exam in multiple choice, matching, true or false, and short answer format
- Written laboratory assignments
- Laboratory practical exams

Instructional Strategies

In order to communicate a body of knowledge, concepts, and skills in anatomy and physiology, Anatomy and Physiology I and Lab will utilize:

- Lectures and lecture discussions
- Laboratory exercises coordinated with lecture topics
- Written homework assignments coordinated with lecture topics to encourage prompt and thorough reading of the text
- Study questions will be provided regularly
- Quizzes to provide feedback to students about their understanding of material before the exams.
- Students are encouraged to use the publisher's companion web site to accompany the text, including tutorials, quizzes, and links to related sites.
- Student study groups outside of class time are greatly encouraged!
- Course material and resources will be available on a Moodle page.

Required Texts and Materials

- 1) Marieb, Anatomy and Physiology, 5th ed, Pearson Benjamin Cummings, ISBN: 9780321860781.
- 2) Marieb, Human Anatomy & Physiology Lab Manual, Cat Version, 11th ed, Update with Access to PhysioEx 8.0, PAL 2.0, Pearson Education, Inc, 2014. ISBN: 9780321821843.
- 3) Internet access. A lap-top computer is recommended, as some laboratory exercises will include on-line activities. Students can complete the course using internet access available in SNC's Prim Library.

Supplemental Materials

- 1) The course syllabus, handouts, and other material will be posted on a Moodle site at www.sierranevada.moodle.com.
- 2) The publisher supports a companion Web site to the text at www.anatomyandphysiology.com. This well-designed resource includes animations, tutorials, quizzes, and links to related web sites. A fast internet connection is recommended.
- 3) Students will be required to use a computer with internet access for course and lab assignments. A laptop computer that can be brought to class is recommended. Students can complete the coursework on computers available in the SNC Prim Library.
- 4) Current articles related to class topics will be assigned as supplemental reading. These will be distributed in class and posted on the course Moodle site.
- 5) Marieb, Anatomy & Physiology Coloring Workbook: A Complete Study Guide, 9/E, Pearson Benjamin Cummings, 2009. ISBN: 9780805347784. This optional text, written by our text author, provides exercises to aid students in remembering anatomy and physiology vocabulary and concepts.
- 6) Netter, Atlas of Human Anatomy – This is an excellent book of anatomy organized by body region. This will definitely be useful for any students who plan to pursue a career in healthcare.
- 7) Laboratory materials (optional): Colored pencils for sketching histological slides

Attendance

Success in Anatomy and Physiology I and Lab is largely dependent on faithful attendance at class and lab periods. Thus, laboratory reports will be accepted only from students who have attended and performed the laboratory exercise. Students MAY NOT be allowed to make up missed labs and exams. Since life happens, students may seek to excuse an absence and have an opportunity to do make up work for missed points. Absences will be excused for illness (of the student or a dependent) with a physician's excuse, military duty, a family bereavement, or at the instructor's discretion. Excused absences will NOT be granted for employment conflicting with class times, vacations, or oversleeping.

Class Requirements

Cell phones and pagers must be turned off or set to 'silent mode.'"

Sanctions for Cheating and/or Plagiarism

Plagiarism is "passing off a source's information, ideas, or words as one's own by omitting to acknowledge the sources." This refers to all sources of information, including the Internet, the text, the instructor, and classmates. Examples of plagiarism include: copying the glossary definition of a term for a vocabulary assignment, cutting text from an internet source and pasting it into your answer to a homework question, copying a lab partners answer to a question for a laboratory report. As long as you answer questions, define terms, and write sentences in your own words, you are not guilty of plagiarism.

The following policy regarding cheating and plagiarism has been established at Sierra Nevada College:

- First offense: Student receives a failing grade for that assignment; the instructor notifies the advisor and the Vice President of Academic Affairs. Students identified as committing an act of plagiarism will be referred to Student Services.
- Second offense in the same class or any other class that semester or subsequent semesters: Student receives a failing grade for the class where the second offense takes place; the instructor notifies the advisor and the V. P. of Academic Affairs.
- Third offense: The student is expelled from Sierra Nevada College. The instructor notifies the advisor and the Vice President of Academic Affairs.

