CHAMINADE UNIVERSITY of HONOLULU FALL 1999 EVENING PROGRAM
Jan 19 - March 22, 2000 • SCHOFIELD BARRACKS EDUCATION CENTER

Course:	BI 101: General Biology I- LECTURE (3.0 cr) + LAB (1.0 cr)
Time:	**Mon/Wed within 5:30 - 9:55 p.m. time frame**
Instructor:	**Shirley Black Gerum, B.A., Botany; MPH, Environmental Health**
e-mail:	gerum@hawaii.edu Snail Mail: P.O. **Box 18: Haleiwa, HI 96712**
Office Hours:	**Immediately after class; other times by appt (Tel SB CUH ofc. - 624-2515)**
Text:	**Biology:** *Life on Earth* **(4th or 5th ed.) by Teresa & Gerald Audesirk**

I. COURSE DESCRIPTION: **BIOLOGY 101 satisfies a portion of the core requirements for natural sciences at Chaminade University. The course provides an overview *of* the basic principles of biology/biological systems. In Biology 101, we take a close look at how cells function, DNA and Inheritance, the fragile balance of Life on Earth to provide a foundation for exploring current and future advances in biology.** An **educated society is a prepared society.**

II. CLASS OBJECTIVE: **The field will be changing daily-and with each advance, so will everything in our society, for there is no way to separate biology from the chain of events that lead to and govern our life on earth. To provide students a basis for applying a basic understanding of biology to everyday situations-goals will be:**

To understand and appreciate the fundamental properties and processes shared by most living organisms on our planet: to appreciate how we're fundamentally alike, uniquely different
To recognize biological principles in everyday life and current events and to use the scientific approach to analyze such research to make informed administrative decisions
To develop a fundamental vocabulary necessary for discussing, writing about biological events and to recognize the great names in the history of biology
To learn to discern what constitutes bad science, fraud, and deception
To learn the five kingdoms of life on earth to understand necessity of diversity,
To learn from the living laboratory that surrounds us and to understand why biologists from all over the world come to Hawaii's mountains, streams, oceans, volcanoes to discover life forms that can be found nowhere else; to learn why Hawaii has more endangered native flora/fauna than any other state, what we can do to preserve them

III. METHODOLOGY:

Reading sssignments from text, handouts, news media; independent research
Class lectures will be structured to provide students with the basis for further application in the biological sciences. They are designed to highlight and supplement-not to replace the text. Students should come to class prepared to participate, to discuss the material covered in text. Students will work together on enquiry-based problems and seminars.

IV. GRADING: 5 **assignments and/or exams at 50 pts. each .... 250 points possible**
3 applicablebiological articles in the news (5 pts. ea.) ..... 15 points possible
Attendance, Participation, Sportsmanship (APS) . . . . . **15 points possible**
280 points possible

A = 90-100% (252-280); B = 80-89% (224-251.99); C = 70-79% (196-223.99); D = 60-69% (168-195.99); F Below 60% (0-167)

V. STUDENT RESPONSIBILITIES:

1. **Attendance/Participation/Sportsmanship** (APS); **Attendance, participation and sportsmanship are vital to maintaining interactive excellence.** Attendance: **Students with the highest grades are usually those who have participated in hands-on activities, materials, are present for demonstrations, special speakers, discussions and videos that cannot be repeated.** Note: **The pace of an accelerated class does not allow time to respond to individual reiterations due to absence or late arrival. Students are responsible for obtaining information**

missed from other students. Participation: **The input of class members is one of the most valuable components of a university-level class. To emphasize the importance of participation, support for those presenting ideas to the class and to underscore zero tolerance for unwelcome remarks, 15 points of the total grade will be based on** APS. Good sportsmanship **goes a long way in any field: yielding to those who are speaking, withholding negative comments and judgments.**

2. Academic Honesty: **CUH policies regarding academic honesty are clear.** Plagiarism **is the deliberate use or reproduction of ideas, words, statements of another as one's own without proper acknowledgment or citation. Papers with plagiarized information will be returned without credit.** Cheating: **No student may give or receive help from another during examinations. No student may hand in or cause to be handed in another student's work as one's own. The copying of another's assignments(s) (complete or partial) and/or submitting as one's own original work (however freely given or purchased) the original exam, research paper, manuscript, report, computer file, or other assignment that has been prepared by another individual, website, publisher is also forbidden and will result in a ZERO for the assignment. Minor changes in wording or syntax-without acknowledgment of original work is NOT sufficient to avoid plagiarism charges. Per CUH regulations, the usual penalty for academic dishonesty is failure in the course for the 1st offense and disciplinary** action, **not to exclude suspension /expulsion from CUH for 2nd offense.**

3. Missed Quizzes/Exams: Out of respect to students who come prepared t4 take **quizzes/exams in spite of obstacle/illnesses, students who miss a quiz or exam will not be given the opportunity for a makeup exam. Exceptions will be made for students with** documented **duty or emergency medical absences who report the anticipated absence to CUH SB office before class. It is the student's responsibility to keep informed of assignments, quizzes. Please check with other students if you miss class.** "Not knowing" **of an announced quiz will not excuse any student. from taking a scheduled exam or quiz.**

4. Written or Typed? **Written work will be cheerfully accepted as long as it can be clearly read, If the writing is too small (or the type font used is below 13 point for typed material), you will be asked to enlarge the paper at the Library xerox below.** (Note: **This sentence uses TIMES 13 point type font.** This sentence: HELVETICA 13 point. This sentence too small:

Course: **Bi 101 L- General Biology I** Lab (1.0 cr)
Days/Time: **Mon & Wed (3 hrs/wk within timeframe allotted per published CUH class schedule)**

3 hours each week will be devoted to lab activities (fieldwork, campus walks, microscopy, field trips, observing, learning from AN and hands-on material.). A variety of assignments, demonstrations, hands-on, field assignments, will be used to reinforce biological concepts discussed in the course. Life experiences will be incorporated whenever applicable to provide students with the vocabulary and skills needed for competency in the biological sciences and standardized tests.

