

BIOL 100 Human Biology

CRN 64088 * 03 Credits

MW 3:00-4:15 p.m. * Televised Broadcast

INSTRUCTOR:	David A. Krupp, Ph.D
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OFFICE HOURS:	M T W Th 9:30 – 10:30 a.m.
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EFFECTIVE DATE:	Fall 2008
COURSE WEBSITE:	http://krupp.wcc.hawaii.edu/
LAULIMA URL:	https://laulima.hawaii.edu/portal

WINDWARD COMMUNITY COLLEGE MISSION STATEMENT

Windward Community College is committed to excellence in the liberal arts and career development; we support and challenge individuals to develop skills, fulfill their potential, enrich their lives, and become contributing, culturally aware members of our community.

CATALOG DESCRIPTION

Introduction to scientific inquiry with special emphasis on the structure and function of cells, tissues, organs, and systems of the human body. Topics relate to fitness, nutrition, health, inheritance, evolution, and ecology. Not intended for science majors. Students who have received credit for or are concurrently enrolled in ZOOL 101 may not receive credit for BIOL 100. (3 hrs. lect.).

STUDENT LEARNING OUTCOMES

By the end of this class, the student should be able to

1. Explain the process and philosophical basis of scientific inquiry.
2. Distinguish between living things and inanimate objects.
3. Describe the chemical architecture of living things and the functions of the major groups of biological molecules.
4. Describe the parts, their structure and functions, of cells, diversity of cell types, cell metabolism, cell communication, and cell division processes (mitosis and meiosis).
5. Solve problems in Mendelian genetics.
6. Describe the processes whereby genes are expressed as the characteristics of the whole organism.
7. Explain the role of nutrition and fitness in human health.
8. Describe the hierarchical architecture of the human body and how the organism achieves this organization (human development).
9. Describe the anatomy and physiology of the systems that make up the human body, including skeletal, integumentary, muscular, circulatory, digestive, respiratory, excretory, nervous, endocrine, immune, and reproductive systems.
10. Discuss current concepts regarding human evolution, its mechanisms and history.
11. Describe the interrelationships between humans and their environments.

COURSE CONTENT

Course Content and Topics

1. The philosophy and characteristics of science and the scientific method.
2. The difference between hypotheses, theories and laws in science.
3. The characteristics of living things and how living things differ from inanimate objects.
4. The major integrating themes of biology: cell theory, inheritance, and evolution.
5. The chemical architecture of living things and the functions of the major groups of biological molecules.
6. The parts, their structure and functions, of animal cells, how animal cells differ from plant cells and prokaryotic cells, cell metabolism including anabolic and catabolic processes, and cell division processes (mitosis and meiosis).
7. Human genetics, especially the relationship between genetics and human health.
8. Human nutritional requirements and the role of nutrition and fitness in human health.
9. The hierarchical architecture of the human body: molecules, cells, tissues, organs, organ systems, and whole organism.
10. The anatomy and physiology of the systems that make up the human body, including skeletal, integumentary, muscular, circulatory, digestive, respiratory, excretory, nervous, endocrine, immune, and reproductive systems.
11. Human evolution, its mechanisms and history.
12. The interrelationships between humans and their environments (behavior and ecology).

COURSE TASKS, ASSESSMENT AND GRADING

QUIZZES. The student will take a minimum of ten quizzes (20 points each; 200 points total) administered through the Internet (Laulima) during specified time periods. These quizzes will address the detailed content and major concepts presented in the lectures, lecture outlines, text readings, and study guide activities. If the student takes more than ten quizzes, only the best ten quiz scores will be used in calculating the student's total points. Since these quizzes may be taken using home computers connected to the Internet, students may refer to instructional resources (text, study guide, lecture notes, etc.) while taking the quizzes. However, each quiz will be timed, the student having only 30 minutes to complete. No make-up quizzes for missed quizzes will be administered (the student will receive no score for missed quizzes).

EXAMINATIONS. The student will take one midterm examination (100 points) and a non-cumulative final examination (100 points) to demonstrate understanding of information presented primarily during lectures. Exams will be delivered through the Internet via Laulima at the student's respective learning resource center. These proctored exams will be closed-book exams and students will not be allowed to refer to texts, notes, nor other materials while taking the exam. **NO RETESTS** will be given. The student must take the exam during the scheduled time period. A student missing an exam because of an illness or legitimate emergency may take a make-up exam as soon as possible after the student returns from the illness and as determined by the instructor. In such a circumstance, the student should make every reasonable attempt to contact the instructor before the exam period is over (or as soon as possible). While make-up exams will cover the same content area as a missed exam, the exam format and specific questions may be different.

