

BISC 104 – How the Body Works
Fall 2020

This GE (D, Life Science) 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, genetics, lifestyle, 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.

Learning Objectives: After completing this course, students will have a clear understanding of how the major physiological systems of the human body function. In addition, they will appreciate how the systems both influence and depend upon one another.

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Textbook: (recommended, not required)
Visualizing Human Biology by Kathleen Anne Ireland, 4th edition; Publisher: Wiley

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

Lecture: Lectures will be recorded and streamed live via Zoom on MWF 1:00-1:50 PDT and then made available on Blackboard the same day.

PowerPoint slides of the lectures will be posted to Blackboard in advance of each class meeting. The content of these slides will be drawn largely from the textbook readings but may also contain information from other sources. A successful learning strategy is to read over the lecture notes before class so that class time can be efficiently spent learning the material in greater depth.

Grading (there is no “extra credit” so please, don’t ask):

Lecture Exam 1 (Friday, September 4)	100 points
Lecture Exam 2 (Wednesday, September 30)	100 points
Lecture Exam 3 (Friday, October 23)	100 points
Final Exam (Wednesday, November 18; 4:30-6:30 PM)	100 points
Laboratory (see lab schedule below for point breakdown)	100 points
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Total	500 points

Exam content: 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 class generally do not do as well on examinations. There will be four in-class exams that will be drawn exclusively from the PowerPoint slides as well as any other information covered during the lectures. The exam itself may consist of a mix of short-answer, multiple choice, true/false, fill-in-the-blank and matching type questions. The final exam is non-cumulative and will only cover material since the third exam. Exams will be given via Blackboard at the same time as the lectures.

Exams days: During the exams you'll need to join the Zoom meeting with video and audio enabled.

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.

Missed Exams, assignments, quizzes, etc.: No make-up exams will be given. Students who are unable to take an exam at the scheduled time must give written notification, preferably in advance. Students who miss an exam, assignment, quiz, etc. for a legitimate reason (either a medical issue or a University-sanctioned event) must provide written documentation of said reason within seven days of the exam or assignment due date. Documentation must be sent to Dr. Moore. If documentation is not received within seven days the score for the missed assignment will be a zero. Upon receipt of valid documentation, the score for the missing assignment will be prorated. In other words, the score for the missed assignment will be the average of the score for the other like assignments. (For example, if exam 2 is missed, that score will become the average of exams 1, 3, and 4.) Note that proration will only be done for one missed exam. This policy does not apply for the Final Exam which cannot be missed.

Please note that this course involves conceptual ideas that may not easily be 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.

Final grades: Grades will be assigned on a curve, based 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 students' 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 provided on Blackboard is provisional as it is based on the number of points possible at that point in the course. Only the total number of points earned by the end of the semester will determine course grades.

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.

Laboratory portion: Each student must enroll in one section of laboratory. Lab sections will start the week of August 24. (There will be no labs during the first week of classes.) The labs will consist of online activities and will be held during the times specified in the Schedule of Classes site accessible from the USC home page. The labs will serve to further elucidate various lecture topics either through discussion and/or laboratory exercises and activities. The material covered in the labs is critical to understanding the overall course. As a result, the lab is an integral part of this course, and cannot be taken separately. For certain exercises and activities additional handouts will be provided in lab and/or on Blackboard. More information about the labs will be supplied at a later date. Be sure to attend the first offering of your lab section.

Academic conduct, 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. Moore 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.

