

June 28, 2011

To: Frank Laski, Chair
Life Sciences Core Curriculum

From: Arlene Russell, Chair
Committee on Curriculum, Undergraduate Council

Re: GE Credit Approval for Life Sciences 2

On behalf of the Undergraduate Council, I am pleased to inform you that the General Education Governance Committee's recommendation for the revised **Life Sciences 2** (4 units) to satisfy the UCLA General Education requirements has been approved. The effective date of this approval is **Fall 2011**.

If you have any questions or need additional information, please do not hesitate to contact Academic Senate Principal Policy Analyst Jisoo Kim (x51194; jkim@senate.ucla.edu).

cc: Kim Alexander	Robert Kilgore
Lucy Blackmar	Jisoo Kim
Scott Chandler	Raymond Knapp
Randy Cirilo	Kyle McJunkin
Kathleen Copenhaver	Roxanne Neal
Erica Dragon	Tracy Newman
Penny Hein-Unruh	Alison Nickerson
Leann Hennig	Vivian Salazar
Corey Hollis	Michael Soh
Gregory Kendrick	Joseph B. Watson


Attachment: College FEC Approval Memo of June 22, 2011

UCLA MEMORANDUM

College Faculty Executive Committee
A265 Murphy Hall

June 22, 2011

To: Frank Laski, Chair
Life Science Core Program

From: Raymond Knapp, Chair 
UCLA College Faculty Executive Committee

Re: **Recommendations from General Education Governance Committee (submitted June 14, 2011);**
Effective date: Fall 2011
Final Approval terminates with the Undergraduate Council

On behalf of the College Faculty Executive Committee (FEC), I have reviewed an additional recommendation from the GE Governance committee. Acting on behalf of the College FEC, I am pleased to inform you that the FEC has approved the committee's recommendation. The effective date of the FEC approval is Fall 2011.

Summary of recommendations approved by FEC:

- One course from [Life Sciences](#) (Fall 2011)

By way of this cover letter, I am forwarding your proposal to the Undergraduate Council for final approval. The Undergraduate Council will inform you of their decision at the conclusion of the approval process. In the meantime, you are welcome to contact me at knapp@humnet.ucla.edu with questions. Kyle Stewart McJunkin, Academic Administrator, is also available to assist you and he can be reached at (310) 825-3223 or kmcjunkin@college.ucla.edu.

cc: Tracy Newman, Management Services Officer, Life Science Core Curriculum
Jisoo Kim, Principal Policy Analyst, Academic Senate
Lucy Blackmar, Assistant Vice Provost, Undergraduate Education Initiatives
M. Gregory Kendrick, Director, Freshman Cluster Program
Kathleen Copenhaver, Associate Registrar, Registrar's Office
Leann Hennig, Senior Editor, Registrar's Office
Arlene Russell, Chair, Curriculum Committee
Joseph Watson, Chair, Undergraduate Council
Scott Chandler, Chair, GE Governance Committee


Attachment: Recommendation from GE Governance committee

UCLA MEMORANDUM

General Education
A265 Murphy Hall
157101

June 22, 2011

TO: Raymond Knapp, Chair
College Faculty Executive Committee

FROM: Scott Chandler, Chair 
General Education Governance Committee

RE: Recommendation for GE Credit Approval

After careful analysis of submitted course materials (http://www.college.ucla.edu/ge/app/ge_archive.aspx), the General Education Governance Committee recommends that the following course be approved for GE credit.

Life Science 2

Cells, Tissues, and Organs

Cooper, Ron; Fain, Gordon; Schein, Stan; Bok, Dean; Esdin, Joseph;
Simmons, Dwayne; Edgerton, Reggie; Arnold, Arthur; Narins, Cameron;
Phelan, Jay
Units: 4
Effective Date: Fall 2011

GE Governance Committee Recommendation:
Foundations of Scientific Inquiry – Life Science

Cc: Kyle McJunkin, Academic Administrator, College Faculty Executive Committee

May 17, 2011

Dear GE Committee,

I am writing to request that the new LS2 be given GE credit status. Recently the College Faculty Executive Committee (FEC) approved changes to the Life Sciences Core Curriculum pertaining to the lab component of LS2 and LS3 and the new course LS23. Below is a summary of the proposed changes:

1. The lab components of LS2 and LS3 will be removed from those courses. Both LS2 and LS3 will change from 5 credits to 4 credits. The new LS2 and LS3 will have weekly 75-minute discussion sections.
2. LS23 will be called "Introduction to Biology Laboratory". It will be a 2-credit class that meets weekly for a 3-hour lab session. Students will take the course concurrently with Life Science 3 or 4.
3. For the first year (2011-2012) LS23L will contain the same laboratory modules as are currently being taught in LS2 and LS3. This first year will be a transition year, moving students from the old tract to the new. The labs will be modified (improved) in the following years.