Since we will have enough daylight at the beginning of class to fieldtrip and walk around campus to observe examples from the five kingdoms of life on earth, we will often begin the class with lab activities. Many of the learning opportunities afforded us from our environment will apply to the lab and lecture portions of this course. You will also be carrying out some of the lab assignments in your neighborhoods, hopefully with your families. Note: Regretfully, it will be impossible to replicate some hands-on lab **quizzes,** fieldtrips, audio-visual demos, even when missed due to documented work or illness.

The lab portion of our class will consist of 10 assignments/quizzes worth 15 points each-from the mundane to the bizarre-for a total of 150 points possible. In-Class and Take-Home Assignments: 90-100% (135-150) = A; 80-89% (120-134.99) = B; 70-79% (105-119.99) = C; 60-69% (90-104.99)=D; F =Below

"In the end, we will conserve only what we love, we will love only what we understand and we will understand only what we are taught." Baba Dioum, Senegal

COURSE SCHEDULE * Bi 101: Gen Biol I * CUH W EVE 2000 * Schofield Ed Ctr

Instructor: Shirley Gerum Days/Times: Mon/Wed - 5:30-9:55 time period

Note: Subject to Change to Accommodate Events/Speakers

DATE	DAY #	TOPICS	REFERENCE TEXT CHAPTERS
JAN 10 Mon	1	INTRO TO LIFE ON EARTH:WHAT ARE LIVING THINGS?HOW IS LIFE ON EARTH CLASSIFIED? 5(+?) KINGDOMS HISTORY OF LIFE ON EARTH; (NOTE: BOOK-MARK CHARTS (HIST OF LIFE ON EARTH, TREE OF LIFE) P. 316, 344-345	1 (& ref 18)
JAN 12 Wed	2	ATOMS->MOLECULES OF CARBON-BASED LIFE; ENERGY FLOW IN THE LIFE OF A CELL; CELL MEMBRANE STRUCTURE & FUNCTION	2, 3, 4 5, 6
JAN 17 Mon H		**** NO CLASS ****MARTIN LUTHER KING DAY ****	
JAN 19 Wed	3	CAPTURING SOLAR ENERGY: PHOTOSYNTHESIS; HARVESTING ENERGY	7, 8
JAN 24 Mon	4	SUMMARY AND REVIEW: CHAPTERS 1-8	
JAN 26 Wed	5	EXAM 1 (CH 1-8) ... FOLLOWED BY . . . INTRO TO MICROBES: Viruses, Viroids & Prions, Bacteria, Fungi, Algae	19, 20
JAN 31 Mon	6	SUMMARY & CLASSIFICATION OF MICROBES **Student Microbiol Seminar: BACTERIA, Rickettsias, Chlamydias, Spirochetes, Gram Neg**	19, 20
FEB 2 Wed	7	CELLULAR REPRODUCTION: MITOSIS &MEIOSIS, PATTERNS OF INHERITANCE; MENDEL AND GENETICS: THEN AND NOW Student Seminar: Famous Biologists (Grps 1 & II)	11, 12
FEB 7 Mon	8	DNA: THE MOLECULE OF HEREDITY; GENE EXPRESSION/REGULATION BIOTECHNOLOGY: FROM DOLLY TO CRIMINAL JUSTICE TOOLS Student Seminar:Famous Biologists (Groups III and IV)	9, 10 13 ...
FEB 9 Wed	9	EVOLUTION AND NATURAL SELECTION ON ISLANDS: What Mendel Observed in Galapagos, Wallace in Malaysia and Why Biologists Flock to Hawaiian islands ... Why are there so many organisms found nowhere else?	14, 15, 16 HANDOUT
FEB 14	Mon 10	PUTTING IT ALL TOGETHER TO UNDERSTAND IMPORTANCE OF DIVERSITY	17, 18
FEB 16	Wed 11	COMMUNITY INTERACTIONS, ECOSYSTEMS; HAPPY VALENTINE'S DAY	39, 40, 41
FEB 21 Mon H		**** NO CLASS ****HAPPY PRESIDENT'S DAY****	
FEB 23 Wed	12	EXAM 2 - DNA, GENETICS, NATURAL SELECTION, EVOLUTION	
FEB 28	Mon 13	Student Microbiology Seminar: BACTERIA: Gr-Positives, Mycobacteria, NocaRdioforms	
MAR 1	Wed 14	Student Microbiol Seminar: FUNGI, PROTISTS, WORMS, ALGAE, ARTHROPODS	
MAR 6	Mon 15	Student Micro Seminar: VIRUSES (DNA & RNA) and Prions ("Mad Cow" et al.)	
MAR 8 Wed	16	EXAM 3:MICROBE CLASSIFICATION/ID: VIRUS, BACTERIA, FUNGI, PROTIST?	
MAR 13 Mon	17	BIOLOGY AND SOCIETY: TODAY'S DECISIONS/LONG TERM RISKS, BENEFITS	
MAR 15 Wed	18	BIOLOGY AND THE FUTURE: BIOLOGY AND SPACE AND MORE	
MAR 20 Mon	19	SUMMARY AND REVIEW: 50 TERMS & PERSONS IN BIOLOGY-TO GO	
MAR 2. Wed	20	(FINAL) EXAM 4 (50 BIOLOGY) AND ALOHA	