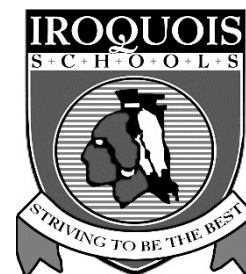


IROQUOIS HIGH SCHOOL

HUMAN ANATOMY & PHYSIOLOGY

FALL SEMESTER

COURSE SYLLABUS



- I. Course Information:** *HAP-A – Fall Semester; *HAP-B – Spring Semester
Prerequisite – Regents Living Environment
Lecture and Lab Based Course
- *Offered as a Dual Enrollment Course through Hilbert College for 4 credits.*
 - Students must enroll for both HAP-A and HAP-B starting in the Fall Semester.
 - Registration through Hilbert begins in October and is done online.
- II. Course Instructor:** Christian Rainville
crainville@iroquoiscsd.org
(716) 652-3000 ext. 7117
- III. Course Description:** This course provides a comprehensive study of the anatomy and physiology of the human body and is taken over two semesters. In the Fall students take HAP-A while students in the Spring take HAP-B. This course is designed to be similar to a college level course for students in studying the structures and functions of the human body in scientific detail.
- If a student is planning on registering for dual enrollment through Hilbert, it is required that they sign up for both semesters and begin in the Fall. Students who are not interested in going the dual enrollment path may take either course, and they do not need to be in sequence.
- Students will learn how the various organs of the body interact with one another and how they contribute to the overall physiology of the body. Students will engage in interactive and hands-on investigations to learn the structures and functions of the human body. Pathology will also be studied as examples of disruption to normal body homeostasis. In addition, students will develop competency in the language of anatomy and physiology and describe and explain anatomical features using proper terminology.
- IV. Course Learning Outcomes:** In completing the course content students will be able to:
- Use anatomical terminology to identify and describe locations of major organs of each system covered.
 - Explain interrelationships among molecular, cellular, tissue, and organ functions in each system.
 - Describe the interdependency and interactions of the systems.
 - Explain contributions of organs and systems to the maintenance of homeostasis.
 - Identify causes and effects of homeostatic imbalances.
 - Describe modern technology and tools used to study anatomy and physiology.
 - Safe and appropriate use of laboratory equipment, such as microscopes, dissection tools, general labware, and technology.

V. Course Materials:

- **Textbook - “Essentials of Human Anatomy and Physiology”**
Elaine Nicpon Marieb. *Essentials of Human Anatomy & Physiology*. 11th ed., Boston; Columbus ; Paris, Pearson, Cop, 2015.
– This will be assigned during the first week of the semester. Please purchase a book cover or make one to ensure the book remains in good condition.
- **3 Ring Binder – 2” or 3”**
- **Student-issued Laptops**
- **Microsoft Teams** – This app should be installed on your laptop, and you can install it on your smartphone. This will be the hub of information for the course throughout each semester!
- **Microsoft One Note** - This app should be installed on your laptop. Any documents, homework, lab work, collaborations, or notes that I need to share digitally will be shared in One Note.
- **Other items you may want to have:** Highlighters, colored pencils, 4 function calculator.

VI. Course Expectations: You will get out of this course what you put into it! It is assumed that you chose to take this course because you have a true interest in learning and understanding how the human body works as a whole. Therefore, it is expected that you will come to class each day with an inquiring mind. Since this course has two overarching areas (i.e. Anatomy & Physiology) you will spend equal times learning both. The anatomy is something that you will need to spend time with by labeling diagrams and reviewing with the classroom models. In other words, learning the anatomy will be your responsibility with me to help guide you. During lecture, you will take notes on functions of the anatomical structures and physiological processes, in which it is very helpful to know the anatomy that is relative to the notes we are taking. Lastly, you are responsible for completing any reading/labeling assignments, participating in lab activities, studying for tests, quizzes, and practicals, and any additional activities prescribed during the course of study. Checking your Teams “Week at a Glance” channel is required at the beginning of each week and accessed regularly.

VII. Grading Policy: Total Points

Tests – Each chapter will end with a comprehensive test and will be announced at least 1 week in advance. Tests will be worth approximately 30-50 points depending on the amount of material covered.

Quizzes/Projects – There will be 1 - 2 quizzes for every chapter and will be announced at least 2 days in advance. There will be several projects that students will be responsible for throughout the semester. Project formats may vary from whole group to individual participation. Quizzes or projects will be worth approximately 10 – 30 points.

Lab Activities/Practical's – Lab work is a very important part of any science, and students will be expected to be fully involved and engaged during these experiences. Lab Practical's will be used to assess student understanding of the lab work. There will be one practical per quarter. Labs will be worth approximately 20-50 points.

Homework/In-Class Assignments/Class Participation – Students will be expected to do some research and work on their own, which may include worksheets that the instructor assigns, finishing components of lab work, WebQuests, reading assignments, etc.... There will frequently be allotted time during the class period to work on these items, and it will be expected that they are finished for homework. The students' diligence, preparedness, and attentiveness to these items will reflect on their class participation. Each homework assignment is worth approximately 10-30 points.

Late Work Policy:

- Assignments will not be accepted after the specified due date, and a grade of 0 will be given. Students are still expected to complete the work for their own benefit.
- If a student is absent on the day an assignment is due, they will need to present the completed assignment upon their return to receive full credit.
- If a student is absent on the day an assignment is assigned, it is their responsibility to *obtain that assignment upon returning to school and will have time to make up that assignment for full credit as agreed upon by the teacher.
- Tests and Quizzes – Any missed test or quiz needs to be made up within a 6-day cycle or it will result in a 0.
- Any extenuating circumstances regarding late work will be dealt with on a case-by-case basis.