LS2 is currently a GE course with a lab/demo component. Based on these changes, we propose that the new LS2 retain its GE status, but without lab. LS2 is primarily taken as a GE course by science students in biochemistry, chemistry, and bioengineering. It is a help to these students and their programs that LS2 has GE credit. I will emphasize that LS2 currently has GE status, and the new LS2 will be largely the same course retaining the same enforced requisite that includes Chemistry 14A or 20A except for the lab. We therefore request that it retain its GE status.

Thanks for your help, and please let me know if you have further questions.

Yours, Frank Laski
Chair, LS Core
Professor, MCDB Dept. and MBI
laski@mbi.ucla.edu
X63640

General Education Course Information Sheet

Please submit this sheet for each proposed course

Department & Course Number Life Sciences Core Curriculum / LS2
 Course Title Life Sciences 2, Cells, Tissues & Organs
 Indicate if Seminar and/or Writing II course _____

1 Check the recommended GE foundation area(s) and subgroups(s) for this course

Foundations of the Arts and Humanities

- Literary and Cultural Analysis _____
- Philosophic and Linguistic Analysis _____
- Visual and Performance Arts Analysis and Practice _____

Foundations of Society and Culture

- Historical Analysis _____
- Social Analysis _____

Foundations of Scientific Inquiry

- Physical Science _____
With Laboratory or Demonstration Component must be 5 units (or more) _____
- Life Science X _____
With Laboratory or Demonstration Component must be 5 units (or more) _____

2. Briefly describe the rationale for assignment to foundation area(s) and subgroup(s) chosen. _____

Introduction to basic principles of cell structure, organization of cells into tissues and organs, and principles of organ systems

3. "List faculty member(s) who will serve as instructor (give academic rank):
COOPER, RON; FAIN, GORDON; SCHEIN, STAN; BOK, DEAN; ESDIN, JOSEPH; SIMMONS, DWAYNE; EDGERTON, REGGIE; ARNOLD, ARTHUR; NARINS, CAMERON; PHELAN, JAY;

Do you intend to use graduate student instructors (TAs) in this course? Yes X No _____
 If yes, please indicate the number of TAs (576 Students/24 Sections) 8

4. Indicate when do you anticipate teaching this course over the next three years:

2010-2011	Fall	_____	Winter	_____	Spring	_____
	Enrollment	_____	Enrollment	_____	Enrollment	_____
2011-2012	Fall	<u>X</u>	Winter	<u>X</u>	Spring	<u>X</u>
	Enrollment	<u>576</u>	Enrollment	<u>576</u>	Enrollment	<u>576</u>
2012-2013	Fall	<u>X</u>	Winter	<u>X</u>	Spring	<u>X</u>
	Enrollment	<u>576</u>	Enrollment	<u>576</u>	Enrollment	<u>576</u>

5. GE Course Units

Is this an **existing** course that has been modified for inclusion in the new GE? Yes X No _____
 If yes, provide a brief explanation of what has changed. _____

LS2 is currently a GE course with Laboratory. The Laboratory component will be removed.

Present Number of Units: 5 Proposed Number of Units: 4

6. Please present concise arguments for the GE principles applicable to this course.

- ❑ General Knowledge

Discussion of scientific concepts and technologies is pervasive in the world today, from newspapers and magazines, with numerous important political and medical decisions contingent upon such knowledge. LS2 covers scientific discoveries and methods, including broad organizing theories and concepts, significant experimental results and practical applications of both.
- ❑ Integrative Learning

In LS2, students learn and apply knowledge about the physiology, and analyses of experimental observations that use quantitative methods and logic. Further, they explore how scientific technologies can have significant impacts on diverse disciplines, from agriculture, medicine, nutrition, and learning to criminology.
- ❑ Ethical Implications

Throughout LS2, students explore issues with important and difficult ethical implications. These include stem cells research as well as pre-natal testing.
- ❑ Cultural Diversity

An important component of our discussions relates to the evaluation of the amounts of within-population variation and between-population variation, which helps shed light on issues surrounding cultural and racial diversity, and the difficulty in categorizing individuals.
- ❑ Critical Thinking

At the core of LS2 lies the process of hypothesis-testing and the analysis of experimental observations in order to draw conclusions (and estimate our confidence in such solutions). From the use of statistical analyses to the examination of data in light of competing explanations to the generation of experimental predictions about novel situations, students spend significant time learning and using critical thinking skills.
- ❑ Rhetorical Effectiveness

Essay questions on the midterms and final exam in LS2 require students to analyze experimental results and to use their analyses to form persuasive arguments about the genetic mechanisms responsible for the observed patterns.
- ❑ Problem-solving

From weekly problem sets to exams heavily focused on problem solving, LS2 students must master problem-solving skills relating to every topic in genetics.
- ❑ Library & Information Literacy

Students must manage information from their textbook as well as classroom discussions of important research findings and the technical literature in which they are described.

