Cover Sheet: Request 13891

PCB4723C - Physiology and Molecular Biology of Animals

Info

Process	Course|Modify|Ugrad/Pro
Status	Pending at PV - University Curriculum Committee (UCC)
Submitter	David Oppenheimer oppenhe@ufl.edu
Created	4/30/2019 2:47:45 PM
Updated	12/8/2020 4:13:13 PM
Description of request	Reduce the number of credits from 5 to 4

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CLAS - Biology 16900300	Marta Wayne	Reducing number of credits to make course more useful for prehealth students. Online lab remains coupled with course as this is not actually a roadblock as I first thought.	5/1/2019
No document changes					
College	Recycled	CLAS - College of Liberal Arts and Sciences	Joseph Spillane	The College Curriculum Committee recycles this request, with the following changes needed: the rationale needs to more clearly explain how the version of the course with fewer credits is different from the version with more credits. This needs to be explicitly done, and the references to cost reductions removed from the rationale.	10/14/2019
No document changes					
Department	Approved	CLAS - Biology 16900300	Marta Wayne		11/7/2019
No document changes					
College	Recycled	CLAS - College of Liberal Arts and Sciences	Joseph Spillane	The College Curriculum Committee recycles this request, and repeats its request from last time--the proposal MUST explain how the course content has been changed from the 5 credit version to the 4 credit version. This explanation should be specific and clear. The justification, moreover, should not reference student cost, but should be focused on curriculum.	1/10/2020
No document changes					
Department	Approved	CLAS - Biology 16900300	David Oppenheimer		7/22/2020
No document changes					

Step	Status	Group	User	Comment	Updated
College	Recycled	CLAS - College of Liberal Arts and Sciences	Joseph Spillane	The College Curriculum Committee recycles this request, with the following note: List topics cut to show 20% reduction of material. Maybe a comparison between Weekly Schedules. Will need to see grading scheme if major changes are made (such as cutting assignments to reduce credit).	10/16/2020
No document changes					
Department	Approved	CLAS - Biology 16900300	David Oppenheimer	I have attached a document that lists topics to be cut to show a 20% reduction of material. This is presented as a comparison between the Weekly Schedules for the 5 credit course and the 4 credit course. The modified grading scheme is also shown.	11/4/2020
Proposed-Topic-and-Grading-Reductions-Nov-2020.docx					11/4/2020
College	Approved	CLAS - College of Liberal Arts and Sciences	Joseph Spillane		11/16/2020
No document changes					
University Curriculum Committee	Pending	PV - University Curriculum Committee (UCC)			11/16/2020
No document changes					
Statewide Course Numbering System					
No document changes					
Office of the Registrar					
No document changes					
Student Academic Support System					
No document changes					
Catalog					
No document changes					
College Notified					
No document changes					

Course|Modify for request 13891

Info

Request: PCB4723C - Physiology and Molecular Biology of Animals
Description of request: Reduce the number of credits from 5 to 4
Submitter: David Oppenheimer oppenhe@ufl.edu
Created: 7/22/2020 2:48:04 PM
Form version: 2

Responses

Current Prefix
Enter the current three letter code (e.g., POS, ATR, ENC).

Response:
PCB

Course Level
Select the current one digit code preceding the course number that indicates the course level at which the course is taught (e.g., 1=freshman, 2=sophomore, etc.).

Response:
4

Number
Enter the current three digit code indicating the specific content of the course based on the SCNS taxonomy and course equivalency profiles.

Response:
723

Lab Code
Enter the current lab code. This code indicates whether the course is lecture only (None), lab only (L), or a combined lecture and lab (C).

Response:
C

Course Title
Enter the current title of the course as it appears in the Academic Catalog.

Response:
Physiology and Molecular Biology of Animals

Effective Term
Select the requested term that the course change(s) will first be implemented. Selecting "Earliest" will allow the change to be effective in the earliest term after SCNS approval. If a specific term and year are selected, this should reflect the department's expectations. Courses cannot be changed retroactively, and therefore the actual

effective term cannot be prior to SCNS approval, which must be obtained prior to the first day of classes for the effective term. SCNS approval typically requires at least 6 weeks after approval of the course change at UF.

Response:
Earliest Available

Effective Year
Select the requested year that the course change will first be implemented. See preceding item for further information.

Response:
Earliest Available

Requested Action
Indicate whether the change is for termination of the course or any other change. If the latter is selected, all of the following items must be completed for any requested change.

