Central Maine Community College

Auburn, ME 04210

Life Sciences and Allied Health Department Bio 115-01 Anatomy and Physiology I Lecture

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Course Syllabus

# COURSE DESCRIPTION

This course is designed to provide the student with in-depth theory of human anatomy and physiology. This is the first part of a two-semester course and will cover organization of the body, the chemical basis of life, support and movement, as well as the nervous system and integumentary system. Prerequisites: Students must meet the prerequisites for both ENG101 and MAT100, or permission from the instructor. Co-requisite: BIO 116. A grade of C or better must be earned in Bio 115 Anatomy and Physiology I in order to go onto BIO 117 Anatomy and Physiology II

# COURSE SPECIFICATION

Total hours scheduled for class meetings

1. Estimated hours required for outside work (reading, research, etc.) 90
2. Projected lecture, lab, clinical or shop hours 45
3. Total estimated hours of student effort (total lines 1, 2) 135
4. Credit hours assigned to the course (per catalog listing) 3

(Total hours specified in #4 divided by 45, rounded to a whole number)

# STUDENT LEARNING OUTCOMES

*Upon successful completion of the course, students should be able to:*

1. Explain the relationship between structure and function.
2. Discuss the chemical, cell, tissue, organ, and organ system levels of organization in the human body.
3. Describe the structural and functional characteristics of eukaryotic cells.
4. Define homeostasis and explain a homeostatic control mechanism.
5. Describe the characteristics used to classify tissue into one of the four major tissue types.
6. Discuss the homeostatic functions of bone.
7. List the classification of joints according to structure and function.
8. Discuss the mechanism of excitation, contraction, and relaxation of skeletal muscle tissue including relevant muscle anatomy.
9. List the various subdivisions of the nervous system and describe the division anatomy and physiology.
10. Explain the mechanism of conduction of an action potential down an axon and across a synapse.
11. Describe the central nervous system and peripheral nervous system.
12. Describe the structure and function of generalized sensory receptors.
13. Explain the structure and function of the integumentary system.
14. Discuss the core principles as they relate to the physiology of membrane transport, the skeletal, muscular, nervous and integumentary systems.
15. Use critical thinking when explaining the mechanism of homeostatic imbalances.
16. Explain the complementarity of structure and function of sub-cellular structures, cells, tissues, organs and the skeletal (including joints), muscular, integumentary and nervous systems.

# COURSE REQUIREMENTS

1. Attend and participate in class.
2. Satisfactorily complete all assignments, quizzes, and exams.
3. Complete homework on Mastering A and P.
4. A grade of C or better must be earned in Anatomy and Physiology I in order to go onto Anatomy and Physiology II.
5. Access eLearning internet site from cmconnect.cmcc.edu for learning tools, assessments, and assignments.
6. Set up and use a Pearson Mastering A and P account. Access comes with a new textbook or can be purchased separately on the Mastering site.
7. CMCC email must be used for student/instructor email correspondence.
8. There are no make-up tests or quizzes unless you have an “excused absence”.
9. An “excused absence” must be a verifiable absence and requires an email to me within 24 hours of the absence. Lack of communication will result in a zero for the assessment.
10. Make up exams must be scheduled before the next class meeting.
11. Repeated missed tests and classes will result in grade reduction.
12. If you miss a class, you are responsible for obtaining the material from another student and checking CMConnect to see if there are assignments due. If you have any questions about the missed material please email me.
13. Cell phones must be turned off unless awaiting an emergency call. No texting during lecture. You may **NOT** use cell phones during an exam. If I see you with your cell phone out during an exam, even if the phone is off, you will receive a zero on that exam.
14. Quizzes and pre-class assignments can be reopened if there were computer issues when taking them and per my discretion.
15. No-Show Policy - Failure to attend during the first two weeks of a 15-week course (one week for 8-week course) will result in a No-Show grade (NS) which is an automatic withdraw. Extended absences must be coordinated with the instructor.
16. L-Grade Policy - Three (3) consecutive weeks of absences in a 15-week course (2 weeks in an 8-week course) will result in an “L” grade. An L grade impacts GPA the same as an F grade.

# STUDENT GRADING AND EVALUATION

60% Exams (5)

10% Quizzes

10% Final exam

10% Mastering Homework

10% Pre-Class assignments

# GRADING SCALE

A 95-100; A- 90 – 94; B+ 87 – 89; B 84 – 86; B- 80 – 83; C+ 77 – 79; C 74 – 76; C- 70 – 73; D 66 – 69; F 65 or below.

# TEXTS, TOOLS, and/or SUPPLIES

Human Anatomy & Physiology: Erin C. Amerman; 2nd Edition, Benjamin Cummings, 2016. Access to Mastering A and P comes with a new book or can be purchased separately.

**Optional Learning Resource (Highly recommended)**

A Visual Analogy Guide to Human Anatomy & Physiology: Paul A. Krieger, 2nd Edition Morton Publishing Company.

# DISABILITY ACCESS STATEMENT

If you are a student with a documented disability and plan to request an academic or other accommodation, you must contact Jennifer Lyons, Disabilities Coordinator.  She may be reached at  jlyons@cmcc.edu , 755-5277 or stop by her office located in Jalbert Hall Room 13.

