

### Basic Course Information

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|--------------|-------------------------|---------------------|------------------------------|
| Semester:    | Winter 2020             | Instructor Name:    | Mohammad Ahrar               |
| Course Title | Bio. 204 -Human Anatomy | Email:              | Mohammad.ahrar@imperial.edu  |
| CRN #:       | 15036                   | Webpage (optional): | See Canvas during the course |
| Classroom:   | 2737                    | Office #            | 2737                         |
| Class Dates: | Jan. 6 to Feb. 6, 2020  | Office Hours:       | 7 to 8 am                    |
| Class Days:  | M/T/W/R/F               | Office Phone #:     | 760-355-6355                 |
| Class & lab  | 8:15 am to 2:15 PM      | Emergency Contact:  | 858-774-8184                 |
| Units:       | 4                       |                     |                              |

### Course Description

Lecture and laboratory course designed to study the fundamental principles of the human body structure at the cellular, tissue, organ, and systems level of organization, including the fetal pig and organ dissection, study of the human skeleton, structural-functional relationships, and appreciation of related human diseases and aging. This course may require the use of human cadavers for observation and/or dissection. (CSU) (UC credit limited. See a counselor.)

**PREREQUISITES:** MATH 091 or MATH 090, and BIOL 100 or BIOL 180, BIOL 182 with a minimum grade of C or better or MATH 091 or MATH 090 with a grade of "C" or better 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: Display critical thought related to topics in human anatomy using written forms of expression and examination. (ILO2, ILO3, ILO4), Display knowledge of anatomy and dissection competency using cat specimens as subjects. (ILO2, ILO3), Display critical thought related to topics in human anatomy as it applies to a global perspective. (ILO2, ILO5), Demonstrate competency in communicating information related to the anatomy of the heart. (ILO1, ILO3, ILO4)

### 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, planes 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**

Textbook: Human Anatomy, 6th Ed. Kenneth S. Saladin- McGraw-Hill Company, 2020  
ISBN 9781260210262

Lab manual: Integrate- Custom library for Anatomy and Physiology. The Pearson Learning Solutions, 2019.  
Available at bookstore ISBN 9781323943281

Lab

### **Course Requirements and Instructional Methods**

This is an intensive lecture/lab course, and requires daily studying. Students need to bring the textbook and the lab manual to each class. Lab experiments and lab assignments are based on the materials and procedures explained in the lab manual. Supplemental information and questionnaire relevant to each exercise will be included in the lab assignments. Teaching will be aided with the use of PowerPoint, based on the materials derived from the textbook and other sources. Videos and CD-ROM, charts and models of different organs will be used during lab hours. Lab works will be collected at the end of each lab, and points will be given to each completed lab work. Missed labs will not receive any point. Some of the questions from the assignments will be used in quizzes or tests. Students will be provided by an outline for each chapter at the beginning of the class. Out of Class Assignments: The Department of Education policy states that one (1) credit hour is the amount of student work that reasonably approximates not less than one hour of class time and two (2) hours of out-of-class time per week over the span of a semester. WASC has adopted a similar requirement.

### **Course Grading Based on Course Objectives**

Your course grade will be based on quizzes, exams, lab assignments, and research project and oral presentation. Anticipated points awarded toward the final grade include; a- Five tests (100 points each). b- Twenty lab assignments (5 points each). c- Research project and presentation (40 points), d- five quizzes (10 points each). Total possible points = 690 points.

Calculating Grade Point; To calculate your grade; add all the points earned during the course, divide that value by total possible points, and multiply by 100. Example; if the total points that you earned is 600 points out of 690 possible points, your average grade for the course would be;  $600 : 690 \times 100 = 87\%$  which equals the letter grade "B". Extra Credit may be awarded in the form of critical thinking questions or extra activity related to the course, 10–15 extra points. Grading scale: A = 90 % or higher, B = 80-89 %, C = 70-79 %, D = 60-69 %, F =  $\leq 59\%$ .