Response:
Other (selecting this option opens additional form fields below)

Change Course Prefix?

Response:
No

Change Course Level?
Note that a change in course level requires submission of a course syllabus.

Response:
No

Change Course Number?

Response:
No

Change Lab Code?
Note that a change in lab code requires submission of a course syllabus.

Response:
No

Change Course Title?

Response:
No

Change Transcript Title?

Response:
No

Change Credit Hours?
Note that a change in credit hours requires submission of a course syllabus.

Response:
Yes

Current Credit Hours

Response:
5

Proposed Credit Hours

Response:
4

Change Variable Credit?
Note that a change in variable credit status requires submission of a course syllabus.

Response:
No

Change S/U Only?

Response:
No

Change Contact Type?

Response:
No

Change Rotating Topic Designation?

Response:
No

Change Repeatable Credit?
Note that a change in repeatable credit status requires submission of a course syllabus.

Response:
No

Maximum Repeatable Credits
Enter the maximum credits a student may accrue by repeating this course.

Response:
4

Change Course Description?
Note that a change in course description requires submission of a course syllabus.

Response:
No

Change Prerequisites?

Response:
No

Change Co-requisites?

Response:
No

Rationale
Please explain the rationale for the requested change.

Response:
In switching from 5 to 4 credit hours, we will have an increased focus on the unifying principles shared by all vertebrate animals and reduce contrasts between diverse animal groups. The laboratory portion of the course, which largely focuses on the process of conducting physiological research, will not change. These changes are a better fit for the vast majority of students in that class, who are interested in health professions that largely focus on humans and other mammals.

PCB4723C – Physiology and Molecular Biology of Animals:

Responses are preceded by ">>"

Rationale for this change is to make the curriculum a better fit for health professions students who are interested in focusing on humans and other mammals. How does the department know this is the primary interest of the students in this course?

>>Instructors regularly poll students about their career interests and over 95% of them are pre-health professional majors with interests in health fields.

What course can/will students – who are so inclined – take in order to learn the material that is removed from the course?

>>Students interested in a broader the diversity of animals will gain fundamental understanding from PCB4723C that applies to all animal groups. Specialized courses are available for students interested in taxa-specific topics (e.g., FAS 4202C, ZOO 4205C, ZOO4307C, and NEM 3002)

Please include statement that communation through canvas is preferred but official UF email is also allowed.

>>Changed as requested.

Please provide weekly schedule format in syllabus so that students may plan their semesters.

>>Dates for exams were added to the weekly schedule; the only other graded activities in lecture are instant response questions that occur during every lecture. Other graded activities take place during lab/discussion groups that meet separately as smaller groups with teaching assistants. These activities are not affected by the requested credit hour change.

Please include required course evaluation information in syllabus.

>>Added as requested.

URLs in the syllabus need to be updated.

>>Updated as requested.

What happens to missed clicker questions if the student has an excused absence? Students with excused absences must be afforded the opportunity to make up missing assignments according to UF attendance policy.

>>Instructions were added for Top Hat question make-ups.

Are "quizzes" the "Top Hat" clicker questions?

>>There are no formal quizzes. Top hat questions are asked throughout every lecture.

An Instructor cannot ask a student with possible symptoms to leave the class, as there could be any number of symptoms which could overlap with current major illness concerns. It is recommended that instead the announce at the beginning of each class and include in their syllabus encouragement to go to the SHCC should they be feeling any sickness. Please update the syllabus accordingly to remove this statement.

>>This section was omitted and replaced by encouragement to seek medical attention as requested.

Students should not be limited in the amount of time they have to ask for a re-review of assignments. Please update this section of the syllabus as well.

>>This section was omitted.

PCB 4723C: Physiology & Molecular Biology of Animals
Proposed Topic and Grading Reductions

5 CREDIT HOUR OUTLINE AND GRADING

Course outline

Week	Topics
1	1-Homeostasis & Integration; 2-Cell & Molecular Physiology;
2	2-Cell & Molecular Physiology; 3-Approaches to Physiology
3	4-Metabolism*
4	Catch-up & Review; Exam 1
5	6-Transport of solutes and water
6	7-Salt and water physiology; 8-Urine dilution
7	9-Urine concentration; 10-Evolution of osmoregulation*
8	Catch-up & Review; Exam 2
9	11.1-Membrane potentials and Neurons
10	11.2 –Synapses; 12-Nervous Systems
11	13 – Sensory Physiology*
12	Catch-up & Review; Exam 3
14	15-Endocrine control of stress*; 16-Muscle physiology
13	16-Muscle physiology; 17-Cardiovascular physiology
15	17-Cardiovascular physiology
16	Exam 4

