

01:119:127 – Anatomy and Physiology

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Office Hours: Wednesday, 12:00 – 1:00

Course Description

Undergraduate course designed to provide a foundational understanding of the structure and function of the human body with emphasis on the homeostatic regulation of organ systems. The course includes a laboratory component that uses dissection of a cat as well as other mammalian organs.

Course Materials

Two text resources are required. The text for lecture is Seeley: Anatomy and Physiology, 13th Edition (ISBN-13: 9781260172195). The manual for lab is Marieb: Human Anatomy & Physiology Laboratory Manual, Cat Version (ISBN-13: 978-0321765581). Additional resources will be provided on SAKAI and Canvas instructional platforms.

You may elect to use earlier versions of both texts. Lecture course content parallels the Seeley text so it is essential that you use a version of the Seeley text.

Course Requirements

Lecture: four hourly exams and a cumulative final exam

Laboratory: two quizzes, midterm exam, and non-cumulative final exam

Course Purpose and Learning Goals

Anatomy and Physiology 119:127/128 is a two-semester course that includes lecture and laboratory elements. The course is required for nursing majors and is a prerequisite for many post-baccalaureate clinical programs. It provides students a thorough understanding of human anatomy and physiological function and a foundation for the understanding of disease and pathological processes that affect this function.

To achieve the forgoing, students will gain an understanding of the following concepts:

Cellular basis of life, cellular reproduction and the cell cycle

Structural organization of the human body

Microscopic anatomy of all major tissue types

Molecular basis of function in selected human systems

Functional anatomy of major organ systems

Physiological function of organ systems and their contribution to the human organism

Homeostatic regulation of physiological function

Heredity and its contribution to human physiological function

Elements of the pathophysiological process

Pathophysiological processes affecting organ systems

The development of these competencies will provide insights into pathology, disease and the clinical disciplines and contribute to the development of the critical thinking and reasoning required of individuals practicing nursing as a profession.

In conjunction, students should also understand that observable function in most systems results from integrated activity and reflects biological processes at the cellular and molecular level. Therefore, understanding the functioning of the human body requires an integrated understanding of all levels of physiological function.

The achievement of this objective requires the development of highly evolved skills and critical thinking that is ultimately transferable to complex challenges characteristic of the clinical professions. The discrete content of the course and its complexity provides an excellent system to promote and model these attributes.

Course Schedule

Lecture Syllabus

Date	Topic	Assigned Reading
8-Sep	Organizational Meeting	
12-Sep	Anatomical Organization	Chapter 1
15-Sep	Cellular Biology I	Chapter 3
19-Sep	Cellular Biology II	
22-Sep	Structural Organization	Chapter 4
26-Sep	Structural Organization	
29-Sep	Integumentary System	Chapter 5
3-Oct	Exam I	
6-Oct	Skeletal Tissue	Chapter 6 - 7
10-Oct	Axial Skeleton	
13-Oct	Appendicular Skeleton	
17-Oct	Movement	Chapter 8
20-Oct	Articulations	Chapter 8
24-Oct	Muscle Tissue	Chapter 9
27-Oct	Muscle Physiology	
31-Oct	Exam II	
3-Nov	Axial Muscles	Chapter 10
7-Nov	Axial Muscles	
10-Nov	Appendicular Muscles	
14-Nov	Appendicular Muscles	
17-Nov	Neurophysiology	Chapter 11
21-Nov	Neurotransmission	
24-Nov	Thanksgiving	
28-Nov	Neurochemistry	
1-Dec	Exam III	
5-Dec	Anatomy of the Brain	Chapter 12 - 14
8-Dec	Protective Mechanisms	
12-Dec	Spinal Cord	
12/22	Exam IV/Final Exam 12:00 – 2:30 PM	

Laboratory Syllabus

Week of:	Topic	Evaluation
5-Sep	No Laboratory	
12-Sep	Anatomical Organization and Mitosis	
19-Sep	Epithelial Tissue	
26-Sep	Connective Tissue and Skin	
3-Oct	Axial Skeleton	
10-Oct	Appendicular Skeleton	Quiz 1
17-Oct	Articulations	
24-Oct	Midterm Practical (Labs 1 – 5)	
31-Oct	Dissection of Cat Muscles	
7-Nov	Human Muscles	
14-Nov	Muscles cont.	Quiz 2
21-Nov	Thanksgiving	
28-Nov	Nervous System: Brain and Spinal Cord	
5-Dec	Final Practical (Labs 1 – 10)	

Reading List

Topic	Assigned Reading
Anatomical Organization	Chapter 1
Cellular Biology I	Chapter 3
Structural Organization	Chapter 4
Integumentary System	Chapter 5
Skeletal System: Bones	Chapter 6 - 7
Movement	Chapter 8
Articulations	Chapter 8
Muscles	Chapters 9 - 10
Nervous System Physiology	Chapter 11
Central Nervous System	Chapter 12 - 14
Autonomic Nervous System	Chapter 16

Grading

The final course grade is comprised of lecture and laboratory components and will reflect collective performance during the entire semester. There is a total of 850 points (see below for breakdown). The hourly and final exams will include multiple choice. Specific elements of grading will be discussed in more detail as the semester progresses.

Lecture	Points
Hourly Exams	400
Final Exam	200
	600
Laboratory	
Quizzes	50
Midterm Exam	75
Final Exam	125
	250
Total for Course	850

Academic Integrity Policy

Academic dishonesty is any attempt by the student to gain academic advantage through dishonest means, to submit, as his/her own work that which has not been done by him/her or to give improper aid to another student in the completion of an assignment. Such dishonesty would include, but is not limited to: submitting as his/her own a project, paper, report, test, or speech copied from, partially copied, or paraphrased from the work of another (whether the source is printed, under copyright, or in manuscript form). Credit must be given for words quoted or paraphrased. The rules apply to any academic dishonesty, whether the work is graded or ungraded, group or individual, written or oral.

Americans with Disabilities Act (ADA) Policy

Any student who has a documented disability and is in need of academic accommodations should notify the professor of this course and contact the Office of Differing Abilities Services. Accommodations are individualized and in accordance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1992.