# AFFIRMATIVE ACTION STATEMENT

Central Maine Community College is an equal opportunity/affirmative action institution and employer. For more information, please call 207-755-5233.

# ETHICAL BEHAVIOR STATEMENT

Central Maine Community College requires all students to adhere to high standards of integrity in their academic work. Activities such as cheating on exams and plagiarizing the intellectual work of others are not acceptable and will be subject to severe disciplinary actions up to and including dismissal.

# STUDENT ACADEMIC ADVISING

1. Office hours by appointment, please email me for an appointment. My office is J523.
2. E-mail address: ddrown@cmcc.edu
3. See me about peer study groups or tutor availability.

# TOPICAL OUTLINE OF INSTRUCTION

**Please Note: See CMConnect and Mastering A&P for due date details.**

**Assignments and due dates may change**

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| **Anatomy & Physiology I** |  | **Calendar, Fall 2017** |
| **Week** | **Date** | **Lecture Topics** | **Text** | **Assignments** |
| 1 | 1/211/23 | Introduction to Anatomy & PhysiologyChemistry of Life | **Chpt. 1** | □Setup and explore Mastering □Read Chapter 1□Work on and complete homework on Chapter 1□Read Chapter 2 □Complete pre-class assignment 2 on eLearning□Work on and complete homework on Chapter 2 |
| 2 | 1/281/30 | The Chemistry of LifeThe Cell | **Chpt. 2****Chpt. 3** | □Take eLearning quiz on Chapter 1□Work on and complete homework on Chapter 2□Take eLearning quiz on Chapter 2□Read Chapter 3 □Complete pre-class assignment 3 on eLearning□Work on and complete homework on Chapter 3 |
| 3 | 2/4**2/6** | The Cell**Exam 1 Chapter 1,2,3** | **Chpt. 3** | □Work on and complete homework on Chapter 3□Take eLearning quiz on Chapter 3**Exam 1 Chapter 1,2,3** |
| 4 | 2/112/13 | HistologyHistology | **Chpt. 4** | □Read Chapter 4 □Complete pre-class assignment 4 on eLearning□Work on and complete homework on Chapter 4□Take eLearning quiz on Chapter 4 |
| 5 | 2/182/20 | Bones and Bone TissueBones and Bone Tissue | **Chpt. 6** | □Read Chapter 6 □Complete pre-class assignment 6 on eLearning□Work on and complete homework on Chapter 6□Take eLearning quiz on Chapter 6 |
| 6 | 2/25**2/27** | Articulations**Exam 2 Chapters 4,6,8** | **Chpt. 8** | □Read Chapter 7 □Work on and complete homework on Chapter 7□Read Chapter 8 □Complete pre-classassignment 8 on eLearning□Work on and complete homework on Chapter 8□Take eLearning quiz on Chapter 8**Exam 2 Chapters 4,6,8** |
| 7 | 3/33/5 | Introduction to the Nervous System & Nervous TissueIntroduction to the Nervous System & Nervous Tissue | **Chpt. 11** | □Read Chapter 11 □Complete pre-class assignment 11 eLearning□Work on homework on Chapter 11 |

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| 8 | 3/103/12 | Intro to the Nervous System & Nervous TissueThe Central Nervous System | **Chpt. 12** | □Take eLearning quiz on Chapter 11□Work on and complete homework on Chapter 11□Read Chapter 12 □ Complete pre-class assignment 12 eLearning |
| 9 | **3/17****3/19** | **NO SCHOOL-SPRING BREAK** |  | □Continue work on Chapter 12 homework |
| 10 | 3/243/26 | The Central Nervous SystemThe Central Nervous System | **Chpt. 12** | □Continue work on and finish Chapter 12 homework□Take eLearning quiz on Chapter 12 |
| 11 | **3/31**4/2 | **Exam 3 Chapters 11 & 12**The Peripheral Nervous System | **Chpt. 13** | **Exam 3 Chapters 11 & 12**□Read Chapter 13 □ Complete pre-class assignment 13 eLearning |
| 12 | 4/74/9 | The Peripheral Nervous SystemAutonomic Nervous System & Homeostasis | **Chpt.****14** | □Work on and complete homework on Chapter 13□Take eLearning quiz on Chapter 13□Read Chapter 14 □Complete pre-class assignment 14 eLearning |
| 13 | 4/14**4/16** | Autonomic Nervous System & Homeostasis**Exam 4 Chapters 13 & 14** |  | □Work on and complete homework on Chapter 14□Take eLearning quiz on Chapter14**Exam 4 Chapters 13 & 14**□Read Chapters 9 and 10 □ Complete pre-class assignment 9 and 10 eLearning |
| 14 | 4/214/23 | The Muscular SystemMuscle Tissue & Physiology | **Chpt.****9** | □Work on homework on Chapters 9 and 10 |
| 15 | 4/284/30 | Muscle Tissue & PhysiologyThe Integumentary System | **Chpt. 10** | □Work on and complete homework on Chapters 9 and 10□Take eLearning quiz on Chapters 9 and 10□Read Chapter 5 □ Complete pre-class assignment 5 eLearning |
| 16 | 5/5**5/7** | The Integumentary System**Test Chapters 9, 10, 5 & Final Exam** | **Chpt. 5** | □Work on and complete homework on Chapter 5□Take eLearning quiz on Chapter 5**Test Chapters 9, 10, 5 & Final Exam** |