



INTEG BIO/PHYS ED c129 – Human Physiological Assessment (3 units)

Instructor:	Sue Johannessen, M.A.
Class Times:	Lecture: Wednesdays, 8:00-10:00 am Labs: Wednesdays 10:00-1:00 pm and 1:00-4:00 pm
Location:	210 Hearst Gymnasium (lec); 3047 VLSB (lab)
Contact:	Email: suejoh@berkeley.edu
Office:	205 Hearst Gymnasium (inside room 200)
Office Hours:	Alternating Tues and Thurs, 9:30-11:00 am, after lab or by appointment
Required Texts:	Gibson, AL, DR Wagner, and VH Heyward, <u>Advanced Fitness Assessment and Exercise Prescription</u> , 8 th edition, Human Kinetics, 2019. Available at e-reserves . <u>IntegBio/PhysEd c129 Laboratory Manual</u> @ Copy Central, 2411 Telegraph Numerous articles posted on bCourses
Course Website:	https://bcourses.berkeley.edu (check site regularly)

I. Course Description: This course examines the principles, theories and application of human physiological assessments in relation to physical activity, methodology of testing, and the design of conditioning programs for health, fitness and the treatment of chronic disease. The laboratory activities include procedures to measure and interpret health-related components of physiological fitness (e.g., cardio-respiratory endurance, body composition, musculoskeletal fitness).

II. Statement of Course Goal and Learning Objectives: By the conclusion of this cross-listed course in human physiological assessment, students shall be able to:

- Recognize the role of physical activity and exercise in reducing risk of chronic disease and improving health
- Understand the body's acute response and chronic adaptations to exercise, in both the cell and physiologic systems.
- Identify common assessments and practice skills in their administration to measure health-related components of physical fitness
- Design safe and effective exercise programs for healthy populations and those with health concerns
- Analyze a normal electrocardiogram; interpret common arrhythmias, ischemia
- Analyze a healthy eating plan and understand the health risks of obesity
- Identify lifestyle factors that contribute to successful weight management
- Discuss behavioral modifications and risk management to promote wellness and prevent disease in healthy and special populations

III. Method of Assessment and Evaluation:

GRADING: 55% Midterms (2) and Final Exam
45% Lab - Participation, Questions; Homework (3), Lab Practical Exam (2)

Grading is determined using straight percentages (e.g., A= 93-100%; A-= 90-92.99%; B+= 87-89.99%; B= 83-86.99%; B-= 80-82.99%, etc.). Midterms and final exam may be scaled to yield a higher grade. *There is no extra credit.*

COMPONENT	POINTS	TOTAL POINTS (%)
Midterm Exams (2)	95 pts each (3/2, 4/6)	190 points (38%)
Final Exam	85 pts (5/9)	85 points (17%)
Lab: Participate, Questions; Hmwk (3)	10 pts weekly; 5-10 pts	125 points (25%)
Lab Practical Exams (2)	50 pts each (2/23, 4/27)	100 points (20%)
COURSE GRADE		500 points (100%)

Grading is determined using straight percentages (e.g., A= 93-100%; A-= 90-92.99%; B+= 87-89.99%; B= 83-86.99%; B-= 80-82.99%, etc.). If necessary, midterms and the final exam may be scaled to yield a higher grade. *There is no extra credit.*

Two midterm exams (Module I and Module II) and a final exam (Module III, plus integrative questions from entire course) will be written from material presented in lecture, textbook chapters, bCourses articles and laboratory activities. All exams will be taken and proctored in-class, and consist of a combination of true/false, multiple choice and short answer questions. A final review session will be held on Wednesday of RRR week.

Participation in weekly laboratories allow students to practice different methods of assessing fitness (cardio-respiratory endurance, muscular strength and endurance, body composition, flexibility, balance, and low back fitness) and the interpretation of that data. Attendance is crucial; students will serve as both subject and technician. Please don't attend lab if you're feeling ill, however, activities cannot be made up. Lab questions and homework assignments are designed to review important concepts from lecture in practical scenarios.

Two 20-minute Laboratory Practical exams (cardio-respiratory fitness; remaining fitness assessments) will evaluate each students' skills in administering fitness assessments on a subject with the instructor present.

IV. Course Policies

- Students should be prepared for each lecture by having read the appropriate materials in accordance with the course schedule.
- The use of laptops is encouraged during class; all tasks being conducted or viewed should be related to the course and not distracting to others. Please turn cell phones off.
- Attendance in lecture and lab is expected, but not graded. Students are graded on their laboratory participation/questions/homework, along with performance on all examinations.
- Wear a face mask indoors. Use hand sanitizer frequently. Stay home if you're feeling ill.
- Each student is consenting to participate as a subject, which may involve light-to-moderate-to-vigorous physical activity. Please dress appropriately. Inform the instructor should you have a physical limitation that precludes your active participation during lab.
- All written assignments must be submitted through bCourses by the posted due dates. Late assignments are not accepted. Extra credit is not available.
- All examinations are in-person and must be completed by the posted due dates listed in bCourses. Contact the instructor beforehand with any extenuating circumstance.
- Each student must abide by the university's honor code: <https://teaching.berkeley.edu/berkeley-honor-code>. "As a member of the UC Berkeley community, I act with honesty, integrity, and respect for others." Violation of the Honor Code shall result in a grade of "F" for the course.

