



Centro Universitario Internacional



## BIO 209E Anatomy and Physiology II

### **Prof. Juan C. Rodriguez**

Office: Bdg 21, room 21.1.07

Email: [jcrodagu@upo.es](mailto:jcrodagu@upo.es)

Office Hours: Mon. and Fri.

11:30AM-12:30 PM

(appointment required)

### **Course Information:**

Fall 2017

Lectures: Tuesdays and Thursdays 9:00AM-10:20AM

Labs: Thursdays at 12:00PM-3:00PM

### **Prof. Eduardo Dominguez**

Office: Bdg 21, room 21.1.10

Email: [edomtor@upo.es](mailto:edomtor@upo.es)

Office Hours: Mon. and Wed., 10:30-11:30 AM

(appointment required)

### **Course Description**

This is the second part of Human Anatomy & Physiology. During this course, you will study the fundamentals on human body structure, its proper functions and some disorders using an organ-system approach. It is crucial for you to understand how cells and organs are coordinated within an integrated human physiology. Closely related systems as endocrine, cardiovascular, immune, respiratory, urinary, or digestive system develop an overall coordinated physiology. The lab sessions of this course are related with the lectures and will reinforce concepts presented in discussions and in the text. It will be accomplished through organ dissections, model studies and simulation labs. We will also examine how certain system malfunctions may affect the delicate physiology balance (homeostasis), and how human body compensates to maintain itself.

### **Prerequisites**

A previous course in the first part of Anatomy and Physiology is required to follow this course.

### **Course Goals and Methodology**

The goals of this course are to provide the student with an understanding of the general concepts and basic laboratory techniques in human Anatomy and Physiology. The course is oriented towards standard healthy aspects of human Anatomy and Physiology; however, particular pathological aspects will be also described.

The course is structured in lecture and lab sessions. Students are expected to have read the textbook chapters and lab protocols before the corresponding lectures and lab sessions. Lecture slides, lab protocols and other course materials are posted on Blackboard prior to the lectures and labs.

Lecture sessions will include lecturing and discussion. Homework assignments will include the discussion of case studies and problems on the Blackboard discussion forums and an online quiz per lecture on Blackboard.

Lab sessions will include presentation of the experimental procedures and experimental work. General lab safety rules must be observed at all times. A quiz per lab session will be posted on Blackboard.

### **Learning objectives**

Upon successful completion of the course students will be able to:

1. Understand homeostasis and how different physiological systems participate in its maintenance.
2. Identify some pathological malfunctions and its main symptoms.
3. Anticipate consequences of system malfunction on homeostasis and the existing physiological mechanisms to restore it.
4. Integrate different sorts of information in order to solve biological problems;

### **Required Textbook**

*Hole's Human Anatomy and Physiology, 14th Edition. Shier, Butler, Lewis, McGraw Hill., 2016.*

### **General course policies**

#### *Communication*

Unless stated otherwise, all course announcements will be posted online in Virtual Campus (Blackboard). This is to include, but is not limited to assignments, deadlines, exam calls, homework, and changes in schedule. Electronic communications between students and instructors are also handled in Virtual Campus.

If you need academic assistance, please contact the instructor involved in that particular topic.

#### *Attendance and punctuality*

Attendance is mandatory. More than three unexcused absences will result in lowering the final grade. Six unexcused absences will result in a failing the course. Punctuality is required – session unpunctuality will be penalized by half (15-30 min) or one absence (over 30 min).

#### *During the sessions*

Use of cell phones, pagers, MP3 players, headphones, texting, etc. is prohibited during class time. Please turn all of these devices to vibration mode or off upon entering the classroom. If emergency communications are required, please excuse yourself from lecture/lab.

For safety reasons, eating or drinking is strictly forbidden during lab sessions.

#### *Missed or late activities*

It is the student's responsibility to be informed about exam dates and required course activities, due dates, etc. before making any travel plans during the semester.

Every piece of homework will include its due date. Incomplete or late homework will receive 10% discount in credit (within 48 hours after deadline) or 50% discount in credit (over 48 hours after deadline). There is no chance to make up late homework.

Exams missed due to an excused (e.g. medical) absence must be made up within a week of returning to classes. Exams missed due to unexcused absence will not be made up.

There will be no make up for missed lab sessions. Labs missed due to an excused (e.g. medical) will be graded using the overall average lab grade obtained in those lab sessions attended. Labs missed due to unexcused absence will not be made up and will receive zero points as grade.

