

BISC 104Lxg – How the Body Works: Topics in Human Physiology Fall 2007

(Draft, 8/13/2007)

This GE course is designed to give undergraduates an introduction to human physiology. BISC 104 is designed to provide a working knowledge of the human body and many of the associated considerations, such as diseases, genetic and environmental interactions, and the effect of both legitimate and illegal drugs. We shall also explore social aspects of many of areas presented. Although there is no prerequisite, general knowledge of introductory biology and chemistry at the high school level is helpful.

Please note that this course is **not** designed for those majoring in biology or the related health sciences. BISC 104 does not satisfy the requirements for accreditation in any pre-health area of which we are aware, and should not be used in an attempt to satisfy admission requirements into one of the health professions. We do not support, and will not provide help, in using this course for such a purpose. Those who are majoring in biology or any of the health sciences should consider BISC 307, which is designed specifically for pre-health majors.

Lecturers:

Chien-Ping Ko, Ph.D.	HNB 209	740-9182	cko@usc.edu	Office hrs: WF 2-3
Michel Baudry, Ph.D.	HNB 534	740-9188	baudry@usc.edu	Office hrs: Tue 2-4

Laboratory Director:

Eric Price, Ph.D. Candidate	ZHS 371B	740-6084	eap@usc.edu	Office hrs: during all laboratories
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Teaching Assistants: TBA

Textbook:

Visualizing Human Biology by Kathleen Anne Ireland and David J. Tenenbaum. Wiley/The National Geographic Society.

Ancillary material: a number of handouts will be supplied as needed.

Blackboard Website: <https://blackboard.usc.edu/>

Lecture: MWF 1 – 1:50 PM, THH 301.

Grading:

The possible numbers of points for the various evaluations are:

First Midterm, 1 hour	100 points
Second Midterm, 1 hour	100 points
Third Midterm, 1 hour	100 points
Term paper	100 points
Oral presentation	50 points
Final Exam, 2 hours	200 points
Laboratory	250 points

Course Total	900 points

Laboratory: Each student must enroll in one section of laboratory. The laboratory meets once each week for two hours. The material covered in the laboratory is critical to understanding the overall course. As a result, the laboratory is an integral part of this course, and cannot be taken separately. More information about the laboratory will be supplied to you at a later date. Be sure to attend the first offering of your laboratory section.

The final examination will be composed of two parts. One part will cover the material of the last quarter of the course, and will be worth 100 points. The second will cover material from the entire course, and will also be worth 100 points. You will take both simultaneously, dividing your time between the two parts as you wish.

Final grades are assigned on a curve, based entirely on the total number of points earned in the course. After each exam a curve will be given by the instructors to indicate roughly what letter grade corresponds to the student's current number of points. Specifically, you will be provided with the current course average and a provisional letter grade scale. Please remember that the course mean on Blackboard is NOT authoritative. Also, please remember that all discussion regarding letter grades is to be held as provisional prior to the completion of all course assignments. Again, provisional means provisional. Please remember that only the total number of points earned determines your course grade!

In a course such as this, in which the exact content of the lectures can vary, the student must realize that the examinations can and will cover anything that is discussed in class. Some of this material may not be in the textbook, and will be available only to those who were present in class. For this reason, it is very important that you attend class. Those who do not attend will surely do less well on examinations.

Please note that this course involves conceptual ideas that are not easily grasped, as well as a significant amount of memorization. These are often challenging to students. BISC 104 is not a trivial course. The entire grade distribution will be used, including Ds and (when we are forced to) Fs. Students who seek less challenging material would be well advised to consider alternate enrollments.

Regarding Pass/No Pass Status. Should you choose the Pass/No Pass option, you must have a final score equivalent to "C minus" quality or better to receive a "Pass." "No Pass" will be assigned if your final score is less than the equivalent of a "C minus." No petitions for change from Pass/No Pass to graded status will be accepted after the deadline to change status has passed.

Re-grading of exams. If you wish to have exam questions re-graded, you must submit a request to your TA within one week of when your exam was returned to you. Your request must be thoroughly explained in writing. TAs will not consider oral requests. The entire answer will be re-graded, not just the part you think deserves more credit. Your score may go up or down as a result of a re-grade.

Make-up exams will normally not be permitted. Making up an exam will only be allowed if the student can demonstrate with written documentation, in advance when possible, a compelling reason for not taking the exam at the scheduled time. A make-up exam may include an oral component and will generally be more difficult than the in-class exam.