The Honor Code

The faculty of SNC believes students must be held to high standards of integrity in all aspects of college life in order to promote the educational mission of the College and to encourage respect for the rights of others. Each student brings to the SNC community unique skills, talents, values and experiences which, when expressed within the community, contribute to the quality of the educational environment and the growth and development of the individual. Students share with members of the faculty, administration and staff the responsibility for creating and maintaining an environment conducive to learning and personal development, where actions are guided by mutual respect, integrity, responsibility and trust. The faculty and students alike must make diligent efforts to ensure high standards are upheld by their colleagues and peers as well as themselves. Therefore faculty and students accept responsibility for maintaining these standards at Sierra Nevada College and are obligated to comply with its regulations and procedures, which they are expected to read and understand.

Consequences of Violating the Student Honor Code

SNC students and faculty share the responsibility for maintaining an environment of academic honesty. Thus, all are responsible for knowing and abiding by the SNC Faculty/Student Honor Code published in the current SNC Catalog. Faculty are responsible for presenting the Honor Code and the consequences of violating it to students at the start of their classes AND for reporting all incidences of academic dishonesty to the Provost. Students are responsible for knowing what constitutes CHEATING, PLAGIARISM and FABRICATION and for refraining from these and other forms of academic dishonesty. Violations of the Honor Code become part of a student's academic record.

- 1st Offense: Student receives a zero for assignment/exam and counseling with faculty on the honor code, consequences for violating the honor code, and the value of academic honesty in learning.
- 2nd Offense: Student fails course and receives counseling with faculty on the honor code, consequences for violating the honor code, and the value of academic honesty in learning.
- 3rd Offense: Student is expelled.

Grading Policy

Since BIOL 331 and 335 are co-requisites, and the material of each is so integral to the other, assignments from each will contribute to an overall point total and the same letter grade will be awarded to both courses. The grading is based on a 1000-point scale, with 75% of points from BIOL 331 and 25% from BIOL 335.

For grades A through C:

If your grade is within 1 % point of a grade above, (e.g. 88.5 rounds up to 89) you will receive the higher grade with a minus (e.g. A-).

If your grade is within 2 points of a grade above (e.g. 87.5 rounds up to 88) you will receive the lower grade with a plus (e.g. B+).

For grades D & F: **No plus or minus scale is applied.**

Grade	%	POINTS
A	90-100%	895-1000
A-	88.5-89.4%	885-894
B+	87.5-88.4%	875-884
B	80-87.4%	795-874
B-	78.5-79.4%	785-794
C+	77.5-78.4%	775-784
C	70-77.4%	695-774
C-	68.5-69.4%	685-694
D	60-68.4%	595-684
F	<60%	<595

BIOL 331	Points Each	Total Points Possible
Homework Review Q's (10)* <i>* Optional to offset final exam weight on grade</i>	(10)	(100)
Quizzes (4)	25	100
Exams (4)	100	400
Comprehensive Final Exam	250 (150)	250 (150)
BIOL 335		
Lab Reports (12 best of 14)	15	180
Lab Practicals (2)	35	70
Total		1000

Description of Assignments and Exams:

Homework: Students are assigned homework to encourage prompt reading of the text and review of class material, and to provide feedback about students' understanding of important concepts before the exams. Assigned chapter problems and due dates are posted in the syllabus packet and on the Moodle site, and will usually be posted on the whiteboard in class before homework is due. A student's 12 best homework scores will count toward the grade. Homework may be hand-written (if legible) or typed (hard copy). Emailed homework is not accepted at this time.

Exams: Four exams will cover material from the previous three to four chapters. Exams include multiple choice questions, since this format is used on standardized exams, such the GRE and MCAT. Other questions may include short answer, matching, genetics problems, or true-false formats. Make-up exams will not be given without an excused absence. Students will have hard copy exams.

