

# PHYSIOLOGY LAB E112L

## Dr. Nancy Aguilar-Roca

Email: [nmaguila@uci.edu](mailto:nmaguila@uci.edu)

Phone: (949) 824-3632

Office hour: Thurs, 11am-12pm  
5242 McGaugh Hall

One-on-one: <http://nancy-aguilar-roca.youcanbook.me>

## MANDATORY DISCUSSION

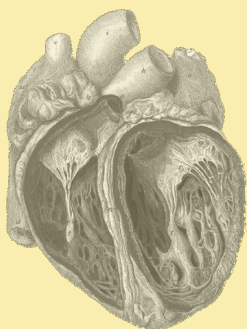
Mondays 4:00-5:50 pm ALP 1300

## ALL LABS ARE IN SH 272

## CLASS WEBSITE

## ADMINISTRATIVE TA

Michelle Herrera,  
[mjherre1@uci.edu](mailto:mjherre1@uci.edu)



## Overview

One day someone in my family came to me with a newspaper article about a food supplement for diabetics. It was a really expensive supplement and he wanted to know if it would really help his diabetes. Fortunately, I was able to do a primary literature search to help make a decision. Your friends and family may approach you with similar questions after you take a physiology class. So, by the end of this course, you should be able to

- critically evaluate physiological research that may appear in the media.
- find journal articles relevant to a physiological condition.
- give an overview of the structure and function of the systems we study in lab.
- form a hypothesis and propose a physiological experiment to test it.
- determine whether physiological data supports a hypothesis.

## Becoming an expert

The transition from introductory level to expert isn't easy. The expectation set by the University is that for every hour of in-class instruction, students will spend at least 1 to 2 hours studying on their own. Therefore, you should expect to spend at least 10 hours per week on this class (~5 hours of instruction + 5 or more hours of studying).

## Attendance

You are responsible for attending all Discussions and Labs. **To make-up a Lab because of an excused absence** (e.g. illness with emergency room receipt, accident with police report, interview with invitation letter), email Dr. Aguilar-Roca, and cc your TA and the TA of the lab section you wish to attend. Missed labs may

be made up only during the week when that lab set-up is available. There will be no make-up labs after the scheduled week for any given lab. You will do the homework assigned to the make-up lab.

## Materials required

- 1) **Learning Catalytics account** (\$12, details on the next page)
- 2) **Peerceptiv account.** Details will be provided on Mon Apr 8.
- 3) **Any physiology textbook published in the last 5 years.** This class builds on Human Physiology E109. If you remember everything from that class, you won't need a textbook. Otherwise, you should have a textbook. Here is a [link to a free online textbook](#).
- 4) **Print-out of lab worksheets** (1 page/ sheet; download from course website)

## Labs

Closed toed shoes and long pants that **cover the ankles** are required. NO EXCEPTIONS. You will be asked to leave the lab if you are wearing sandals, flip-flops, shorts, capris, etc.



Lab coat and goggles will be required for some labs. A limited number of extras are available in the lab for you to borrow. You do not need a dissection kit. (Note: aprons are no longer acceptable)



## Get Started with Pearson's Learning Catalytics

### Registration

If you have ever used a Pearson MyLab or Mastering product (e.g. MasteringBiology or MasteringPhysics) **DO NOT** create a new Learning Catalytics account. You will sign in to Learning Catalytics using your existing username and password.

1. Make sure you have a credit card/PayPal account. You can buy instant access with a credit card or PayPal account during registration
2. Go to [www.learningcatalytics.com](http://www.learningcatalytics.com)
3. Select **Register**
4. Under the **Student** tab, choose to purchase access. Select 6 month access.
5. **If you have a Pearson account**, select Yes and enter your existing Pearson account login name and password.
  - You have an account if you have ever used a Pearson MyLab & Mastering product, such as MyMathLab, MyITLab, MySpanishLab, MasteringBiology or MasteringPhysics.
6. **If you don't have an account**, select No and complete the required fields
7. If you are purchasing access, fill in the appropriate fields and click continue.
8. That's it! You should now see a "Confirmation & Summary" page.