Students with Disabilities. Any student requesting academic accommodations based on a disability is required to register with the Office of Disability Services and Programs (DSP, STU 301, 213-740-0776) each semester. You must deliver an approved DSP letter to Dr. Price, Dr. Ko, or Dr. Baudry as early in the semester as possible. Please see SCampus (<http://www.usc.edu/dept/publications/SCAMPUS/>) for additional policies that are not covered here (i.e. academic integrity, proper conduct, etc) but that do still apply!

Preparation of the term paper and oral presentation

A **term paper** is required. The term paper should be a minimum of about 10 pages, double spaced and machine-printed in a manner that is normal for formal presentations using a font size of 12 points. Please don't exceed 20 pages. Any style that you wish to use is fine, as long as it is used consistently and is in accord with the usual formal presentations of your field. Please don't submit illegible, torn, or handwritten papers.

Each paper must be annotated with a minimum of 4-10 references to the scientific or popular literature. Of these references, one must be as recent as 2006. The references must demonstrate evidence that the student has read at least two articles from a scientific journal or one of the sources listed below. The presentation must be an original work by the student involved. Plagiarism in this matter, as in connection with everything concerning this course and your University activities, is strictly forbidden and will be treated with the usual University rules if it is encountered. Please visit <http://www.usc.edu/dept/publications/SCAMPUS/gov/gov05.html> regarding the University's policy on plagiarism, and <http://www.usc.edu/dept/publications/SCAMPUS/gov/gov11.html> regarding Academic Dishonesty Sanction Guidelines. The recommended sanction for plagiarism is F for course.

The term paper due date: **Monday, November 19, 2007**

Subject Matter

The choice of subject for the term paper is up to the student, but must deal with the material of the course. In general, a subject that deals with any aspect of human physiology or disease will be accepted. Students are urged to discuss the subject of their paper with any of the teaching staff of the course. Topics that are not suitable will result in reduced credit. If you are in doubt as to whether a subject is suitable or not, please present it to the instructors or one of the teaching assistants prior to the 6th week of class to obtain permission. It is not necessary that every student choose a different topic; many students can, and often do, present the same subject. In this case, of course, all the students must work independently.

Sources of Material

There exist a large variety of different reference sources. These include the following popular level scientific magazines:

Scientific American
American Scientist
New Scientist

Science
Discover
Nature (any version)

Science News

Any of these sources can serve as a rich supply of ideas and information. You may use references from any of them freely. You will often find excellent articles in *Time*, *Newsweek*, the newspapers (particularly the *New York Times* and the *Los Angeles Times*). Note particularly the excellent section on health in the Monday edition of the *LA Times*, and other news periodicals. Most of these are now available on the web. Newspaper articles are quite satisfactory as sources, but must be appropriately referenced.

In addition to the popular magazines concerning science, there exist a number of more formal scientific journals used by the professionals in the field. You will usually find these articles too advanced to be read easily, but you may certainly feel free to use them if you wish. In particular, review articles in journals such as *Trends in Neuroscience* and *Trends in Pharmacology* are often of value.

The World Wide Web is an excellent source of information and ideas. If you are not already familiar with the Web, go to Leavey and learn about it. The Web and associated electronic means of communication are changing our society. While they are very powerful, be careful of information from the Web. This material is almost

completely unrefereed, and may (and often does) contain significant errors. You are responsible for checking your sources to be sure that the information you report is correct. This is a significant part of modern scholarship. You may not use only the Web as a source of information. Of course, you can use peer-reviewed publications available online such as medical journals and the scientific journals listed above. Always cite scientific journals as journals whether accessed online or in print.

Some web sites of interest are:

www.medlineplus.gov
<http://www.cdc.gov/>
<http://www.fda.gov/>
<http://www.nih.gov/>
<http://www.ncbi.nih.gov/entrez/query.fcgi>
<http://www.usda.gov/>

You may trust any information from these excellent governmental web sites.

Finally, there are a wide variety of medical journals. Many of these are written for physicians and are difficult to read, but many are written for a less highly trained audience. This latter group should be understandable by you as we move into the second half of the course. You may feel free to include references from any of these.

Turnitin for Term Papers

The following statement provided by USC's Center for Scholarly Technology applies. "USC is committed to the general principles of academic honesty that include and incorporate the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one's own academic work from misuse by others as well as to avoid using another's work as one's own. By taking this course, students are expected to understand and abide by these principles. All submitted work for this course may be subject to an originality review as performed by Turnitin technologies (<http://www.turnitin.com>) to find textual similarities with other Internet content or previously submitted student work. Students of this course retain the copyright of their own original work, and Turnitin is not permitted to use student-submitted work for any other purpose than (a) performing an originality review of the work, and (b) including that work in the database against which it checks other student-submitted work." Each of you will be required to submit your term paper in hard copy as well as in electronic form through turnitin® on blackboard by the due date. You will receive instructions regarding how to submit your papers later in the semester.

