



IMPERIAL VALLEY COLLEGE

Basic Course Information

Semester:	Fall 2024	Instructor Name:	John B. Horne
Course Title & #:	Human Anatomy – Biol 204	Email:	John.horne@imperial.edu
CRN #:	10566	Webpage (optional):	
Classroom:	2737	Office #:	2779
Class Dates:	Aug 12 – Dec 7, 2024	Office Hours:	Thursday 9:00-1:00 pm
Class Days:	Monday, Wednesday	Office Phone #:	760-355-6148
Class Times:	Lecture: 9:35 – 10:40 Lab: 10:50 – 2:00	Emergency Contact:	Department Secretary: 760 355 6155
Units:	4	Class Format/Modality:	Face-to-face

Course Description

Lecture and laboratory course designed to study the foundational principles of the human body structure at the cellular, tissue, organ, and systems level of organization, including the cat and organ dissection, study of the human skeleton, structural-functional relationships, and appreciation of related human diseases and aging.

Course Prerequisite(s) and/or Corequisite(s)

BIOL 100 or BIOL 122 or BIOL 124 or BIOL 180 or BIOL 182 - with grades of "C" or better; or, - successful completion of Intermediate Algebra or appropriate placement as defined by AB 705 and - current California LVN/RN license.

Student Learning Outcomes

Upon course completion, the successful student will have acquired new skills, knowledge, and or attitudes as demonstrated by being able to:

- 1. Display critical thought and competency in communicating information related to topics in human anatomy.*
- 2. Display knowledge of anatomy and dissection competency using mammal and/or human cadaver specimens as subjects.*

Course Objectives

Upon satisfactory completion of the course, students will be able to:

- 1. characterize the levels of structural organization in the human body and to describe regional names, directional terms, plains and sections, body cavities and abdominal regions and quadrants.*
- 2. define a cell and explain the structure and functions of its principle parts.*
- 3. identify and discuss the origin, classification, structure, location and function of four major types of tissues.*
- 4. describe the structural and functional characteristics of the various layers of the skin, the epidermal derivatives.*
- 5. describe the gross features of a long bone and the process of bone formation.*
- 6. identify all the bones of the skeleton and their important surface markings.*
- 7. describe the structural and functional classification of the joints and to describe the important characteristics of selected joints.*
- 8. describe the connective tissue components, the motor unit, the neuromuscular junction, and the microscopic anatomy of muscle tissue.*
- 9. describe how the skeletal muscles provide specific movements of the body, and identify the principal skeletal muscles of the body.*

10. describe the major surface features of the head, neck, trunk, and upper and lower extremities.
11. describe characteristics of the blood plasma and the formed elements of the blood.
12. describe the general flow of blood through the systemic and pulmonary circulation, the structural and functional features of the heart.
13. contrast the structure and functions of blood vessels and identify the major vessels in the body.
14. trace lymphatic circulation and describe the structure and functions of lymphatic tissues and organs.
15. describe the organization of the nervous system, and contrast the histological characteristics and functions of neurons and neuroglia.
16. describe the anatomy of the spinal cord, the reflexes, and the origin, composition, and branches of spinal nerves and nerve plexuses.
17. identify the principal parts of the brain and cranial nerves, and explain the formation and circulation of cerebrospinal fluid.
18. describe the components of sensations, major characteristics of sensory receptors, the sensory pathways, integration of sensory input and motor input, and the motor pathways.
19. identify the structures of the eyes and the ears, and to describe the neural pathways for olfaction, taste, vision, hearing and equilibrium.
20. compare the structural and functional differences between the somatic and autonomic nervous systems.
21. describe the location, histology, and functions of the major endocrine glands of the body.
22. identify the structures of the respiratory system and the mechanics of pulmonary ventilation.
23. identify and describe the structure and functions of the organs of the gastrointestinal tract and the accessory organs of digestion.
24. identify the features of the kidney, describe the blood supply to the kidney, and describe the location, structure and function of ureters, urinary bladder, and urethra.
25. identify and describe the structure, histology, and functions of the male and female reproductive systems, and to explain the principal events of gametogenesis.
26. describe the major events that occur during pregnancy.
27. demonstrate dissection skills using animals and/or a human cadaver.

Textbooks & Other Resources or Links

Ninth edition Human Anatomy (Smith Marieb and Smith) ISBN-13: 9780135273005 (2019 update)

Anatomy and Physiology Free online ebook: <https://openstax.org/details/books/anatomy-and-physiology-2e>

Course Requirements and Instructional Methods

Anatomy is a fundamental field of study in the biological and medical sciences. Students wishing to pursue careers in any area of biology or medicine will require a strong background in anatomical terms and concepts.

The principles of anatomy are best taught through meaningful engagement with the study material such as hands-on laboratory projects and weekly course assignments. Such assignments will include quizzes, writing exercises, and in-class discussions, in addition to attendance of all course lectures. Weekly assignments will comprise 20% of the semester grade total.

Satisfactory course completion will require a demonstrated understanding of the material through examination. Students will be expected to take eight exams during the semester, including the final exam, with each test being worth 10% of the grade total.