Grading

Exam 1	100**
Exam 2	100**
Exam 3	100**
Exam 4	100**
In class response questions	100
Simulations and exercises	40
Problem sets	30
Literature presentation and participation	50
Total	620

*Topics omitted for 4 credit proposal
**Grades reduced for 4 credit proposal

PROPOSED 4 CREDIT HOUR OUTLINE AND GRADING

Course outline

Week	Topics
1	1-Homeostasis & Integration
2	2-Cell & Molecular Physiology
3	3-Approaches to Physiology
4	Catch-up & Review; Exam 1
5	6-Transport of solutes and water
6	7-Salt and water physiology; 8-Urine dilution
7	9-Urine concentration
8	Catch-up & Review; Exam 2
9	11.1-Membrane potentials and Neurons
10	11.2 –Synapses
11	12-Nervous Systems
12	Catch-up & Review; Exam 3

14	16-Muscle physiology
13	17-Cardiovascular physiology
15	17-Cardiovascular physiology
16	Exam 4

Grading

Exam 1	75
Exam 2	75
Exam 3	75
Exam 4	75
In class response questions	100
Simulations and exercises	40
Problem sets	30
Literature presentation and participation	50
Total	520

PCB 4723C: Physiology & Molecular Biology of Animals
Fall 2019 – All Sections 8/16/19

COURSE OVERVIEW AND OBJECTIVES

In this course, you will learn physiology at the molecular, cellular, tissue, and systemic levels emphasizing application of concepts and analysis of information over recalling of facts. The course is not a survey of how different animals function, it is an in depth exploration of unifying principles that are broadly applicable to animals and humans. This approach is well suited for students preparing to enter health professional schools (e.g., pre-med, pre-vet, pre-dental) and graduate school.

The 'discussion/lab' portion of the course will utilize discussions, physiological simulators, a "hands-on" exercise, problem sets, and team projects to reinforce principles discussed in lectures, promote problem-based learning, introduce students to primary scientific literature, and give students experience working in teams and communicating scientific information.

Recommended prerequisites: General biology (BSC 2010&2011), general chemistry (CHM 2046/2046L), and general physics (either PHY 2048/2048L or PHY 2053/2053L), all with a grade of at least C. Genetics, cell biology, and biochemistry are also recommended. 5 Credit hours.

INSTRUCTORS

Lecturer

Keith P. Choe, PhD, Bartram Hall room 321A (inside lab), office hours T 10-11 AM & R 11-12 PM. Office hours will be extended leading up to each exam. Contact via Canvas mail is preferred, and also permitted via kchoe@ufl.edu.

Teaching Assistants

Undergraduate Teaching Assistants for lecture with office hours: Akshay Sadeeshkum (akshay771@ufl.edu) Carr 221 M 11:30-12:30 PM, Rebekkah Braziel (rebekkahebraziel@ufl.edu) Carr 221 W 2:45-3:45 PM, and Aaron Sandoval (aarsan85@ufl.edu) Carr 521 F 1:30-2:30 PM

Graduate TAs for discussion sessions: Luke Chandler (lukemchandler@ufl.edu), Mitch Walters (mjw246@ufl.edu), David Anderson (daan4786@ufl.edu), and Phil Shirk (plshirk@ufl.edu)

WEEKLY SCHEDULE – LECTURES CLB C130 TR 7-8

Approximate Week	#	Topics	Reading*
8/19	1	1-Homeostasis & Integration; 2-Cell & Molecular Physiology;	Chap. 1, 2, 3
8/26	2	2-Cell & Molecular Physiology; 3-Approaches to Physiology	Chap. 2, 3
9/2	3	4-Metabolism	Chap. 15
9/9	4	Catch-up & Review; Exam 1 9/12	
9/16	5	6-Transport of solutes and water	Chap. 3
9/23	6	7-Salt and water physiology; 8-Urine dilution	Chap. 13, 12
9/30	7	9-Urine concentration; 10-Evolution of osmoregulation	Chap. 12, 7, 13
10/7	8	Catch-up & Review; Exam 2 10/10	
10/14	9	11.1-Membrane potentials and Neurons	Chap. 3, 4
10/21	10	11.2 -Synapses	Chap. 5
10/28	11	12-Nervous Systems	
11/4	12	Catch-up & Review; Exam 3 11/5	
11/11	14	15-Endocrine control of stress; 16-Muscle physiology	Chap. 7, 8
11/18	13	16-Muscle physiology; 17-Cardiovascular physiology	Chap. 8, 9
11/25	15	17-Cardiovascular physiology; Catch-up	Chap. 9
12/2	16	Exam 4 12/3	

*Note that chapters are listed only as a rough guide; we will not cover all sections or material in each chapter. Use your judgement to read the sections of the book that are most relevant to the study questions and learning objectives.