### **DURING CLASS.....**

1. You will receive an access code **during** class
2. When you have the access code, go to [www.learningcatalytics.com](http://www.learningcatalytics.com)
3. Select **Sign In**
4. Enter your Pearson account username and password, and Sign In

**Need Help?** Contact Pearson Support at <https://support.pearson.com/getsupport>

## Accommodations

I am happy to provide accommodations for students with learning or physical disabilities. Please identify yourself to me during the first week of class so that we may discuss ways that will enhance your learning experience. All such discussions will be fully confidential unless you state otherwise. All requests for alternate exam policies will be coordinated through the UCI Disability Services Center

<http://www.disability.uci.edu/>.



## Contacting me

I will be available during posted office hours and by appointment. I will do my best to respond to your emails within 24 hours. I enjoy hearing from students and I will be even happier to hear from you if you observe the following guidelines:

- Use a relevant subject line.
- Start emails with "Dear Dr. Aguilar-Roca,"
- Assume that I'm too old to understand IM and text-messaging abbreviations.
- Proofread. Auto-corrected renditions of physiological terms are an endless source of amusement, but they hinder efficient communication.
- Sign with the name you prefer to be called.

I try to set aside time every week for one-on-one appointments with students (for everything from help with writing to physiology concepts to life in general). Just put yourself on my calendar - <https://nancy-aguilar-roca.youcanbook.me/>

## Personal Conduct

You are expected to conduct yourselves in a manner consistent with UCI Principles of Community <https://aisc.uci.edu/policies/pacaos/principles-of-community.php>

- Respect - We understand that respect is the cornerstone of human interaction.
- Intellectual curiosity - We are committed to learning, teaching, creativity and research.
- Integrity - We tell the truth and strive to earn the trust of those around us.
- Commitment - We always give our best effort.
- Empathy - We act with compassion and sensitivity.
- Appreciation - We appreciate different opinions and points of view.
- Fun - We enjoy our lives to the fullest.

**If you observe misconduct**, please bring it to the immediate attention of any instructor. You will remain anonymous.

## Academic Honesty

There is zero tolerance for plagiarizing or cheating, including "clicking-in" for someone or copying answers from repositories such as Course Hero. In the event of cheating, the appropriate campus-wide policies will be followed, including contacting the appropriate deans. Refer to <https://aisc.uci.edu/index> for details. Academic dishonesty or cheating is defined as an intentional act of fraud in which a student seeks to claim credit for the work or efforts of another. This includes assisting other students in acts of dishonesty or coercing students into acts of dishonesty, whether it is on writing, lab work, or exams. If you are not sure if something is cheating or not, ask!

**If you observe cheating**, please bring it to the immediate attention of any instructor. You will remain anonymous.

## Letters of Rec

I will consider writing letters for students who earned a B+ or higher **AND** participated in at least two office hours (at posted times or by appointment). If you were not in my lab section, contact your TA first to ask them to write a letter. I will add my comments to their letter, based on my office hour interactions with you, and then co-sign with your TA.

Requests must be made within 6 months of finishing the course.



<http://www.the-aps.org>

**GRADES**

Your grade in the course will be based on the following (details on pg. 4)

Activity	Notes	Points Possible*	% of Grade
Weekly Online Physiology Review Quizzes	9 online quizzes worth 3 points each. Drop the lowest quiz.	24	7.3
Weekly Online Lab Methods Quizzes	9 Online quizzes worth 2 points each. Drop the lowest quiz.	16	4.8
In-class "Mini-midterms"	3 mini-midterms worth 30 points each. (15 multiple choice questions worth 2pts each).	90	27.3
Weekly in-class Learning Catalytics activities	9 class scores worth 2 points each. >50% participation = 2pts. 50-75% participation = 1pt. <50% participation = 0 pts. Drop the <b>two</b> lowest scores.	14	4.2
Weekly Lab activities & assignments	10 Labs worth 5 points each. Drop the lowest score.	45	13.6
Lab reports	Two lab reports. The first will be short and worth 23 pts. The 2nd will be longer with two peer reviewed drafts (46 pts).	69	20.9
Final Exam	Cumulative (~45pts multiple choice + 25pts short answer)	70	21.2
Instructor Evaluations	1pt for Discussion; 1 pt for Lab	2	0.6
<b>TOTAL POSSIBLE</b>		<b>330</b>	

\* The final points available may change during the quarter due to unforeseen circumstances.

All scores will be posted in Canvas GradeBook. The day of the final exam is the deadline to report any missing or incorrect scores in GradeBook for the Discussion or Lab Section. Any requests after that will be ignored. Contact your TA about Lab Section scores.