Quizzes: Four hard copy quizzes covering material from two or three chapters will be given at the beginning of lab or class periods indicated on the running schedule of classes for BIOL 331. The purpose of the quizzes is to encourage students to keep up on reading and studying, and to provide feedback about students' understanding of the material before the exams. Students will NOT be given extra time for a quiz if tardy, and no make-up quizzes will given.

Final Exam: A comprehensive final exam with a format similar to the four exams will be given at the time scheduled by the SNC registrar. The final exam date, day, and time will be announce in class and posted on the Moodle site as soon as the SNC Fall 2008 final exam schedule is published. The entire SNC final exam schedule will be posted on the SNC web site at a link on the "Academics" menu. Make up exams available only with excused absence. Student must procure an exam proctor for any make up given.

Lab Reports: Students will turn in "Review Sheet" exercises from the laboratory manual as laboratory reports. The 12 best lab report scores will count toward the student's grade. In addition, the instructor will check students' lab manuals before they leave the classroom to make sure that students also answered questions within the laboratory exercises.

Lab Practical Exams: Two lab practical exams will test students' laboratory skills, familiarity with the experiments done, data interpretation, observational skills, and the main concepts presented in lab exercises. Students will be held accountable for all lab exercises, whether or not they have turned in corresponding lab reports. The second lab practical exam will take place at the final exam time scheduled for BIOL 335. There are no make-ups for lab practicals.

Due dates and late work: Homework and laboratory assignments are designed to help students learn the material and provide feedback before periodic examinations. Accordingly, the instructor will adhere strictly to following late work policy:

- Assignments are due at the BEGINNING of the class period assigned as the due date. Work turned in after class on the due date will be considered one day late.
- Due dates are listed on the running schedule of classes for BIOL 331 and 335, and on any handouts describing the assignments. The running schedule and all assignment handouts are posted on the class Moodle site.

- Late work will be accepted, HOWEVER, 10% of the possible points will be deducted for each CALENDAR day that the work is late. (Work handed in at the end of the class period will be considered late by one calendar day.)
- Work that is more than seven calendar days late will NOT be accepted.
- If a student anticipates an absence on a date that work is due, it is the student's responsibility to get the work to the instructor on or before the due date.
- Students may submit late work by e-mail if it is being handed in on Tuesday, Thursday, Friday, Saturday or Sunday as I will not be on campus on those days. It is the student's responsibility to ensure that e-mailed work has been received by the instructor; students should contact the instructor if a reply to e-mailed assignments is not returned within 24 hours. (48 hours over the weekend). Email to dwalker2@sierranevada.edu.
- Extra Credit will NOT be accepted late.

Midterm grades: Midterm grades will be filed Monday, October 20, 2014 and will reflect all work through Wednesday October 15, 2014.

Extra credit: The content of extra credit assignments is designed to provide additional information related to course topics. Extra credit assignments may be used to make up points lost due to absences and to supplement a student's point total to earn the next higher grade. Students may earn up to 50 points in extra credit (5% of total points possible). There are several options for earning extra credit, with point values assigned commensurate with the amount of work involved. These will be posted on the class Moodle site. If more than 50 points of extra credit are accrued, the maximum of 50 points will be assigned to a student's score. All extra credit is due by Friday, November 21, and will NOT be accepted as late work after that time. Some extra credit options have earlier due dates.

ADA Statement

In accordance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973, students with a documented disability are eligible for support services and accommodations. If a student wishes to request an accommodation, please contact the Director of Academic Support Services, Henry Conover, at (775) 831-1314 x7534, hconover@sierranevada.edu, office in Prim Library: PL-304.

The Sierra Nevada College Mission Statement:

Sierra Nevada College graduates will be educated to be scholars of and contributors to a sustainable world. Sierra Nevada College combines the liberal arts and professional preparedness through an interdisciplinary curriculum that emphasizes entrepreneurial thinking and environmental, social, economic and educational sustainability.

The Core Themes: Four core themes from the SNC mission are woven through all courses and the life of the community at SNC.

Liberal Arts

Professional Preparedness

Entrepreneurial Thinking

Sustainability

The SNC Email System

The SNC email system is the official communication vehicle among students, faculty members and administrative staff and is designed to protect the confidentiality of student information as required by the Family Educational Rights and Privacy Act of 1974 Act (FERPA). Students should check their college email accounts daily during the school year.