Exam times: Exams 1, 2, 3, and 4 are in class on 9/12, 10/10, 11/5, and 12/3 (not cumulative).

GRADING

Exam 1	100
Exam 2	100
Exam 3	100
Exam 4	100
In class response questions	*100
Simulations and exercises	**40
Problem sets	**30
Literature presentation and participation	**50
Total	620

Exams will test your understanding and application of concepts presented in lecture, in study questions, and presented in the discussion sessions. There will be many "connect the dots" questions and few based on regurgitation of material.

At the discretion of the instructor, up to 2% of extra credit will be available.

*The total number of in class response questions will not be known until the end of the course, and your total clicker points earned will be calculated as a percentage of 100 points. You can drop 1/4th of your incorrect and missing response questions. *It is YOUR responsibility to budget these for illnesses, post-graduate school interviews, university sanctioned events, religious holidays, sleeping-in, dead batteries, etc…*

**Discussion points will be covered by your graduate teaching assistants.

Grading scale

low	high	letter
94.00	100.00	A
90.00	93.99	A-
87.00	89.99	B+
84.00	86.99	B
80.00	83.99	B-
77.00	79.99	C+
70.00	76.99	C
67.00	69.99	D+
64.00	66.99	D
61.00	63.99	D-
0	60.99	E

At the end of the course, grade ranges may or may not be adjusted down, but they will not be adjusted up. For example, if you earn 84.00% of all possible points then you guaranteed a B grade.

REQUIRED/RECOMMENDED COURSE MATERIALS

Animal Physiology: from genes to organisms, 2nd Edition by Sherwood, Klandorf, and Yancey, Brooks/Cole 2013. This version has an owl on the cover. Options for access are:

- Buy new or used Hardcover ~$100-250: From Cengage, Amazon, UF others…
- Rent Hardcover ~$20-100
- Rent Electronic ~$20-80

- First Edition (2004) new or used from $3 and up. This version has a mountain lion on the cover: From Amazon, Textbooks.com, others... Note – The instructor has not seen the first edition. Some material may be outdated, and in different places, but this can be an inexpensive option if you want to spend the least amount of money. Use this option at your own risk.
- Search Google/shopping for more options

We will heavily use the Top Hat Monocle instant response system in class to help stimulate understanding and discussions. Details on the system and how to register are at: https://tophat.com/ (join code 483837).

Calculator – any scientific calculator should be sufficient and must be brought to class and exams.

DISCUSSIONS & EXERCISES

You will participate in a mixture of discussions, computer-based physiology simulations, and a "hands-on" exercise. Details are in the Discussions/Lab syllabus in Canvas/Resources. A portion of exams 2, 3, and 4 will be related to papers you discuss as groups.

SUGGESTED STUDY METHODS

Come to class and participate

There is tremendous variation in how people learn and in the foundation they have upon entering this course. However, one thing that is certain is that you will not do well if you do not attend class. Seniors have failed or withdraw from this class and had to repeat it. Some of them had GPAs above 3.5 and were already conditionally accepted to medical or dental schools. They decided they would miss class and get through by cramming for exams. *They were wrong and it cost them.* You will need to "participate" in the class and work hard to do well.

Understand the concepts behind Top Hat questions

Top Hat is used to help you learn concepts while in class and to generate an "active learning" environment. It will also introduce you to the types of questions and concepts that will be on the exams. Review questions and try to anticipate how different versions of the questions might show-up on exams.