#### *Academic honesty*

Academic integrity is a guiding principle for all academic activity at Pablo de Olavide University. Cheating on exams and plagiarism (which includes copying from the Internet) are violations of academic honesty. A student is responsible of plagiarism when he or she presents another person's intellectual property as his or her own.

The penalty for plagiarism is a failing grade for the assignment/exam or even a failing grade for the course. Avoid plagiarism by citing sources properly (using footnotes or endnotes and a bibliography). All assignments will be screened for plagiarism.

#### *Behavior Policy*

Students are expected to show integrity and act in a professional and respectful manner at all times. The professor has a right to ask a student to leave the classroom if the student is unruly or appears intoxicated.

#### *Students with special needing*

If you have a disability or special needing that require particular academic accommodation, please speak to our administration within the first two (2) weeks of the semester in order to discuss any adjustments. It is the student's responsibility to provide the International Center, the documentation confirming the accommodations required. If you have already provided this to your study abroad organization, they may have already informed the International Center already but please confirm.

#### *External factors*

Any medical emergency excuse must be followed by a detail written explanation of the problem from a health care professional. Please show all documents to the instructor on the day you return to class.

Problems associated with travelling are at student's risk. Flight cancellations or severe weather problems are frequent at certain destinations. Missed activities due to these phenomena are at student's risk.

#### **Course grading:**

Four equally weighted midterm exams	60%
Homework (Lab quizzes)	10%
Presentations	20%
Participation	10%
<b>Total</b>	<b>100%</b>

#### Grade Conversion scale:

Spanish grade	10	9.5-9.9	9.0-9.4	8.5-8.9	8.0-8.4	7.5-7.9	7.0-7.4	6.5-6.9	6.0-6.4	5.5-5.9	5.0-5.4	0.0-4.9
U.S. grade	A+	A	A-	B+	B	B	B-	C+	C	C	C-	F

## Class schedule and calendar

Semester week #	Week day	Date	Instructor	Lecture	Lab	Textbook chapter
1	Thu	Sep 14	Rodríguez	Blood	Course kick-off session	14
2	Tue	Sep 19	Rodríguez	Blood		14
2	Thu	Sep 21	Rodríguez	Lymphatic System & Immunity	Blood cells types	16
2	Fri	Sep 22	Rodríguez	Lymphatic System & Immunity		16
3	Tue	Sep 26	Rodríguez	Endocrine System		13
3	Thu	Sep 28	Rodríguez	Endocrine System	Immune reactions	13
4	Tue	Oct 3	Rodríguez	Endocrine System		13
4	Thu	Oct 5	Rodríguez	<b>Midterm 1</b>	Simulation of AP and EKG	<b>13,14,16</b>
5	Tue	Oct 10	Domínguez	Cardiovascular System		
6	Tue	Oct 17	Domínguez	Cardiovascular system		15
6	Thu	Oct 19	Domínguez	Cardiovascular System	Heart Physiology	15
7	Tue	Oct 24	Domínguez	Cardiovascular System		15
7	Thu	Oct 26	Domínguez	Respiratory System	Cardiov. effects of exercise	19
8	Tue	Oct 31	Domínguez	Respiratory System		19
8	Thu	Nov 2	Domínguez	Respiratory System	Spirometry. Lung capacity	19
9	Tue	Nov 7	Domínguez	<b>Midterm 2</b>		<b>15,19</b>
9	Thu	Nov 9	Domínguez	Renal System	Kidney Anat. and Physiol.	20
10	Tue	Nov 14	Domínguez	Renal System		20
10	Thu	Nov 16	Domínguez	Renal System	Presentations session 1	20
11	Tue	Nov 21	Domínguez	Digestion		17
11	Thu	Nov 23	Domínguez	Digestion	Digestive Anat. and Physiol.	17
12	Tue	Nov 28	Domínguez	<b>Midterm 3</b>		<b>17, 20</b>
12	Thu	Nov 30	Rodríguez	Fluid Elec	Osmosis	21
13	Tue	Dec 5	Rodríguez	Fluid Elec		21
13	Thu	Dec 7	Rodríguez	Metabolism	Presentations session 2	18
14	Tue	Dec 12	Rodríguez	Metabolism		18
??	??	Dec ??	Rodríguez	<b>Midterm 4</b>		<b>18, 21</b>