Students have a right to forward their SNC e-mail to another e-mail account (for example, @hotmail or @gmail). However, confidentiality of student information protected by FERPA cannot be guaranteed for SNC e-mail forwarded to an outside vendor. Having email redirected does not absolve a student from the responsibilities associated with official communication sent to his or her SNC email account.

Prim Library Resources

Using the library's resources effectively (not just internet resources) contributes to developing each of SNC's core themes by exposing students to high quality academic resources, diverse opinions, new ideas, and a future that includes building on a liberal arts education. In this course, you will be expected to utilize the library's resources (either on-site or remotely) as you complete your assignments.

Prim Library Resources for Research Methods include, but are not limited to:

1. Books (can be checked out):
 - a. In general, books related to biology have Library of Congress Classification numbers ranging from QH through RC. Books about biotechnology have LCC numbers beginning with TP. However, you will find books related to our course with other LCC numbers, so search the Prim Library Catalog using key words related to the topic that you are researching.
 - b. Robson C. How to do a research project: a guide for undergraduate students. Oxford (UK): Blackwell Publishing; 2007. LCC number LB 2369.R575 2007. Although written for students doing research in the social sciences, with examples from history, psychology, and humanities, this is an excellent discussion of the research process equally applicable to the natural sciences.
 - c. Laake P, Haakon BB, Olsen BR. Research methodology in the medical and biological sciences. Amsterdam: Academic; 2007. LCC number: NetLibrary Click on web link in Prim Library electronic database for books to access full-text. This English translation of a Danish text has a general introduction to research methods that is very easy to understand. The discussion of ethics in research with human and animal subjects is especially good. Specific methods used in medical and molecular biology research are then described. This is an eBook that can be read on any device that can access the Prim Library electronic catalog for books.
 - d. Lipson C. Cite Right: a Quick Guide to Citation Styles. Chicago: University of Chicago Press; 2006. LCC number PN171. F56L55 2006. Includes a section on CSE style.
2. Electronic databases (for peer-reviewed primary source research articles, secondary source reviews, newspaper EBSCO: Academic Search Premier, Environment

Complete, General Science Collection, GreenFILE, Health Source, Newspaper Source, and TOPICsearch; BioOne; and GREENR.

3. Hardcopy periodicals: Prim Library has current subscriptions for Science, New Scientist, Science News, Scientific American, and National Geographic Magazine. Any of these are likely to have secondary source articles about biology topics written for educated people who are not necessarily scientists. You will find these easy to read and articles will include references to primary source articles. Full-text articles from many more periodicals are available through the electronic databases.
4. Lib Guides: <http://Libguides.sierranevada.edu> These web pages contain instructions about how to use resources available at Prim Library, Prim Library resources for biology topics, how to evaluation the appropriateness of information from the internet for a research paper, how to cite sources, and other topics related to finding and using information.

Class Schedule

Anatomy and Physiology I							
Week	Date	Day	Reading	Topic	Work Due	Lab Topic	Lab Report (Due in Lab)
1	18-Aug	M	Syllabus; Chapter 1	Introduction to BIOL 331/335 The Human Body: An Orientation		Ex 1: Language of Anatomy Ex 2: Activity 5-Organ Systems	
	20-Aug	W	Chapter 3	Cells: The Living Units	CH 1		
2	25-Aug	M	Chapter 3	Cells: The Living Units		Lab Safety Ex3: Microscopy Ex 4: Cell Anatomy & Division	Exs 1 & 2
	27-Aug	W	Chapter 4	Quiz 1 Chapters 1 & 3; Histology Part 1	CH 3		
3	1-Sep	M	HOLIDAY	LABOR DAY!!!!!!!!!!!!!!		Ex 6A: Classification of Tissues Ex 7: Integumentary System, Activity 1-4 & 6	EX 3&4
	3-Sep	W	Chapter 4	Histology Part 2	CH 4		
4	8-Sep	M	Chapter 5	Integumentary System		Ex 9: Overview of Skeleton Begin Ex 10: The Axial Skeleton	Ex 6A & 7
	10-Sep	W		Exam 1: Chapters 1, 3, 4			
5	15-Sep	M	Chapter 6	Bones and Skeletal Tissues	CH 5	Finish Ex 10: The Axial Skeleton Ex 11: The	Ex 9

