COURSE NAME: Human Biology Laboratory

COURSE ALPHA: BIOL 100L

CREDIT HOURS: 01

CATALOG DESCRIPTION:
Laboratory to accompany BIOL 100 (Human Biology). Emphasizes the application of the scientific method, basic laboratory methods and procedures in biology, and facts and principles of human anatomy and physiology. (3 hrs. lab)

REQUIREMENTS COURSE SATISFIES:
Partially fulfills Windward Community College’s Liberal Arts degree Natural Science requirements as a biological science laboratory course.

PREREQUISITES:
Prior or concurrent enrollment in BIOL 100 or equivalent preparation or consent of the instructor.

RECOMMENDED SPECIAL PREPARATION: None.

RECOMMENDED BASIC SKILL LEVELS: College level reading/writing skills.

ACTIVITIES REQUIRED AT SCHEDULED TIMES OTHER THAN CLASS TIME:
None.

INSTRUCTOR: David A. Krupp, Ph.D.
OFFICE: Hale ‘Imiloa 104
TELEPHONE: 236-9121
EMAIL: krupp@hawaii.edu
COURSE WEBPAGE: http://krupp.wcc.hawaii.edu/BIOL100L/
EFFECTIVE DATE: Fall 2005
COURSE GOALS

Upon completion of this course, you should:

1. have an understanding of basic biological laboratory techniques, the scientific method of inquiry, and the collection, reduction, interpretation, and formal presentation of data;

2. integrate textbook and lecture information from BIOL 100 with systematic observations of human anatomy and physiology in the laboratory.

COURSE OBJECTIVES

The student will demonstrate the acquisition of basic biological science laboratory skills and knowledge relevant to human biology. These skills and knowledge include the following areas:

1. describe the scientific method of inquiry, provide examples of its use, and demonstrate this method through written reports and summaries of class laboratory activities;

2. collect, reduce, interpret, and present biological data;

3. use of some of the standard tools of the biological scientist, such as microscopes, scales, spectrophotometers, computers, and other analytical tools;

4. knowledge of the procedures and theoretical foundations needed to study human biology, such as dissection, separation of biological compounds, microscopic examination of cells and tissues, membrane transport mechanisms, energy metabolism, genetics, digestion and nutrition, excretion, cardiovascular function, sensory perception, respiration, reproduction and development; and

5. basic knowledge of anatomy (structure) and physiology (function) of the fetal pig (using preserved specimens) and human body (using models and figures), including basic tissues types, organs, and organ systems.

MODE OF INSTRUCTION

The previously described objectives will be achieved through the aid of the following learning activities:

1. Active participation in laboratory activities at home and at U.H. Learning Centers;
2. Televised laboratory presentations and demonstrations;
3. Multimedia presentations, including computer-assisted and Internet-assisted activities (e.g., WebCT);
4. Dissection of preserved specimens and examination of models;
5. Computer-assisted data collection activities and simulations;
6. Recording and interpreting results from laboratory activities and simulations;
7. Written reports and/or summaries of laboratory activities;
8. Nutrition monitoring and reporting; and
9. Laboratory examinations administered via WebCT.
The material presented in all modes of instruction will be of an introductory nature but sufficient in content to allow continuation in higher-level biological science courses. Considerable out-of-classroom time will be spent completing lab reports and summaries.

EVALUATION OF OBJECTIVE ACHIEVEMENT

LAB EXAMINATIONS. The student will take one midterm examination (100 points) and a non-cumulative final examination (100 points) to demonstrate acquisition of laboratory skills and an understanding of information presented during laboratories. These “closed-book” examinations will be taken as proctored exams at a U.H. Learning Center.

LABORATORY REPORTS AND SUMMARIES. The student will complete a written laboratory report or summary for each lab activity. Each report or summary must be completed and turned in no later than the beginning of the first laboratory meeting after the assignment was given (200 points total). At least one laboratory activity will be conducted at a U.H. Learning Center.

NUTRITION ASSIGNMENT. The student will complete a major written (typed) assignment involving an evaluation of the student’s diet and nutrition over the period of one week during the semester (50 points). This assignment will involve a detailed documentation of food eaten and a quantitative assessment of the diet in fulfilling nutritional needs. The specific details and instructions for how to complete this assignment will be made available at the course website or through a written class handout.

METHOD OF GRADING

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

- Midterm Examination: 100 points
- Final Examination: 100 points
- Laboratory Reports/Summaries: 200 points
- Nutrition Assignment: 50 points
- TOTAL: 450 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 EXCEPT UNDER EXTREMELY RARE CIRCUMSTANCES** (e.g., documented serious illness or emergency that prevents the student from officially withdrawing from the course); never 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.

**STUDENT RESPONSIBILITIES**

Students should carefully review the attached sheet detailing inherently dangerous activities of this course and sign the appropriate U.H. Assumption of Risk and Release and Medical Consent forms.

Students are expected to participate in all laboratory activities and complete all course assignments on time.

Any changes in the course schedule, such as examination dates, deadlines, etc., will be announced ahead of time in class. It is the student's responsibility to be informed of these changes.

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 BIOL 100L is a difficult course. Thus BIOL 100L requires much time and serious dedication. If the student does not have a strong background or interest in human biology, the student does not belong in this lab course.

**TEXTBOOK AND OTHER ASSIGNED INSTRUCTIONAL MATERIALS**

The required resources are:

- **Fetal Pig Anatomy Kit with Dissecting Set. Carolina Biological.**
- Handouts and other online resources made available at the course website and the course WebCT site.
OTHER INFORMATION

Important Dates:

First day of instruction ......................... 22 August
Last day to add a class ......................... 26 August
Last day of erase period ...................... 13 September
Last day for official withdrawal .......... 31 October
Last day of instruction ....................... 08 December
Exam period ..................................... 12-15 December

Regular Office Hours (Hale ‘Imiloa 104):
    M 11:30 a.m. – 12:20 p.m.
    Tu 8:45 a.m. – 9:45 a.m.