Oral Presentation

An **oral presentation** must be developed by the student for delivery in lab. The subject matter of the oral presentation will usually be the same as that of the term paper. This presentation should be ten minutes in length. It will be followed by a discussion period of five minutes, during which other students are urged to ask questions and to consider the material. The use of visual aids is expected in the presentation. Grades will be assigned on the basis of significance of the topic, quality of the material, and the quality of the presentation. Detailed guidelines will be distributed later. All presentations will be made during the final three weeks of the course.

Proposed lectures.

It is anticipated that student involvement during class will be frequent. The content of lectures may change as a result of questions or interests of the students.

Lecture Schedule, 104 Lxg, Fall 2007

Date	Topic	Reading	Lecturer
Aug 27	Introduction to Human Physiology and the Scientific Method	Ch 1	Ko
Aug 29	Everyday Chemistry of Life, I	Ch 2	
Aug 31	Everyday Chemistry of Life, II	Ch 2	Ko
Sept 3	<i>University Holiday (Labor Day)</i>		
Sept 5	Everyday Chemistry of Life, III	Ch 2	Ko
Sept 7	Cells, Organization, and Communication, I	Ch 3	Ko
Sept 10	Cells, Organization, and Communication, II	Ch 3	Ko
Sept 12	Tissues	Ch 4	Ko
Sept 14	The Skeletal System	Ch 5	Ko
Sept 17	The Muscular System, I	Ch 6	Ko
Sept 19	The Muscular System, II	Ch 6	Ko
Sept 21	The Nervous System, I	Ch 7	Ko
Sept 24	Midterm Exam I, 100 points	(Covers 8/27-9/19, 10 lectures, Ch 1-6)	
Sept 26	The Nervous System, II	Ch 7	Ko
Sept 28	The Nervous System, III	Ch 7	Ko
Oct 1	The Nervous System, IV	Ch 7	Ko
Oct 3	The Special Senses, I	Ch 8	Ko
Oct 5	The Special Senses, II	Ch 8	Ko
Oct 8	The Integumentary System	Ch 9	Ko
Oct 10	The Immune System, I	Ch 10	Ko
Oct 12	The Immune System, II	Ch 10	Ko
Oct 15	The Immune System, III	Ch 10	Ko
Oct 17	The Cardiovascular System, I	Ch 11	Baudry
Oct 19	The Cardiovascular System, II	Ch 11	Baudry
Oct 22	Midterm Exam II, 100 points	(Covers 9/21-10/15, 10 lectures, Ch 7-10)	
Oct 24	Blood	Ch 11	Baudry
Oct 26	The Respiratory System, I	Ch 12	Baudry
Oct 29	The Respiratory System, II	Ch 12	Baudry
Oct 31	The Digestive System, I	Ch 13	Baudry

Nov 2	The Digestive System, II	Ch 13	Baudry
Nov 5	The Urinary System, I	Ch 14	Baudry
Nov 7	The Urinary System, II	Ch 14	Baudry
Nov 9	The Endocrine System, I	Ch 15	Baudry
Nov 12	Midterm Exam III, 100 points	(Covers 10/17-11/7, 9 lectures, Ch 11-14)	
Nov 14	The Endocrine System, II	Ch 15	Baudry
Nov 16	The Reproductive System, I	Ch 16	Baudry
Nov 19	The Reproductive System, II (Term paper is due today)	Ch 16	Baudry
Nov 21	Development	Ch 17	Baudry
Nov 23	<i>University Holiday (Thanksgiving Holiday)</i>		
Nov 26	Development and Aging	TBA	Baudry
Nov 28	Inheritance, genetics and molecular biology	Ch 18	Baudry
Nov 30	Genetics	Ch 18	Baudry
Dec 3	Evolution	Ch 19	Baudry
Dec 5	Human Evolution	TBA	Baudry
Dec 7	Ecology	Ch 20	Baudry

**Dec 19 Wed. FINAL EXAM 11:00-1:00 p.m., cumulative, total 200 points
(11/9-12/7, 11 lectures, Ch 15-19; 100 points. PLUS the entire course, 100 points)**

Some other important dates (there are yet more, but this is a sampling):

August 27-31	Late registration and change of program
September 3	Labor Day, University Holiday
September 14	This is a very important day. Examine it carefully. last day to register and add classes; last day to drop without W and receive refund; last day to elect Pass/No Pass grading option; last day to purchase or waive tuition refund insurance;
November 16	Last day to drop with grade of W
November 22-24	Thanksgiving recess
December 7	Classes end
December 8-11	Study days
December 12-19	Final Examinations
Dec 20-Jan 13	Winter recess