Extra credit points may be made available throughout the course, as deemed appropriate by the instructor.

Updated 6/2023



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Course Grading Based on Course Objectives

All exams, including the final are equally weighted and worth ten percentage points of the final grade.

Weekly class assignments will be worth varying amounts, but will account for one fifth of the total grade.

Academic Honesty (Artificial Intelligence -AI)

IVC values critical thinking and communication skills and considers academic integrity essential to learning. Using AI tools as a replacement for your own thinking, writing, or quantitative reasoning goes against both our mission and academic honesty policy and will be considered academic dishonesty, or plagiarism unless you have been instructed to do so by your instructor. In case of any uncertainty regarding the ethical use of AI tools, students are encouraged to reach out to their instructors for clarification.

Course Policies

Students are expected to attend and be on time for all lectures and labs. Absences and tardies will disadvantage students and may incur other penalties as deemed appropriate by the instructor.

There is a waitlist for this class, so students who do not show up on the first day will be dropped from the class to make room for waitlisted students.

The timely and on-time completion of assignments is required. Late assignments will be penalized. Exceptions are generally not allowed but can be approved under special circumstances.

Other Course Information

IVC Student Resources

IVC wants you to be successful in all aspects of your education. For help, resources, services, and an explanation of policies, visit <http://www.imperial.edu/studentresources> or click the heart icon in Canvas.

Anticipated Class Schedule/Calendar

Week	Start Date	Lecture Topic	Labs, Exams, Discussions, Assignments
1	8/12	M: The language of Anatomy W: Getting acquainted/course tips	M: Terminology W: Lab Intro and Safety
2	8/19	M: Cytology & Histology- Part 1&2 W: Histology- Part 3, & 4	M: The Microscope & The Cell W: Classification of Tissues Tissue types & function, Microscope slides
3	8/26	M: The Integumentary system	M: The Integumentary System

Updated 6/2023



		<u>W: EXAM 1: (Intro,Cytology & Terminology + Lab practical)</u>	<u>W: EXAM 1: (Intro,Cytology & Terminology + Lab practical)</u>
4	9/2	M: The skeletal system I, Bone tissue <u>W: EXAM 2: (Histology/Integumentary + Lab practical)</u>	M: Overview of skeleton: structure of bone/cartilage <u>W: EXAM 2: (Histology/Integumentary + Lab practical)</u>
5	9/9	M: Skeletal System II TR: Skeletal System III & IV; joints	M: The Axial Skeleton TR: The Appendicular Skeleton & Articulations/Body Movements
6	9/16	<u>M: EXAM 3: (Skeletal System + Lab practical)</u> W: Muscular System I & II	<u>M: EXAM 3: (Skeletal System + Lab practical)</u> W: Muscular system- Microscopic Anatomy of Skeletal Muscle; Gross anatomy of Muscular System (2 day lab)
7	9/23	M: Muscular System III <u>W: EXAM 4: (Muscular System + Lab practical)</u>	M: Muscular system – Use of models; Gross anatomy of Muscular System (2 day lab) <u>W: EXAM 4: (Muscular System + Lab practical)</u>
8	9/30	M: Nervous System, Part 1 &2 W: Nervous System, Part 2&3	M: Histology Nervous Tissue/Gross Anatomy of the Brain & Cranial Nerves (2 day lab) W: Gross Anatomy of the Brain cont'd & The Spinal Cord & Spinal Nerves (2 day lab) -- Dissection Video
9	10/7	M: Nervous System, Part 4 W: Endocrine System & Blood	M: Special Senses – The eye - Dissection , The ear & equilibrium W: Endocrine Glands & Blood Lab (227)
10	10/14	<u>M: EXAM 5: (Nervous System + Lab practical)</u> W: The Heart	<u>M: EXAM 5: (Nervous System + Lab practical)</u> W: Anatomy of the heart (247)- Dissection
11	10/21	M: Blood Vessels W: Respiratory System	M: Blood Vessels W: Anatomy of Respiratory System
12	10/28	M: Lymphatic System & Immunity <u>W: Exam 6: (Blood/Heart/Blood Vessels, & Respiratory + Lab practical)</u>	M: Lymphatic & Immune System <u>W: Exam 6: (Blood/Heart/Blood Vessels, & Respiratory + Lab practical)</u>



IMPERIAL VALLEY COLLEGE

13	11/4	M: Digestive System Part 1 W: Digestive System Part 2	M: Anatomy of the Digestive System W: Open Lab
14	11/11	M: Veterans Day – No School <u>W: Exam 7: (Lymphatic/Digestive + Lab Practical)</u>	M: Veterans Day – No School <u>W: Exam 7: (Lymphatic/Digestive + Lab Practical)</u>
15	11/18	Urinary System Reproductive System	M: Urinary System – models, handout W: Anatomy of the Reproductive System, models
<i>No Classes – Thanksgiving Break</i>			
16	12/2	M: FINAL LECTURE EXAM (Exam 8:Urinary/Reproductive)	W: LAB FINAL EXAM - Cumulative Lab Practical

*****Subject to change without prior notice*****