



**Course Title:** Human Physiology  
BIOL 206 CRN: 10078 Credits: 4

**Instructor:** Dr. Tom Morrell  
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**Office Hours:**  
Monday 5:50 - 6:50 pm  
Tuesday 4:45 - 5:45  
Wednesday 5:50 - 6:50  
Thursday 4:45 - 5:45

If for some reason you not see me during my scheduled office hours, please call or stop by, or email me to arrange a meeting. I have an open door policy and my office is always open, so feel free to stop by anytime.

**Class days, Time, Room:**  
Lecture -Tuesday/Thursday, 7:00 - 7:55 am, Rm. 2737  
Lab - Tuesday/Thursday, 8:05 - 11:15 am, Rm. 2737

### **Class Description**

This is an intensive lecture and laboratory course designed to introduce the function of the human body from the cellular through the organ system levels of organization. Emphasis will be on integration of the body systems and interrelationships for maintaining homeostasis. The practical applications of the basic concepts are presented. Prerequisites include MATH 090 and CHEM 100 and BIOL 204 with grades of "C" or better, or a current California LVN or RN license.

### **Required Text Book**

Silverthorn, Dee Unglaub. 2013. **Human Physiology: An integrated approach**. 6th edition. Pearson Publishing.  
ISBN-13: 978-0-321-75007-5  
ISBN-10: 0-321-75007-1

### **Attendance Policy**

**Attendance is required.** You are responsible for all material presented during lecture and lab sessions. If for some reason you can't attend a lecture, quiz or an exam, it is your responsibility to approach me as soon as possible to determine if you have missed something important, and whether you can make it up. In order to make up missed opportunities you must **provide a signed medical or legal excuse** to document your absence. Students must realize that some labs, and particularly some "in-class lab assignments" **CANNOT** be made up (regardless of the activity that resulted in the absence, or whether its an excused absence). Some labs require numerous hours to prepare and/or require cooperative student participation. Thus, attendance is mandatory at all labs. **All research indicates that there is a strong positive correlation between class attendance and good grades (i.e., those who attend class get better grades than those who skip class).**

Class attendance and tardy policy follows regulations set forth in the IVC catalog. Additionally, the IVC catalog states "disruption of a class can result in disciplinary action." I consider coming into class tardy - a disruption. Any student tardy/absent 4 times (in any combination) will be considered a disturbing element in class and will be directed to student services for disciplinary action. This includes being tardy following any announced breaks during class or lab. **You are allowed one unexcused tardy.** After one tardy you must wait outside of class until the class takes a break. Please note that personal issues, such as family obligations, family situations, border slowdowns, babysitters, railroad crossings, job interviews, car problems, taking family members to appointments, and work schedules are not acceptable excuses for an absence or a tardy. Additionally, leaving class or lab before it has been officially dismissed will be regarded as as an unexcused absence. Should you miss both components of a given lecture you will be recorded as absent (even if you attend the lab).

**It is the responsibility of the student to fill out the necessary paperwork if he/she no longer attends the class. In order for a student to "officially" drop the course he/she must fill out the proper paperwork. If this is not done a semester grade of "F" will be assigned.**

### **Honor Policy**

Imperial Valley College students must conduct themselves in accordance with the highest standards of academic honesty and integrity. Academic dishonesty by a student will not be tolerated. Cheating, plagiarism or violations of copyright policies are a form of academic dishonesty and are treated as an ethics violation.

## Grading

If I see you checking your cell phone for ANY reason, or if your cell phone rings, vibrates, buzzes, flashes or blinks during lecture or during lab (even if it is in your backpack, pocket, or purse!) I will ask you to leave the class for that day and you will be recorded as absent. Rest assured, I will provide you plenty of breaks that enable you to address all of your cell phone and social networking needs. You can provide your children's day care, and/or family health care providers the number of the IVC front office, and the front office can contact you in class in the event of an emergency.

Your course grade will be based on 5 lecture/lab practical exams, lab and lecture quizzes (some unannounced), lab and homework assignments, and discretionary course participation points. There will be approximately 8 - 10 lab and homework assignments, and 5 - 10 quizzes (10-20 points each approximately).

- Total = 750 points (approximate)

Grades will be assigned according to the following scale:

>90% = A

80 - 89.9% = B

70 - 79.9% = C

60 - 69.9% = D

<59.9% = F

**I do not accept late homework without a signed legal or medical excuse.**

## Special Needs and Accommodations

Any student with a documented disability who may need educational accommodations should notify the instructor or the Disabled Student Program and Services (DSP&S) office as soon as possible (DSP&S, Room 2177, Health Sciences Building (760 355-6312)).

If you have emergency medical information to share with me, or if you need special arrangements in the event the building must be evacuated, please let me know during the first week of class.

## Course Objectives

1. The student will be able to describe homeostasis and the mechanisms to maintain homeostasis.
2. The student will be able to discuss the chemical aspect of the human body.
3. The student will be able to describe cell structure and function.