**Letter grade equivalents**

Scores will be rounded to the nearest tenth of a point and assigned letter grades as follows:

- > 96.0% = A+; > 93.0% = A; > 90.0% = A-
- > 86.0% = B+; > 83.0% = B; > 80.0% = B-
- > 76.0% = C+; > 73.0% = C; > 70.0% = C-
- > 66.0% = D+; > 63.0% = D; > 60.0% = D-
- < 60.0% = F

If you earn 89.94%, that will be rounded to 89.9% and it will be a B+. If you earn 89.95%, that will be rounded to 90% and it will be an A-. If the overall class average at the end of the quarter is below 75.0% I will consider using a curve instead of a straight scale.

If you're still reading this, send me a picture of your favorite animal (real or imaginary). I'll be very impressed!

**Lab section scores**

At the end of the quarter, points will be subtracted or added as needed to bring all lab section scores within a standard deviation of each other. Historically, students who have a TA with high grading standards perform better on exams.

**Incompletes**

Students in good standing (having minimally a "C" in the class) who cannot complete the course because of a documented emergency (such as an illness or accident verified with a doctor's note or police report) will be given an Incomplete and will need to make-up the material when the course is offered again. An Incomplete grade is NOT given simply because a student is not doing well in the course.



# FYI

## Activities worth points

### *Weekly On-line Physiology Review Quizzes*

On-line Physiology Review quizzes on Canvas will be posted 3 days before Discussion and will close at the start of Discussion. These quizzes are designed to help you review the material from E109 that will be the basis of the lab. Each quiz will be worth 3 points and each correct answer will be worth between 0.1 and 0.5 points. There will be a 20 min time limit, but you can take it up to 2 times and the highest score will be recorded. The lowest score from the quarter will be dropped.

### *Weekly On-line Lab Methods Quizzes*

On-line Lab Method quizzes on Canvas will be posted 2 days before your lab and will close at the start of your lab. These quizzes are designed to expose you to the techniques that you will use in the lab. Each quiz will be worth 3 points and each correct answer will be worth between 0.1 and 0.5 point. There will be a 20 min time limit, but you can take it up to 2 times and the highest score will be recorded. The lowest score from the quarter will be dropped.

### *Mini-midterms*

There will be 3 in-class Mini-Midterms that cover the material from the preceding week(s). The questions will be in the style of the questions for the final exam. **Make-up mini-midterms will NOT be given.** If you miss a mini-midterm for a documented reason (e.g. medical school interview, emergency room visit, traffic accident with police report or tow truck receipt), the average of your other mini-midterms will replace the missing score. (Photos are not adequate documentation of a traffic accident.)

### *In-class Learning Catalytics*

In-class participation will be worth 2 point per Discussion. You must sign-up for Learning Catalytics before **4pm on April 1**. Scores are based on participation, not correctness. >75% participation = 2pt. 50-75% participation = 1pt. <50% participation = 0 pts. The lowest 2 scores will be dropped. Answers written on paper will not be accepted.

### *Weekly Lab Activities and Assignments*

Weekly lab section activities may include oral presentations, short quizzes, worksheets, data analysis and writing. The single lowest lab score will be dropped. Final lab scores may be adjusted (up or down) so that the average scores of all lab sections are within one standard deviation of each other. Students caught plagiarizing answers from online sources or classmates will receive a zero for all lab assignments. Any questions about re-grades should go to your TA.

### *Cumulative final exam*

The final exam will be primarily multiple choice questions with a few short answer questions. In the event of documented illness or emergency, i.e., you have an emergency room receipt or police report, I will allow a make-up for the final exam only. (Photos are not adequate documentation of a traffic accident.) A make-up will be allowed for students who already have a final at the same time. (Having one other final on the same day is not a valid reason.)

### *Lab Reports*

You will write two lab reports about the Metabolism and Exercise Physiology labs. The first lab report will be short with one round of peer review. The 2nd lab report will be longer, with two rounds of peer review. Any questions about your Peerceptiv or final lab report scores should go to your TA.



During labs you'll be tempted to take photos and selfies.

Please don't. Even if it's just for you. Working with preserved and fresh tissue is a privilege and it only takes one irresponsible social media post to have it taken away from everyone.