(A) STUDENT CONTACT PER WEEK (if not applicable write N/A)

- | | | |
|---|-------------|---------|
| 1. Lecture: | <u>2.50</u> | (hours) |
| 2. Discussion Section: | <u>1.25</u> | (hours) |
| 3. Labs: | _____ | (hours) |
| 4. Experiential (service learning, internships, other): | _____ | (hours) |
| 5. Field Trips: | _____ | (hours) |

(A) TOTAL Student Contact Per Week **3.75** **(HOURS)**

(B) OUT-OF-CLASS HOURS PER WEEK (if not applicable write N/A)

- | | | |
|-------------------------------------|----------|---------|
| 1. General Review & Preparation: | <u>3</u> | (hours) |
| 2. Reading | <u>2</u> | (hours) |
| 3. Group Projects: | _____ | (hours) |
| 4. Preparation for Quizzes & Exams: | <u>2</u> | (hours) |

5. Information Literacy Exercises:

2 (hours)

6. Written Assignments:

3 (hours)

7. Research Activity:

(hours)

(B) TOTAL Out-of-class time per week

12 (HOURS)

GRAND TOTAL (A) + (B) must equal at least 15 hours/week

15.75 (HOURS)

Life Sciences 2

Cells, Tissues, and Organs

Course Information, Fall 2011

4 units; Requisite: Chemistry 14A or Chemistry 20A

TEXTBOOK / REQUIRED MATERIALS

Sadava, Hillis, Heller, and Berenbaum. 2009. *Life, The Science of Biology*, 9th edition.

Prep-U Adaptive Quizzing website: www.prep-u.com (requires access card from textbook)

LS2 Section 2 Reader. Four required articles (from *Sci. American / Nature / Science*). Available at Course Reader Materials, 1081 Westwood Blvd. #1.

COURSE REQUIREMENTS

200 • **Midterm Exams** (2 @ 100 pts each)

50 • **Section** Four two-page papers on *Sci. Amer./Nature/Science* articles @ 10 pts
Participation: 10 pts

175 • **Final Exam** (comprehensive)

425 • **Total Points Possible**

EXAMS

The midterms in this class—two of them—are given in the evening. They are from 5PM to 6:30PM (rather than 5-7pm as listed in the Schedule of Classes) on Tuesday evenings of the 4th and 8th weeks of the quarter. They will cover material from the lectures, the readings, and the discussion sections. Approximately half of the exam will be multiple choice questions and half will be short answer questions. The final exam is comprehensive.

Makeup exams are NOT given. If you have an emergency and are unable to take an examination, you are responsible for contacting the Life Sci. Core Office before the exam. You must have written verification regarding the illness/emergency. If you feel that a clerical error was made in the grading of your exam, submit your exam with a typed explanation of the issue to the Life Sciences Core Office by Friday of the week following the exam and your entire exam will be regraded. Late regrades will not be accepted. Please make a photocopy of your exam if you submit it as they will not be available until after the final exam.

THE LIFE SCIENCES CORE OFFICE

For administrative issues relating to LS2, see Lily Yanez in the Life Sci Core Office (Life Sciences Building, Room 2305, 825-6614). Because LS 2 is an impacted class, you may not drop it after Friday of Week 2.

DISCUSSION SECTION

- Discussion sections will include discussion and review of lecture material and discussion of articles from the scientific literature.
- During weeks 2, 4, 6, and 8, you will turn in a 2-page paper, worth 10 points, on the *Scientific American / Nature / Science* articles assigned for that week. You will receive more specific instructions on each writing assignment on the course website. You must turn in these papers *in person during the section they are due* or you will lose one point. Also, for each additional day they are late you will lose another point.