Lecture Schedule, BISC 104, Fall 2020

Lecture #	Date	Topic	Chapter(s)
1	Aug. 17	Organization of the Body	1 and 2
2	Aug. 19	Chemical Bonds	3
3	Aug. 21	Molecules in Biology	3
4	Aug. 24	Cell Structure	4
5	Aug. 26	Chemical Messengers	4
6	Aug. 28	Body Tissues	5
7	Aug. 31	Bones and Joints	6
	Sept. 2	Review for Exam 1	
	Sept. 4	EXAM 1	
	Sept. 7	<i>Labor Day</i>	
8	Sept. 9	Musculoskeletal System	6
9	Sept. 11	Excitation-Contraction	6
10	Sept. 14	Electrical Properties of Neurons	7
11	Sept. 16	Synaptic Transmission	7
12	Sept. 18	Organization of the Nervous System	7
13	Sept. 21	Hearing and Balance	8
14	Sept. 23	Taste and Smell	8
15	Sept. 25	Visual System	8
	Sept. 28	Review for Exam 2	
	Sept 30	Exam 2	
16	Oct. 2	Immune System	9 and 10
17	Oct. 5	The Heart	12
18	Oct. 7	Arteries, Veins and Capillaries	12
19	Oct. 9	Blood	12
20	Oct. 11	Lung Structure and Ventilation	13

21	Oct. 14	Gas Exchange	13
22	Oct. 16	Respiratory Volumes and Diseases	13
23	Oct. 19	Nutrition and Digestive System	14 and 15
	Oct. 21	Review for Exam 3	
	Oct. 23	Exam 3	
24	Oct. 26	Urinary System	16
25	Oct. 28	Hormones	17
26	Oct. 30	Endocrine System	17
27	Nov. 2	Male Reproductive System	18
28	Nov. 4	Female Reproductive System I	18
29	Nov. 6	Female Reproductive System II	18
30	Nov. 9	Pregnancy and Birth	19
31	Nov. 11	Genetics and Biotechnology	20
	Nov. 13	Review for Final Exam	
	Wednesday, November 18; 4:30-6:30 PM	Final Exam	

Please note the following important dates:

Friday, September 4 is the last day to change from a letter grade to Pass/No Pass option.

Friday, September 4 is the last day to drop without a “W” and receive a refund.

Friday, October 2 is the last day to change from Pass/No Pass option to a letter grade.

Friday, October 2 is the last day to drop without a “W” on transcript (no refund).

Friday, November 6 is the last day to drop with a “W”.

Laboratory Portion

There is no lab manual. Lab exercises will be handed out prior to laboratory meetings. Grading of the lab portion will consist of nine lab quizzes (7 points each) and performance on an oral presentation (37 points). See below for the schedule of these. Presentations will consist of a ten to fifteen minute oral report on a topic of students' choosing. Presentation topics must be related to physiology and must be approved by the TA at least three weeks before the beginning of the three weeks of presentations (see below). The use of visual aids in the presentation is expected (*e.g.* PowerPoint slides). Grades will be assigned on the basis of organization, subject knowledge and the clarity of the presentation. A grading rubric for the presentation will be made available on Blackboard. Lab quizzes will be given in the first five minutes of lab (and only the first 5 minutes of lab). Note: those arriving later than five minutes after the beginning of lab will not be allowed to take the quiz and will earn a zero for that quiz. Lab quizzes will be based on the lab exercise or the presentations from the previous week.

Week of	Laboratory Exercise	Lab Quiz?
Aug 17 th	No Labs	No
Aug 24 th	Cell Transport Mechanisms and Permeability	No
Aug 31 st	Skeletal Muscle Physiology	Yes
Sept 7 th	Neurophysiology and Nerve Impulses	Yes
Sept 14 th	Endocrine System Physiology	Yes
Sept 21 st	Cardiovascular Dynamics	Yes (Presentation topics need to be approved by this week)
Sept 28 th	Cardiovascular Physiology	Yes
Oct 5 th	Respiratory System Mechanics	Yes
Oct 12 th	Presentations	Yes
Oct 19 th	Presentations	No
Oct 26 th	Processes of Digestion	No
Nov 2 nd	Renal System Physiology	Yes
Nov 9 th	Blood Analysis	Yes

The Laboratory portion of the course totals 100 points.

Number	Points	Exercise	Total Points
9	7	Lab Quiz	63
1	37	Presentation	37