## My Commitment to the Whole Student

**Inclusive Classroom:** I will uphold UCI's commitment to ensuring equality and valuing diversity. UCI recognizes that our individual differences can deepen our understanding of one another and the world around us, rather than divide us. In this class, people of all ethnicities, genders and gender identities, religions, ages, sexual orientations, disabilities, socioeconomic backgrounds, regions, and nationalities are strongly encouraged to share their rich array of perspectives and experiences. If you have a name and/or set of pronouns that differ from those that appear on the roster, please let me know!

See also [Diversity and Awareness at UCI](#) and [UCI LGBT Resource Center](#)

**In an ideal world,** science would be objective. However, much of science is subjective and is historically built on a small subset of privileged voices. I acknowledge that it is possible that there may be both overt and covert biases in the material due to the lens with which it was written, even though the material is primarily of a scientific nature. Integrating a diverse set of experiences is important for a more comprehensive understanding of science.

Please let me know ways to improve the effectiveness of the course for you personally, or for other students or

student groups. Your suggestions are encouraged and appreciated.

**Equal Access for All Students:** Janet Napolitano, the UC president, publicly supports all students regardless of immigration status. She has also made a commitment to support and protect students and their families. If you feel that you need any kind of assistance as you are affected by either your immigration status or a loved one (family member, parents, friends, partner) feel free to contact the [UCI DREAM Center](#).

**Basic Needs Security:** Any student who faces challenges securing sufficient food or housing and believes this may affect their performance in the course is urged to contact the [Dean of Students](#) for support. Other resources available at UCI:

- [Student Outreach and Retention Center \(SOAR\)](#)
- [SOAR Basic Needs Hub & Food Pantry](#)

Furthermore, please notify the professor if you are comfortable doing so, so that she can assist with securing resources.

**A safe space.** [UCI CARE](#) provides free and confidential support services to members of the UCI community impacted by sexual assault, relationship abuse, family violence and/or stalking.

## Stressed out?

Over the course of the quarter, you may experience a range of challenges that interfere with your learning and daily activities, such as problems with friend, family, and/or significant other; substance use; concerns about personal adequacy; feeling overwhelmed; or feeling sad or anxious without knowing why. There is nothing wrong with consulting a [professional counselor](#). Some other strategies to consider:

One of the best things you can do is find a study partner. Two heads are better than one!



Give mindful meditation a try. Free intro videos from [UCI](#) and [UCLA](#)



Go for a walk outside! This is what [exercise does to your brain](#)



Grab a friend and go play at the [ARC](#). Did you know that you can also get a [relaxing massage](#) at the ARC?

## DISCUSSION AND LAB SCHEDULE

Protocols, readings and supplemental videos will be posted on the course website.

<b>Week #</b>	<b>Date</b>	<b>Discussion</b> <i>Weekly online physiology review quizzes are due at 4pm on Mondays</i>	<b>Lab topic for the week</b> <i>Weekly online lab methods quizzes are due at the start of your lab</i>
1	April 1	Your must register for learning catalytics before class starts	Thermoregulation
2	April 8		Metabolism <i>This is the basis of Lab Report #1</i>
3	April 15	<b>Mini-midterm #1</b> (Thermoregulation & Metabolism) No physiology review quiz. No methods quiz.	Data Analysis Tutorial (5 pt assignment)
4	April 22		Respiratory Physiology
5	April 29		Cardiovascular Physiology <i>Dissection: bring goggles &amp; lab coat</i>
6	May 6	<b>Mini-midterm #2</b> (Data analysis, Respiratory & Cardiovascular Physiology)	Exercise Physiology <i>Prior to your lab, you must sign-up for a time-slot and select a biker. This is the basis of Lab Report #2</i>
7	May 13		Hindlimb Anatomy <i>Dissection: bring goggles &amp; lab coat</i>
8	May 20	<b>Mini-midterm #3</b> (Exercise Physiology & Anatomy)	Muscle Physiology <i>Dissection: bring goggles &amp; lab coat. There will be an alternative for anyone uncomfortable with using live vertebrates.</i>
9	May 27	<b>Monday holiday</b> No discussion, but there will still be a physiology review quiz and methods quiz.	Human EMGs
10	June 3		Diabetes
Final Exam	Mon Jun 10, 8-10am	<b>Comprehensive Final Exam</b>	