4. The student will be able to discuss control of enzyme activity and bioenergetics.
5. The student will list nervous system divisions and components and describe their basic functions.
6. The student will be able to discuss the special senses and their nervous control.
7. The student will be able to discuss the function of the endocrine system and major regulation hormones, especially the hormones of the anterior pituitary.
8. The student will be able to discuss muscle function and understand the similarities and differences between different muscle types.
9. The student will be able to discuss the regulation and functions of the cardiovascular system.
10. The student will be able to describe the mechanism of immunity.
11. The student will be able to describe the functions of the respiratory system and the environmental effects.
12. The student will be able to describe the kidney function and urine formation.
13. The student will be able to distinguish between physical and chemical digestion and describe the functions of the digestive tract and accessory digestive organs.
14. The student will be able to describe the male and female reproductive physiology and the female cyclic changes.

**Student Learning Outcomes:**

1. Conduct and interpret an electromyogram performed on another individual
2. Conduct and interpret an electroencephalogram performed on another individual
3. Conduct and interpret an electrocardiogram performed on another individual
4. Display critical thought related to evaluating early disease detection by conducting a urinalysis evaluation.

[Physiology Schedule Fall 12 Morrell\(1\).pdf](#)

WK	DAY	DATE	LECTURE	MATERIALS NEEDED
1	Tues.	8-21	Orientation	Nothing Needed
	Thur.	8-23	Cha. 1 Intro to Physiology	Prepared slides: nervous, connective, muscle & epithe
2	Tues.	8-28	Cha. 2 Molecular Interactions	CD#27: The Chemistry of Living things
	Thur.	8-30	Cha. 3 Cells and Tissues	CD#38: Inside the cell - DNA Necklace

<b>3</b>	Tues.	9-4	Cha. 4 Energy & Cell Metabolism	CDs# 34 (enzymes) CD#29 (Cellular respiration)
	Thur.	9-6	Cha. 4 Cont.	CDs# 34 (enzymes) CD#29 (Cellular respiration) CD #30 (protein synthesis)
<b>4</b>	<b>Tues.</b>	<b>9-11</b>	<b>EXAM 1</b>	<b>Cha. 5 Cell Membranes Lecture!!!!!!!!!!!!!!!</b>
	Thur.	9-13	Cha. 6 Cell Communication/Integration	Microscopes, clean slides, H2O water eye droppers, and 150 ml physiologic solution. <b>Thistle tube Osmosis Experiment</b> solution, distilled water. (8) 500 ml beakers, dialysis tubing, water droppers (rubber bands not needed).
<b>5</b>	Tues.	9-18	Cha. 7 Endocrine System	Interactive Physiology CD
	Thur.	9-20	Cha. 8 Neurons	Interactive Physiology CD
<b>6</b>	Tues.	9-25	Cha. 9 Central Nervous System	BIOPAC (Brain Waves)
	Thur.	9-27	Cha. 10 Sensory Physiology	Open Lab Study Session
<b>7</b>	<b>Tues.</b>	<b>10-2</b>	<b>Exam 2</b>	
	Thur.	10-4	Cha. 10 Sensory physiology cont.	Sensory stimuli: rubber hammers, tuning forks, pen light, discrimination pins, 25 q-tips, color blind books, eye mask, beakers, ice, hot plate, eye chart, 6 reaction time ruler, evaluators
<b>8</b>	Tues.	10-9	Cha. 11 Efferent Division	Sensory stimuli: rubber hammers, tuning forks, pen light, discrimination pins, 25 q-tips, color blind books, eye mask, beakers, ice, hot plate, eye chart, 6 reaction time ruler, evaluators
	Thur.	10-11	Cha. 12 & 13 Muscles & Movement	BIOPAC (motor recruitment)
<b>WK</b>		<b>DATE</b>	<b>LECTURE</b>	<b>MATERIALS NEEDED</b>

<b>9</b>	Tues.	10-16	Cha. 14 Cardiovascular Physiology	BIOPAC (ECG)
	Thur.	10-18	Cha. 15 Blood Flow & Control	Sphygmomanometers, Stethoscopes, BIOPAC
<b>10</b>	Tues.	10-23	<b>Exam 3</b>	Nothing needed
	Thur.	10-25	Cha 16 Blood	Blood typing kits, Prepared Slides of Blood
<b>11</b>	Tues.	10-30	Cha. 17 Mechanics of Breathing	BIOPAC (respiratory volumes)
	Thur.	11-1	Cha. 18 Gas Transport & Exchange	Interactive Physiology (Respiration and gas exchange)
<b>12</b>	Tues.	11-6	Cha. 19 Physiology of the Kidney	Open Study Lab
	Thur.	11-8	<b>Exam 4</b>	
<b>13</b>	Tues.	11-13	Cha. 19 cont.	Kidney Modeling lab, Urinalysis
	Thur.	11-15	Cha. 21 Digestive system	Interactive Physiology
<b>14</b>	Tues.	11-20	Cha. 21 Cont.	Interactive Physiology
	Thur.	11-22	<b>HOLIDAY-THANKSGIVING</b>	
<b>15</b>	Tues.	11-27	Cha. 22 Metabolism & Energy Balance	CD Digestive System
	Thur.	11-29	Cha. 24 Immune System	Interactive Physiology
<b>16</b>	Tues.	12-4	Cha. 26 Reproduction & Development	Urchin development lab
	Thur.	12-6	<b>FINAL EXAM</b>	Nothing needed