## Attendance

- Students are expected to attend all classes and lab sessions and participate in each class activity. An absence is assessed each time a student is not in attendance during a regularly scheduled class period, whether or not it is an excused absence.
- A student who fails to attend the first meeting of a class or does not complete the first mandatory activity of an online class will be dropped by the instructor as of the first official meeting of that class. Should readmission be desired, the student's status will be the same as that of any other student who desires to add a class. It is the student's responsibility to drop or officially withdraw from the class. See [General Catalog](#) for details.
- Regular attendance in all classes is expected of all students. A student whose continuous, unexcused absences exceed the number of hours the class is scheduled to meet per week may be dropped. For online courses, students who fail to complete required activities for two consecutive weeks may be considered to have excessive absences and may be dropped.
- Absences attributed to the representation of the college at officially approved events (conferences, contests, and field trips) will be counted as 'excused' absences.
- Perfect attendance and no tardiness may receive extra credit (mentioned above)

## Classroom Etiquette

- Ethical behavior in the classroom is required of every student. As a diverse community of learners, students must strive to work together in a setting of civility, tolerance, and respect for each other and for the staff and instructors.
- [Electronic Devices](#): Cell phones and electronic devices must be turned off and put away during class, unless otherwise directed by the instructor.
- [Talking during lectures](#) is not tolerated. I would like to ask my students to be very quiet during lectures. Discussions and conversation during lab hours is allowed provided being related to anatomy.
- [Food and Drink](#) are prohibited in all classrooms. Water bottles with lids/caps are the only exception. Additional restrictions will apply in labs. Please comply as directed by the instructor.
- [Disruptive Students](#): Students who disrupt or interfere with a class may be sent out of the room and told to meet with the Campus Disciplinary Officer before returning to continue with coursework. Disciplinary procedures will be followed as outlined in the [General Catalog](#).
- [Children in the classroom](#): Due to college rules and state laws, no one who is not enrolled in the class may attend, including children.
- Perfect observance of classroom etiquette may receive extra credit (mentioned above)

## Academic Honesty

Academic honesty in the advancement of knowledge requires that all students and instructors respect the integrity of one another's work and recognize the importance of acknowledging and safeguarding intellectual property.

There are many different forms of academic dishonesty. The following kinds of honesty violations and their definitions are not meant to be exhaustive. Rather, they are intended to serve as examples of unacceptable academic conduct.

- [Plagiarism](#) is using or presenting a material as one's own, while the writings or ideas are of others, without citing the source. You should understand the concept of plagiarism and keep it in mind when

preparing written materials and research projects. If you do not understand how to “cite a source” correctly, you must ask for help.

- [Cheating](#) is defined as fraud, deceit, or dishonesty in an academic assignment, or using or attempting to use materials, or assisting others in using materials that are prohibited or inappropriate in the context of the academic assignment in question.

Anyone caught cheating or plagiarizing will receive a zero (0) on the exam or assignment, and the instructor may report the incident to the Campus Disciplinary Officer, who may place related documentation in a file. Repeated acts of cheating may result in an F in the course and/or disciplinary action. Please refer to the [General Catalog](#) for more information on academic dishonesty or other misconduct.

Acts of cheating include, but are not limited to, the following: (a) plagiarism; (b) copying or attempting to copy from others during an examination or on an assignment; (c) communicating test information with another person during an examination; (d) allowing others to do your assignment or portion of an assignment; (e) using a commercial term paper service.

### **Additional Student Services**

Imperial Valley College offers various services in support of student success. The following are some of the services available for students. Please speak to your instructor about additional services which may be available.

- [Blackboard Support Site](#). The Blackboard Support Site provides a variety of support channels available to students 24 hours per day.
- [Learning Services](#). There are several learning labs on campus to assist students through the use of computers and tutors. Please consult your [Campus Map](#) for the [Math Lab](#); [Reading, Writing & Language Labs](#); and the [Study Skills Center](#).
- [Library Services](#). There is more to our library than just books. You have access to tutors in the [Study Skills Center](#), study rooms for small groups, and online access to a wealth of resources.

### **Disabled Student Programs and Services (DSPS)**

Any student with a documented disability who may need educational accommodations should notify the instructor or the [Disabled Student Programs and Services](#) (DSP&S) office as soon as possible. The DSP&S office is located in Building 2100, telephone 760-355-6313. Please contact them if you feel you need to be evaluated for educational accommodations.

### **Student Counseling and Health Services**

Students have counseling and health services available, provided by the pre-paid Student Health Fee.

- [Student Health Center](#). A Student Health Nurse is available on campus. In addition, Pioneers Memorial Healthcare District and El Centro Regional Center provide basic health services for students, such as first aid and care for minor illnesses. Contact the IVC [Student Health Center](#) at 760-355-6310 in Room 2109 for more information.
- [Mental Health Counseling Services](#). Short-term individual, couples, family, and group therapy are provided to currently enrolled students. Contact the IVC [Mental Health Counseling Services](#) at 760-355-6196 in Room 2109 for more information.