WEEK	DISCUSSION SECTION TOPIC / WRITING ASSIGNMENT
1	Introduction to scientific thinking
2	Biological macromolecules and cell structure. <i>Writing:</i> The benefits and ethics of animal research
3	Enzymes and energetics.
4	Photosynthesis and cell respiration. <i>Writing:</i> Atherosclerosis: the new view.
5	Investigating animal metabolism.
6	Reproduction and development. <i>Writing:</i> No truth to the fountain of youth/Why do we age?
7	Form and function in animal anatomy and physiology.
8	Endocrinology, neurobiology, and cell signaling. <i>Writing:</i> Neurotransmitters, receptors and the lust for danger.
9	Nutrition and digestion.
10	Review

LECTURE SCHEDULE FOR LS2

WK		LECTURE TOPIC	READING (CHAPTER)
1	Tu	1. Scientific Thinking and Experimental Design	1-2
	Th	2. Biological Macromolecules	3-4
2	Tu	3. Cellular Organelles	5
	Th	4. Cellular Membranes	6
3	Tu	5. Enzymes and Energetics	8
	Th	6. Mitochondria and Cellular Respiration	9
4	Tu	7. Chloroplasts and Photosynthesis	10
	Th	Exam 1 8. Photosynthesis (cont.)	10
5	Tu	9. Cell Cycle, Mitosis and Meiosis	11
	Th	10. Homeostasis	40
6	Tu	11. Reproduction	43
	Th	12. Animal Development	44
7	Tu	13. Signaling	7
	Th	14. Neurons and Sensory Systems	45,46
8	Tu	15. The Synapse	45
	Th	Exam 2 16. Endocrine System	41
9	Tu	17. Gas Exchange and Respiration	49
	Th	18. Transport and Circulation	50
10	Tu	19. Digestion and Absorption	51
	Th	20. Nutrition	



Course Revision Proposal

Life Sciences 2 Cells, Tissues, and Organs

Requested revisions that apply: Renumbering Title Format Requisites Units Grading DescriptionMultiple Listing: Add New Change Number DeleteConcurrent Listing: Add New Change Number Delete**CURRENT****Course Number** Life Sciences 2
Title Cells, Tissues, and Organs**Short Title** CELLS&TISSUES&ORGNS**Units** Fixed: 5**Grading Basis** Letter grade only**Instructional Format** Primary Format**Format** Lecture

Secondary Format

Discussion**TIE Code** LECS - Lecture (Plus Supplementary Activity) [T]**GE** Yes**Requisites** Chemistry 14A or 20A**Description** Lecture, three hours; discussion/laboratory, three hours (alternate weeks). Enforced requisite: Chemistry 14A or 20A. Introduction to basic principles of cell structure, organization of cells into tissues and organs, and principles of organ systems. Letter grading.**Justification****Syllabus****Supplemental Information****Effective Date** Fall 2002**Department** Life Sciences**Contact****Routing Help****ROUTING STATUS****Role:** Registrar's Office**Status:** Processing Completed**Role:** Registrar's Publications Office - Hennig, Leann Jean (lhennig@registrar.ucla.edu) - 56704**Status:** Added to SRS on 2/19/2011 8:44:40 PM**Changes:** TIE Code**Comments:** Edited course description into official version.**Role:** Registrar's Scheduling Office - Thomson, Douglas N (dthomson@registrar.ucla.edu) - 51441**PROPOSED****Life Sciences 2
Cells, Tissues, and
Organs
CELLS&TISSUES&ORGNS
Fixed: 4
Letter grade only**

Primary Format

**Lecture - 3 hours per
week**

Secondary Format

**Discussion - 75 hours
per week****LECS - Lecture (Plus
Supplementary Activity)
[T]****Yes****Chemistry 14A or 20A.****Lecture, three hours;
discussion, 75 minutes.****Enforced requisite:
Chemistry 14A or 20A.
Introduction to basic
principles of cell
structure, organization
of cells into tissues and
organs, and principles of
organ systems. Letter
grading.****LS 2 is decreasing in
units from 5 to 4 as the
lab component is being
proposed as a
standalone lab effective
fall 2011.****Fall 2011****Life Sciences**

Name

TRACY NEWMAN

E-mail

tracyn@lifesci.ucla.edu

Status: Added to SRS on 2/7/2011 1:42:58 PM
Changes: TIE Code
Comments: No Comments

Role: FEC School Coordinator - Soh, Michael Young (msoh@college.ucla.edu) - 45040
Status: Returned for Additional Info on 1/21/2011 6:02:45 PM
Changes: TIE Code
Comments: Routing to Registrar's Office

Role: FEC Chair or Designee - Knapp, Raymond L (knapp@humnet.ucla.edu) - 62278
Status: Approved on 1/21/2011 2:13:01 PM
Changes: TIE Code
Comments: No Comments

Role: L&S FEC Coordinator - Soh, Michael Young (msoh@college.ucla.edu) - 45040
Status: Returned for Additional Info on 1/20/2011 5:53:50 PM
Changes: TIE Code
Comments: Routing to FEC Chair Ray Knapp for approval