Anatomy and Physiology I

Week	Date	Day	Reading	Topic	Work Due	Lab Topic	Lab Report (Due in Lab)
						Appendicular Skeleton	
	17-Sep	W	Chapter 6	Bones and Skeletal Tissues Part 2	CH 6		

6	22-Sep	M	Chapter 7	The Skeleton		Lab Practical 1: Exercises 1,2,3,4,6A,7,9,10,11	Ex 10&11
						LAB Ex 13: Articulations and Body Mvmts Activity 1,2,4 - 10	
	24-Sep	W	Chapter 7	The Skeleton	CH 7		
7	29-Sep	M	Chapter 8	Quiz 2 Chapter 5-7; Joints Part 1		Ex 14: Anatomy & Org Skeletal Muscle	Ex 13
	1-Oct	W	Chapter 8	Joints Part 2	CH 8		
8	6-Oct	M		Exam 2: Chapters 5-8		Ex 15: Gross Anatomy of MM Sx Begin Dissection 1: Cat Muscles	Ex 14
	8-Oct	W	Chapter 9	Muscles and Muscle Tissue Part 1			
9	13-Oct	M	Chapter 9	Muscles and Muscle Tissue Part 2		Finish: Dissection 1	Ex 15

Anatomy and Physiology I

Week	Date	Day	Reading	Topic	Work Due	Lab Topic	Lab Report (Due in Lab)
9 cont'd	15-Oct	W	Chapter 10	The Muscular System Part 1	CH 9		
10	20-Oct	M	Chapter 10	The Muscular System Part 2		Ex 17: Histology of Nervous Tissue Begin Ex 19: Gross Anatomy of the Brain and Cranial Nerves	Dissect 1
	22-Oct	W	Chapter 11	Quiz 3 Chapters 9-10 Fundamentals of the Nervous System 1	CH 10		

11	27-Oct	M	Chapter 11	Fundamentals of the Nervous System 2		Finish Ex 19: Gross Anatomy of the Brain and Cranial Nerves Dissection 2: Cat Spinal Nerves	Ex 17
	29-Oct	W	Chapter 12	The CNS 1	CH 11		
12	3-Nov	M		Exam 3: Chapter 9-11		Ex 21: Activity 3-5 ANS Ex 22: Human Reflex Physiology	Ex 19 & Dissect 2
	5-Nov	W	Chapter 12	The CNS 2	CH 12		
13	10-Nov	M	CH 13	The PNS Part 1		Ex 24: Vision	Ex 21 & 22

Anatomy and Physiology I							
Week	Date	Day	Reading	Topic	Work Due	Lab Topic	Lab Report (Due in Lab)
	12-Nov	W	Chapter 13	The PNS 2	Ch 13		
14	17-Nov	M	Chapter 14	Quiz: 4 Chapters 12-13 The ANS part 1	CH 14	Ex 25: Hearing & Equilibrium	Ex 24
	19-Nov	W	Chapter 14	The ANS part 2			
Thanks giving	24-28-November			Happy Holiday!			
15	1-Dec	M		Exam 4: Chapters 12-14		Lab Practical 2: Labs 14,15,17,19,21,22,24,25 & dissections 1 & 2.	Ex 25
	3-Dec	W	Review	Review Day			
NO CLASSES	8-Dec	M	FINALS NO CLASS	Happy Studying!			
FINAL EXAM	10-Dec	W	6:30 pm – 9:30 pm	Comprehensive Final Exam		Have a wonderful, safe, and relaxing holiday!!!	

Your completed Syllabus must then be **emailed** (as an attachment) to your Department Chair with a copy to Web site editor Schuyler Harrison (sharrison@sierranevada.edu).