The assignment of points will be according to the following protocol:

Quizzes	200	points
Midterm Examination	100	points
<u>Final Examination</u>	<u>100</u>	<u>points</u>
TOTAL	400	points

Letter grades will be assigned as follows:

A	90% or above in total points.
B	80-89.9% of total points.
C	65-79.9% of total points.
D	55-64.9% of total points.
F	Below 55% of total points or informal or incomplete official withdrawal from course.
I	Incomplete; given at the INSTRUCTOR'S OPTION when student is unable to complete a small part of the course because of circumstances beyond his or her control. It is the STUDENT'S responsibility to make up incomplete work. Failure to satisfactorily make up incomplete work within the appropriate time period will result in a grade change for "I" to the contingency grade identified by the instructor (see catalog).
CR	65% or above in total points; the student must indicate the intent to take the course as CR/NC in writing by the end of the 10th week of classes (see catalog).
NC	Below 65% of total points; this grade only available under the CR/NC option (see above and see catalog).
N	NOT GIVEN BY THIS INSTRUCTOR EXCEPT UNDER EXTREMELY RARE CIRCUMSTANCES (e.g., documented serious illness or emergency that prevents the student from officially withdrawing from the course); not used as an alternative for an "F" grade.
W	Official withdrawal from the course after the third week and prior to the end of the 10th week of classes (see catalog).

Waiver of minimum requirements for specific grades may be given only in unique situations at the instructor's discretion.

Students involved in academic dishonesty will receive an "F" grade for the course. Academic dishonesty is defined in WCC's college catalog.

LEARNING RESOURCES

Required Textbook

Johnson, M.D. 2007. Human Biology: Concepts and Current Issues. Fourth Edition. Benjamin Cummings. San Francisco.

Recommended Textbook

Stewart, J. 2007. Study Guide for Human Biology: Concepts and Current Issues, Fourth Edition. Benjamin Cummings. San Francisco

Lecture outlines, PowerPoint slides, and other resources will be made available at the course Laulima site.

STUDENT RESPONSIBILITIES

The student is expected to attend and actively participate in all course lectures and activities, and complete all quizzes and examinations on time.

The student is expected to be prepared in advance before the class sessions. Being prepared includes the following: having read text materials (e.g., textbook readings, and lecture outlines) assigned for that day's activities and bringing required work materials (e.g., textbook, handouts, writing supplies, etc.) to the session.

Any changes in the course schedule, such as examination dates, deadlines, etc., will be announced ahead of time in class or on the course Laulima site. It is the student's responsibility to be informed of these changes. Students should visit the course Laulima at least twice per week.

It is the student's responsibility to be informed about deadlines critical to making registration changes (e.g., last day of erase period and last day for making an official withdrawal).

The student should understand that "introductory" does not mean "easy". The student should not assume that the lack of science prerequisites for this class ensures a low level of difficulty for this course. While the instructor assumes that students enrolled in BIOL 100 have little or no science background, the student should expect a level of difficulty comparable to other 100-level science classes. When difficult concepts and detailed information are presented, it is the student's responsibility to take the appropriate steps to learn and understand these concepts and information.

Science courses generally require two to three hours of independent private study time for each hour in class (depends upon the student's science background). It is the student's responsibility to allocate the appropriate time needed for study in an environment conducive to quality study. The student must budget time efficiently and be realistic about all personal and professional commitments that consume time.

HOW TO SUCCEED IN THIS CLASS

Understanding biological science involves understanding many difficult concepts and vocabulary, not just knowing facts. The student should know that the details to these concepts are important. In addition, the student will be introduced to hundreds of new words. In some cases, words that are familiar in a context other than biology will be introduced in the context of biology. The student will need to understand and use these terms in a biological science context.

While the student will have lecture outlines (downloadable from the Laulima site), the student will not succeed in this class without taking careful lecture notes and reading the corresponding material in the textbook. The lecture outlines are not to be used in place of the student's own note taking. As soon as possible (best if done on the same day), the student should copy over these lecture notes filling in gaps and missing information by referring to the lecture outlines and textbook. The student should carefully review these rewritten lecture notes as often as possible. In addition to reviewing these notes before an exam, it would be useful for the student to try to rewrite these notes from memory.

In addition to copying over lecture notes, study activities should include drawing labeled diagrams or graphs that illustrate important biological phenomena (e.g., the internal structure of the cell, the stages of cell division, or the anatomy of the heart). These diagrams need not be works of art, but should clearly illustrate significant information. Before an exam, it would be useful to redraw these labeled diagrams and graphs from memory.

The student should make flashcards for each new vocabulary word presented (refer to lecture outlines for a lists of required terms). On one side of the card, write the word. On the other side, write the appropriate biological science definition for the word. The student should use these card for self-testing as often as possible. The student should also practice using the words to explain biological concepts.

The student should do all of the recommended study guide activities and review all of the Internet resource materials provided.

The textbook and the lecture outlines include useful study questions. The student should write out answers to all of these questions as though they were required assignments. Students could exchange these answers and provide constructive feedback to each other.

The student should read the textbook materials corresponding to a particular lecture before and after that lecture.

Students are recommended to establish study groups and study together. The students in these groups may test each other's knowledge and understanding of the information. They may also take turns teaching each other.

The student should ask the instructor to explain the things that the student does not understand.

DISABILITIES ACCOMMODATION STATEMENT

If you have a physical, sensory, health, cognitive, or mental health disability that could limit your ability to fully participate in this class, you are encouraged to contact the Disability Specialist Counselor to discuss reasonable accommodations that will help you succeed in this class. Ann Lemke can be reached at 235-7448, lemke@hawaii.edu, or you may stop by Hale 'Akoakoa 213 for more information.