### Student Rights and Responsibilities

Students have the right to experience a positive learning environment and to due process of law. For more information regarding student rights and responsibilities, please refer to the IVC [General Catalog](#).

### Information Literacy

Imperial Valley College is dedicated to helping students skillfully discover, evaluate, and use information from all sources. The IVC [Library Department](#) provides numerous [Information Literacy Tutorials](#) to assist students in this endeavor.

### Anticipated Class Schedule/Calendar, Winter 2020

| DATE               | Lecture  | Laboratory  |
|--------------------|--|---|
| Mon.<br>1/6/2020   | Ch. 1, The study of Human Body<br>Ch. 2, Cytology – The study of cells                     | Introduction- Lab safety guidelines<br>The Language of Anatomy<br>The cell- Handout   |
| Tue.<br>1/7/2020   | Ch. 3, Histology – The study of tissues  | Classification of Tissues (Lab book page 17)<br>Studying the primary tissue types & function.                                   |
| Wed.<br>1/8/2020   | Ch. 5, The Integumentary system  | The integumentary system (page 45)  |
| Thur.<br>1/9/2020  | Ch. 6, The skeletal system I, Bone tissue<br>Ch. 7, The skeletal System II- Axial skeleton | Overview of skeleton: structure of bone/cartilage. The axial skeleton (page 73)<br><b>Test 1 (Ch. 1 to 5) + lab experiments</b> |
| Fri.<br>1/10/2020  | Ch. 8, The skeletal System III- Appendicular<br>Ch. 9, The skeletal System IV Joints       | The appendicular skeleton (page 101)  |
| Mon.<br>1/13/2020  | Ch. 10, The muscular system I  | Joints – handout<br>Gross anatomy of muscular system (page121)  |
| Tue.<br>1/14/2020  | Ch. 11, The muscular system II- Axial  | Muscular system - Axial. Use of models<br><b>Dissection</b>   |
| Wed.<br>1/15/2020  | Ch. 12, The muscular system III- Appendicular  | Muscular system – appendicular –<br><b>Cadaver observation</b>  |
| Thur.<br>1/16/2020 | Ch. 13, The nervous system I-Nervous tissue  | Gross anatomy of brain and cranial nerves (p. 159) <b>Test 2 (Ch. 6 to 12) + lab experiments</b>                                |
| Fri.<br>1/17/2020  | Ch. 14 The nervous system II- spinal cord  |   |
| Mon.<br>1/20/2020  | <b>Holiday – No class</b>  | <b>No lab</b>   |
| Tue.<br>1/21/2020  | Ch. 15, The nervous system III- Brain  | Anatomy of brain  |
| Wed.<br>1/22/2020  | Ch. 16 The nervous system IV- Autonomics   | Autonomic nervous system - handout  |
| Thur.<br>1/23/2020 | Ch. 17 The nervous system V: Sense organs  | Special senses – The eye- <b>Dissection</b><br>Special senses – the ear and equilibrium.  |
| Fri.<br>1/24/2020  | Ch. 18, The endocrine system   | The endocrine system – Handout  |

|                    |   |  |
|--------------------|---|--|
| Mon.<br>1/27/2020  | Ch. 19, The circulatory system I – Blood            | Blood (page 215)<br><b>Test 3 (Ch. 13 to 18) + lab experiments</b>                           |
| Tue.<br>1/28/2020  | Ch. 20, The circulatory system- II- the heart       | Anatomy of the heart (page 235)<br><b>Dissection</b>   |
| Wed.<br>1/29/2020  | Ch. 21, The circulatory system III – Blood vessels  | Anatomy of blood vessels (page 249)  |
| Thur.<br>1/30/2020 | Ch. 23, The respiratory system                      | Anatomy of Respiratory system  |
| Fri.<br>1/31/2020  | Ch. 24, The digestive system                        | Anatomy of the digestive system (page 287)<br><b>Test 4 (Ch. 19 to 23) + lab experiments</b> |
| Mon.<br>2/3/2020   | Ch. 25, The urinary system                          | Urinary system – Handout   |
| Tue.<br>2/4/2020   | Ch. 26, The reproductive system                     | Anatomy of reproductive system (page 309)  |
| Wed.<br>2/5/2020   | Ch. 4, Human development                            | Handout  |
| Thur.<br>2/6/2020  | <b>Final Exam (Ch. 4, 24, 25, 26) + experiments</b> |  |

**\*\*\*Anticipated class schedule is tentative, and subject to change\*\*\***