****With the use of Teams and One Note, students should be able to check to see what work they are missing, and even work on assignments if they have been uploaded to these platforms. In other words, there is very little excuse for not being able to obtain missed work.***

VIII. Classroom Expectations and Behavior:

- This is a laboratory setting, so NO DRINKS OR FOOD are permitted.
- The LAB SUPPLIES that are provided should be USED WITH CARE, following all LAB SAFETY RULES!
- Be PREPARED and ON TIME.
- Be RESPECTFUL to others and contents in the classroom. Use your MANNERS!
- Please use the lavatory before class begins. There will be NO PASSES during the class period unless it is an emergency.
- Cell Phones, AirPods/Earbuds/Headphones are prohibited during class, unless the instructor permits them for select activities.

Failure to follow these basic guidelines will result as follows:

1st Offense – Meet with the instructor to discuss your behavior.

2nd Offense – A reminder and final warning before issuing a referral.

3rd Offense – A referral will be submitted to administration.

4th Offense – A referral will be submitted to administration followed by a call home.

IX. HAP-A Course Schedule *(This schedule is tentative. Any modifications will be made in the Teams Week at a Glance channel.)*

Week of...	Topic(s)	Chapter	Coursework/Class Activities
9/4 – 9/8 Labor Day (9/4) Superintendent Conference Day (9/5)	Course Policy and Syllabus Introduction to HAP Body Orientation Language of Anatomy	1	What do you know – Kahoot Note Guides Book Assignment
9/11 – 9/15	Body Orientation and Language of Anatomy Body Planes, Cavities, positions, & Regions	1	Ch. 1 Reading Assignment Language of Anatomy Worksheet Lab: Body Orientation and Anatomical Terms
9/18 – 9/22	Levels of Organization Histology -Epithelial and Connective	3	Application of Anatomical Terms Body Orientation and Language Quiz Histology Worksheet
9/25 – 9/29	Histology - Muscular and Nervous	3	Lab: Histology – Microscopy of Tissues Histology Quiz Ch. 1 and 3 Test

10/2 – 10/6 Superintendent Conference Day (10/6)	Ch. 4 Integumentary System -Epithelial and Connective Membrane Tissues -Structures of the skin -Glands of the skin	4	Ch. 4 Reading Assignment Skin WebQuest Extra Credit – Edible Integument
10/9 – 10/13 Columbus Day (10/9)	Integumentary System -Finish glands -Appendages of the skin	4	Lab: Skin Appendages Morgellons Disease Documentary Ch. 4 Integumentary System Test
10/16 – 10/20	CH. 5 Skeletal System -Classification of bones -Anatomy of a long bone -Bone features and Markings	5	Ch. 5 Reading Assignment Ch. 5 Labeling Worksheet – Focus on Axial Skeleton Practical: Bone Classification and Features
10/23 – 10/27	Bone Growth and Remodeling Axial Skeleton	5	Bone Growth and Remodeling Graphic Organizer – Watch Video Axial Skeleton Quiz
10/30 – 11/3	Appendicular Skeleton Types of Joints	5	Ch. 5 Labeling WS – Focus on Appendicular Skeleton Lab: Forensic Anthropology
11/6 – 11/10 Veteran's Day (11/10)	Appendicular Skeleton Types of Fractures Homeostatic Imbalance	5	Lab – X-Ray Analysis Appendicular Skeleton Quiz
11/13 – 11/17	Skeletal System Anatomy Review	5	Practical: Bone ID Ch. 5 Skeletal System Test
11/20 – 11/24 Thanksgiving Recess (11/22- 11/24)	Ch. 6 Muscular System -Anatomy of Skeletal Muscle -Skeletal Muscle Activity -Sliding Filament Mechanism	6	Ch. 6 Reading Assignment Ch. 6 Labeling WS – Face, Neck, Trunk
11/27 – 12/1	Isotonic/Isometric Contractions Roles of muscles Body movements Characteristics used to name muscles	6	Muscles of the Head, Neck, and Torso Quiz Ch. 6 Labeling – Muscles of the Arms and Legs Lab: Chicken Wing Dissection
12/4 – 12/8	“Physiology of ____” Project Supplements Discussion	6	Work on “Physiology of ____” Project Muscles of the Arms and Legs Quiz “Little Red Riding Hood” Extra Credit
12/11 – 12/15	Project	6	Presentations Ch. 6 Muscular System Test
12/18 – 12/22	Ch. 7 Nervous System -Structural and Functional Classification -Neuron Anatomy -Nerve Impulses and Events at the Synapse	7	Ch. 7 Reading Assignment Ch. 7 Labeling WS – Due after break
12/25 – 12/29	Winter Recess (12/25 – 1/1)		
1/1 – 1/5	Reflexes Spinal Cord Brain Anatomy and Function	7	Lab: Sheep Brain Dissection
1/8 – 1/12	Brain Anatomy and Function Centers of the Brain	7	Quiz – Neuron and Brain Anatomy Lab: Brain, Drugs, Addiction
1/15 – 1/19 MLK Jr. Day (1/15)	Ch. 8 Special Senses Sensory Receptors	8	Lab: Cow Eye Dissection Ch. 7 Nervous System Test