Answer and understand the concepts behind the study questions

There is an immense amount of material that is covered. To help provide focus, study questions will be posted for each exam. Exams will be limited to these concepts and material. Work on these questions as we progress. Compare your answers with those of other students, ask Dr. Choe and the undergraduate TAs for guidance, and share answers and uncertainties with other students on the discussion boards (see below). Dr. Choe will not post complete answers to these questions, as the best way to learn is to discover the answer yourself. *However, the TAs and I are always happy to help YOU come to the correct answers or CONFIRM if you are correct.*

Participate in discussion boards and chats

There are over 180 other students in the class trying to learn the same material. Post and answer general questions and comments in the chat related to daily lectures and clicker questions. Use the discussion boards to ask and answer questions about the study questions as you prepare for exams. Teaching other students is a great way to make sure you know the material. Undergraduate TAs and the instructor will monitor and direct the discussions as necessary. *These are read by all students and instructors, so make sure your comments are appropriate and respectful.*

Keep up with material

This is likely to be one of the most conceptually difficult courses you will take. It also has the potential to be one of the most stimulating and rewarding. You will be required to build on what you have learned in other

courses and to apply concepts as opposed to memorizing facts. Physiology is where you actually get to apply what you learned in courses like algebra, physics, chemistry, biochemistry, and cell biology.

You will need to be able to interpret graphs, calculate quantitative physiological variables, and integrate multiple physiological systems to understand and predict outcomes. This will require you to learn incrementally and built on concepts as they are learned. Everyone learns differently, but the best advice I can give you is to stay current on the notes, study questions, reading, and synthesis of material.

Visit the undergraduate TA or Dr. Choe

There is an undergraduate TA for this course who holds regular office hours. He did very well in this course just last year. Dr. Choe is also happy to answer questions before and after class and in office hours.

How much time should I be spending?

The minimum full-time work week in the US is 40 h. Most professionals work far more hours (e.g., 55-70), but let's use 40 h/week as a minimum. If you are taking 15 credit hours, then this course is 1/3 of your course load. So, that's 1/3 X 40 h = 13.33 h you should spend on this course. 13.33 – 4 h lecture – 3 h lab = 6.33 h you should spend outside of class each week or about 1.5 h per day for 4 days.

OTHER POLICIES

Academic Honesty

All students are expected to hold themselves to a high standard of academic honesty.

Of course, you must work alone on all exam questions.

If you witness any instances of academic dishonesty in this class, please notify the instructor or contact the Student Honor Court (392-1631) or Cheating Hotline (392-6999). For additional information on Academic Honesty, please refer to the University of Florida Academic Honesty Guidelines at: https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/

In class Top Hat response questions

You are responsible for making sure that you bring a fully functioning responder (phone with text service or WIFI device) to each class meeting. There will be no make-up questions or other allowances made for failure of your unit to work properly. Please keep in perspective that there will likely be as many as 100 questions so missing any single question due to equipment failure only affects about 0.2 percentage points of your final grade. An incorrect response is worth 0.5 points, and a missing response is worth 0.0 points. You can drop 1/4th of your missed or incorrect response questions. *It is YOUR responsibility to budget these for unexcused absences. For excused absences (e.g., illnesses, university sanctioned events, and religious holidays), see Dr. Choe before the following lecture to make-up missed questions.*

Attendance and Absences

I may take attendance in lectures, but this by itself is not worth any points and is just to help me keep track. Alternatively, you must attend the lectures to complete the "Top Hat" questions. Missed clicker questions will be counted as "0".

If you must miss an exam due to an allowable scheduled absence (for example, to participate in a sanctioned university function), you must notify the instructor as soon as the event is scheduled or during the first week of classes. If you miss class due to an allowable but unscheduled absence (e.g., illness), you must contact the instructor as soon as possible. In the case of illness, you must provide a signed note from your primary care provider indicating that you were *unable to attend class* on the day(s) in question; it is not sufficient for the note to simply indicate that you were seen in a clinic on a given day.

If you are feeling ill, you are encouraged to seek medical attention at SHCC https://shcc.ufl.edu/.

Teacher Evaluations

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/.

Students with Special Needs

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center at https://disability.ufl.edu/students/get-started/. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

No accommodations are available to students who lack this documentation. It is the policy of the University of Florida that the student, not the instructor, is responsible for arranging accommodations when needed.

UF counseling Services

Resources are available on-campus for students having personal problems or lacking clear career and academic goals. The resources include: 1) UF Counseling & Wellness Center, 3190 Radio Rd, 392-1575, psychological and psychiatric services. 2) Career Resource Center, Reitz Union, 392-1601, career and job search services. Many students experience test anxiety and other stress related problems. “A Self Help Guide for Students” is available through the Counseling Center (301 Peabody Hall, 392-1575) and at their web site: https://counseling.ufl.edu/.

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.