CLASS SCHEDULE: (subject to change) (Zoom link for 1/19, 1/26 lectures posted on bCourses – see Front Page or Modules, Start Here, Lecture)

<u>Module I:</u>	<u>Topics covered in Lecture and Laboratory</u>	<u>Reading</u>
*1/19 (recording)	Introduction; Physical Activity, Health and Disease <i>No lab this week</i>	Chapter 1
*1/26 (Zoom)	Physiological Responses to Exercise - Review Online: Resting Heart Rate; Field Tests for C-R Endurance	bC (H/T chap)
2/2	Screening Procedures and Health Appraisal Measuring Blood Pressure; Single-Stage Test for C-R Endurance	Chapters 1, 2
2/9	Assessing C-R Endurance Submaximal Bicycle Ergometer Test	Chapters 3, 4
2/16	Prescribing Exercise for C-R Endurance Review LP I – Submaximal Bike Test	Chapters 3, 5
2/23(all day), 2/24 3/2	LAB PRACTICAL EXAM #1 MIDTERM #1	

<u>Module II:</u>	<u>Topics covered in Lecture and Laboratory</u>	<u>Reading</u>
3/2	Cardiac Anatomy/ECG Fundamentals (lec during lab)	Ch2, bC (H/T chap)
3/9	ECG Arrhythmias and Ischemia Maximal Treadmill Test with ECG	Chapter 2, bC article
3/16	Body Composition and Anthropometry Body Composition Tests	Chapter 8
3/30	Weight Management – Diet and Exercise BodPod Assessment (TBD); ECG quiz review	Chapter 9 bC (H/T chap)
4/6	MIDTERM # 2 - No lab this week	
<u>Module III:</u>	<u>Topics covered in Lecture and Laboratory</u>	<u>Reading</u>
4/13	Assessing and Prescribing Muscular Fitness Muscular Fitness Tests	Chapters 6, 7 bC (H/T chap)
4/20	Flexibility, Balance and Low Back Health Flexibility, Balance, Low Back Tests; Review LP II	Chaps 6,7,10,11,12
4/27 (all day)	LABORATORY PRACTICAL EXAM #2	
5/4 (RRR)	Final Review Session, 8-10 am; extra office hours – TBA	
5/9	FINAL EXAM – Monday, 8-11 am	

V. Official Policies of the University of California at Berkeley

All students must abide by the *Berkeley Campus Code of Student Conduct*

<https://sa.berkeley.edu/code-of-conduct>

Statement of Accommodation. The University of California at Berkeley provides reasonable accommodations to students with disabilities through the Disabled Students' Program (<https://dsp.berkeley.edu>). For more information regarding these services, please contact the DSP staff via telephone at 510.642.0518, email, or visit in person at 260 Cesar Chavez Student Center.

Accommodation of Religious Creed. The University of California at Berkeley is compliant with Education code, Section 92640(a) and permits any student to undergo a test or examination, without penalty, at a time when that activity would not violate the student's religious creed, unless administering the examination at an alternative time would impose an undue hardship which could not reasonably have been avoided (see <https://sa.berkeley.edu/uga/religion> for detailed information).

Academic Integrity. You are a member of an academic community at one of the world's leading research universities. Universities like Berkeley create knowledge that has a lasting impact in the world of ideas and on the lives of others; such knowledge can come from an undergraduate paper as well as the lab of an internationally known professor. One of the most important values of an academic community is the balance between the free flow of ideas and the respect for the intellectual property of others. Researchers don't use one another's research without permission; scholars and students always use proper citations in papers; professors may not circulate or publish student papers without the writer's permission; and students may not circulate or post materials (handouts, exams, syllabi – any class materials) from their classes without the written permission of the instructor.

Scheduling Conflicts. Please notify the instructor in writing by the second week of the term about any known or potential extracurricular conflicts (such as religious observances, graduate or medical school interviews, or team activities). The instructor shall try his or her best to help you with making accommodations but cannot promise them in all cases. In the event there is no mutually workable solution, you may be dropped from the course. (See *Guidelines Concerning Scheduling Conflicts with Academic Requirements* <https://academic-senate.berkeley.edu/sites/default/files/guide-acad-sched-conflicts-final-2014.pdf>).

VI. Safety and Emergency Preparedness. In the event of an emergency, please exit the classroom, turn left and take the stairs down to the next floor. Turn right to exit the north end of VLSB; gather here. For more information - <http://emergency.berkeley.edu>

- Emergency Contacts <http://emergency.berkeley.edu/contacts/shtml>
- WarnMe/Nixle emergency alerts <https://warnme.berkeley.edu>
- Campus Emergency Management Areas <http://emergency.berkeley.edu/emerg-mgmt-areas.shtml>
- Campus Map <http://emergency.berkeley.edu/lib/img/campusmaps.pdf>
- Safe and Well by the American Red Cross <https://safeandwell/communityos.org/cms/>