Role: Department/School Coordinator - Newman, Tracy L (tracyn@lifesci.ucla.edu) - 58445
Status: Approved on 1/12/2011 12:05:50 PM
Changes: TIE Code, Requisites, Description, Justification
Comments: Tracy Newman, MSO on behalf of Frank Laski, LS Core Chair

Role: Registrar's Office - Hennig, Leann Jean (lhennig@registrar.ucla.edu) - 56704
Status: Returned for Additional Info on 1/12/2011 11:01:45 AM
Changes: TIE Code
Comments: Reroute back to Tracy to fix requisites, description, and justification (update course numbers).

Role: Registrar's Scheduling Office - Hennig, Leann Jean (lhennig@registrar.ucla.edu) - 56704
Status: Added to SRS on 5/8/2010 12:48:17 PM
Changes: TIE Code
Comments: Hold for Fall 2011.

Role: Registrar's Publications Office - Hennig, Leann Jean (lhennig@registrar.ucla.edu) - 56704
Status: Added to SRS on 5/7/2010 11:06:41 AM
Changes: TIE Code
Comments: Processing is complete!

Role: Registrar's Scheduling Office - Thomson, Douglas N (dthomson@registrar.ucla.edu) - 51441
Status: Added to SRS on 5/3/2010 12:45:28 PM
Changes: TIE Code, Effective Date
Comments: Effective term changed from fall 2010 to fall 2011, per department.

Role: Registrar's Scheduling Office - Thomson, Douglas N (dthomson@registrar.ucla.edu) - 51441
Status: Added to SRS on 5/3/2010 12:45:23 PM
Changes: TIE Code, Effective Date
Comments: Effective term changed from fall 2010 to fall 2011, per department.

Role: Registrar's Publications Office - Hennig, Leann Jean (lhennig@registrar.ucla.edu) - 56704
Status: Added to SRS on 3/13/2010 11:36:58 AM
Changes: TIE Code, Requisites, Description
Comments: Edited course description into official version; corrected requisites.

Role: Registrar's Scheduling Office - Thomson, Douglas N (dthomson@registrar.ucla.edu) - 51441
Status: Added to SRS on 3/11/2010 10:31:22 AM
Changes: TIE Code
Comments: No Comments

Role: Registrar's Scheduling Office - Thomson, Douglas N (dthomson@registrar.ucla.edu) - 51441
Status: Added to SRS on 3/11/2010 10:14:24 AM
Changes: TIE Code
Comments: No Comments

Role: L&S FEC Coordinator - Soh, Michael Young (msoh@college.ucla.edu) - 45040

Status: Returned for Additional Info on 3/9/2010 6:35:33 PM
Changes: TIE Code
Comments: Re-routing to Doug Thomson in the Registrar's Office

Role: FEC School Coordinator - Weintraub, Dayna Staci Bake (N/A)
Status: Returned for Additional Info on 3/9/2010 6:14:45 PM
Changes: TIE Code
Comments: Routing to M Soh

Role: FEC Chair or Designee - Knapp, Raymond L (knapp@humnet.ucla.edu) - 62278
Status: Approved on 3/9/2010 7:56:51 AM
Changes: TIE Code
Comments: No Comments

Role: L&S FEC Coordinator - Soh, Michael Young (msoh@college.ucla.edu) - 45040
Status: Returned for Additional Info on 3/8/2010 2:13:58 PM
Changes: TIE Code
Comments: Re-routing to FEC Chair Ray Knapp for approval

Role: FEC School Coordinator - Weintraub, Dayna Staci Bake (N/A)
Status: Returned for Additional Info on 3/5/2010 2:54:48 PM
Changes: TIE Code
Comments: Routing to M Soh

Role: Department/School Coordinator - Newman, Tracy L (tracyn@lifesci.ucla.edu) - 58445
Status: Approved on 2/16/2010 3:55:31 PM
Changes: TIE Code
Comments: Tracy Newman, MSO on behalf of Frank Laski, Chair, LS Core

Role: FEC School Coordinator - Weintraub, Dayna Staci Bake (N/A)
Status: Returned for Additional Info on 2/2/2010 12:41:33 PM
Changes: TIE Code
Comments: Department chair approval

Role: Initiator/Submitter - Newman, Tracy L (tracyn@lifesci.ucla.edu) - 58445
Status: Submitted on 2/1/2010 9:03:39 PM
Comments: Initiated a Course Revision Proposal

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Comments or questions? Contact the Registrar's Office at
cims@registrar.ucla.edu or (310) 206-7045