Date	Day	Lab Chapter and/or Topic	Laboratory Event
Aug 24	F	<i>Last Day to Register and Settle without Fee</i>	
Aug 28-30	T-Th	Safety; Using the Compound & Dissecting Microscopes	
Sep 3	M	<i>Labor Day - University Holiday</i>	
Sep 4-6	T-Th	Introduction to the Scientific Method*	
Sep 11-13	T-Th	Nutrient Analysis of Foods and Choices for Good Health*	Lab Report 1 Due
Sep 14	F	<i>Last Day to Switch to Pass/No Pass or to Drop w/out a W</i>	
Sep 18-20	T-Th	Functions and Properties of Cells	Lab Report 2 Due
"	"	"	Lab Quiz 1
Sep 24	M	Midterm Exam I, 100pts	
Sep 25-27	T-Th	The Musculoskeletal System*	
Oct 2-4	T-Th	The Nervous System	Lab Report 3 Due
Oct 9-11	T-Th	The Special Senses (Blackboard download)	Lab Quiz 2
Oct 16-18	T-Th	Pulse & PowerPhys Experiments (Blackboard download)*	
Oct 22	M	Midterm Exam II, 100pts	
Oct 23-25	T-Th	Circulatory System	Lab Report 4 Due
Oct 30-Nov 1	T-Th	Blood	Lab Quiz 3
Nov 6-8	T-Th	Respiratory System*	
Nov 12	M	Midterm Exam III, 100pts	
Nov 13-15	T-Th	Urinary System	Lab Report 5 Due
Nov 16	F	<i>Last Day to Drop with a W</i>	
Nov 19	M	Term Paper Due, 100pts	
Nov 20-21	T-W	<i>No Lab</i>	
Nov 22-24	Th-F	<i>Thanksgiving - University Holiday</i>	
Nov 27-29	T-Th	Presentations	Lab Report 6 Due
"	"	"	Lab Quiz 4
Dec 3-7	T-Th	Presentations/Biotechnology: DNA Analysis	Course Evals
Dec 7	F	<i>Last Day of Classes</i>	
Dec 19	W	Final Exam, 200pts	

LABORATORY POINTS

Number	Points	Event	Total
1	100	Term Paper	100
1	50	Presentation	50
4	15	Lab Quizzes	60
13	5	Lab Completions	65
6	10	Lab Reports	60
1	10	Lab Participation	15

Welcome to the Topics in Human Physiology laboratory. The goal of these laboratories is to enhance the learning experience of this course in a hands-on environment, and should closely follow the course subjects. However, please keep in mind that changes may occur in the schedule. Below are policies of note. Please see <http://www.usc.edu/dept/publications/SCAMPUS/> (SCAMPUS) for additional policies that are not covered here (i.e. academic integrity, proper conduct, etc.) but that still apply!

All laboratories will be held in ZHS 372. Your Teaching Assistants will be announced soon. Their office hours and contact information will then be placed at the bottom of the page.

Make up labs: Generally, you should not expect to be allowed to make up laboratories, practicals, and presentations. However, if you have a compelling reason AND speak to your TA AND Eric Price as far in advance as possible, we may be able to come to some sort of arrangement.

Missed graded items: Generally, the same rules apply as for make up labs. If you are ill, you must have documentation from your Doctor. If you have not given Eric Price this documentation within 1 week, you will not be allowed to make up the missed item (or the score will be thrown out).

Late Work: For each day late, the maximum possible points you may receive for that item will be reduced by 20%. After 5 days, you will receive no points for that assignment. For your own sake, make arrangements in advance to hand work in early if you know you will be absent on the due date.

Laboratory Regrades: Your quizzes, practicals, and reports will be handed back to you and reviewed in laboratory. If you feel something should be reviewed for a regrade, you must hand it back to your TA by the end of that session with a written explanation for why you think it should be regraded. Anything brought out of the lab will not be regraded. The entire question will be regraded, which may raise or lower your score.

Posted Materials: Much of material for this course, including additional labs as well as scores and final grades, will be posted on Blackboard: <https://totale.usc.edu/>

Posted Grades: All points will be posted on blackboard, it is your responsibility to make sure your point total is correct, and inform us if it is not. See Eric or speak with your TA if something doesn't look right, and we'll be more than happy to make any correction.

Contact Information:

Lab Director: Eric Price
Office: ZHS 371B Hours: During most Labs
Office Phone: 213-740-6084
[email: eap@usc.edu](mailto:eap@usc.edu)

TAs: TBA

