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BIOL 100 Syllabus Fall 2023

UNIVERSITY of HAWAI'I®
WINDWARD
COMMUNITY COLLEGE

WINDWARD COMMUNITY COLLEGE

Outline of Course Objectives

Biology 100 (CRN 61054) Human Biology WEB

INSTRUCTOR: Michelle Smith

OFFICE: Windward Community College Hale Imiloa 112B

OFFICE HOURS: By appointment at google meet: https://meet.google.com/efn-pvsy-exj

EMAIL: miliefsk@hawaii.edu

WINDWARD COMMUNITY COLLEGE MISSION STATEMENT

'O keia ka wā kūpono e ho'onui ai ka 'ike me ka ho'omaopopo i kō Hawai'i mau ho'oilina waiwai. Aia nō ho'i ma ke Kulanui Kaiāulu o ke Ko'olau nā papahana hou o nā 'ike 'akeakamai a me nā hana no'eau. Me ke kuleana ko'iko'i e ho'ohiki ke Kulanui e kāko'o a e ho'okumu i ala e hiki kē kōkua i ka ho'onui 'ike a nā kānaka maoli. Na mākou nō e ho'olako, kāko'o a paipai i nā Ko'olau a kō O'ahu a'e me nā hana no'eau ākea, ka ho'ona'auao 'oihana a me ka ho'onui 'ike ma ke kaiāulu — hō'a'ano a e ho'oulu i nā haumāna i ka po'okela.

Windward Community College offers innovative programs in the arts and sciences and opportunities to gain knowledge and understanding of Hawai‘i and its unique heritage. With a special commitment to support the access and educational needs of Native Hawaiians, we provide O‘ahu’s Ko‘olau region and beyond with liberal arts, career and lifelong learning in a supportive and challenging environment — inspiring students to excellence.

OFFICE HOURS

This class has 1 office hour. The meeting can be by phone upon request; however, the preference is for an online live meeting using Google Meet: meet.google.com/efn-pvsy-exj. I typically send out an announcement on Sunday for office hours. You need to be on time to be included in the meeting. I am happy to meet at other times as well; just send me an email. I will return all emails in regards to office hours within 24 hours. Also, weekends and holidays will have a slower response.

CATALOG DESCRIPTION

Introduction to structure and functions of cells, tissues, organs, and systems of the human body. Topics related to physical fitness, nutrition, health, and disease. Not intended for science majors. 3 credit hours.

Activities Required at Scheduled Times Other than Class Times: Watch online videos

STUDENT LEARNING OUTCOMES

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

• Use scientific reasoning to answer a question about phenomena in our natural universe or to determine the validity of a scientific claim.

• Distinguish between living things and inanimate objects.

• Relate cell structure and function to the architecture and functioning of the human body.

• Use information about the form (anatomy) and function (physiology) of the human body to make positive decisions about human health.

• Describe the interrelationships between humans and their environments.

REQUIREMENTS COURSE SATISFIES:

AT WCC: **Partially fulfills AA degree Natural Science requirements. This class counts as a biological science.**

AT UHM: **Partially fulfills Natural Sciences area requirement for the UHM General Education Core and for the Colleges of Arts and Sciences. At UHM, this lecture class is included in Natural Sciences Group 1, Biological Sciences.**

S-FOCUSED: **This BIOL 100 class section is S-focused, meaning that content will focus primarily on sustainability from within a given academic discipline and/or the course will examine an issue or topic using sustainability as a lens. For more information please visit: https://windward.hawaii.edu/Committees/Sustainability_Curriculum/**

PREREQUISITES: **Grade of C or higher in ENG 21, or placement in ENG 100, or consent of instructor.**

LEARNING RESOURCES

The required textbook is CK-12 Flexbook WCC Human Biology BIOL 100. It is an OER and free to download. Go to SYLLABUS and click on BIOL 100 textbook folder.

SCHEDULE OF LECTURE TOPICS

In laulima, select SYLLABUS and click on the BIOL 100 Schedule folder for the lecture schedule.

In laulima, select SYLLABUS and select BIOL 100 Recorded Lectures folder. All lectures can be found as a recorded PPT, MP4, and Youtube video channel (with subtitles). They are all the same. However, digestion and metabolism are only as videos.

STUDENT LEARNING OUTCOMES

Upon completion of the course, the student will be able to:

- **Use scientific reasoning to answer a question about phenomena in our natural universe or to determine the validity of a scientific claim.**
- **Distinguish between living things and inanimate objects.**
- **Relate cell structure and function to the architecture and functioning of the human body.**
- **Use information about the form (anatomy) and function (physiology) of the human body to make effective decisions about human health.**
- **Describe the interrelationships between humans and their environments.**

COURSE CONTENT

Concepts or Topics

The student will describe and integrate basic biological principles and define basic biological terms presented in lecture, required texts, and other instructional materials, citing specific examples when asked for. These principles include the following areas:

- **Philosophy and characteristics of science and the scientific method**
- **Characteristics of living things and how living things differ from inanimate objects**
- **Chemical architecture of living things and the functions of the major groups of biological molecules**
- **Animal cells: the functions of their parts, how animal cells differ from plant and prokaryotic cells, cell metabolism and cell division**
- **Genetics and inheritance**
- **Human evolution, its mechanisms and history;**
- **Human nutritional requirements and the role of nutrition and fitness in human health**
- **Hierarchical architecture of the human body: molecules, cells, tissues, organs, organ systems, and whole organism;**
- **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.**

MODE OF INSTRUCTION

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

• Pre-recorded lecture sessions viewable as PPT, MP4's, and YouTube, viewable on any media player. The slides are available for printing or saving to your hard drive. They can be accessed from the SYLLABUS tab, and click BIOL 100 Recorded lecture. Prior to attending the lecture, it is recommended that you print out the corresponding PowerPoint lecture. You may choose to print 3 or 6 slides per page, leaving enough room to take notes. You will find it easier to follow along if you bring the printouts to class with you.

• Internet-assisted activities and resources.

• Readings from textbook and instructor's study guides.

• Online discussions on human biology related topics

• Quizzes and examinations assessing the students' understanding of course content.

PARTICIPATION IN ONLINE DISCUSSIONS (200 pts)

The student will actively engage in four online discussions during the semester (50 points for each discussion; 200 points total). These discussions, which are meant to entice interest in Human Biology, will involve posting a description of a recent article and your comments toward the information. I expect at least 2 paragraphs minimum. These discussion topics are posted on the Class Discussion page on the class Laulima site. Each discussion topic will be open for limited periods of time (typically 2 weeks, except in summer classes) and students will only be able to comment/respond to other students information during these open periods. Again, you will need to find a recent article related to the topic and provide the link to the site. Please don't use a fact site, it has to be an article. My suggestion is to use the website Science Daily, National Geographic, or other science worthy sites. Be careful using biased sites like Monsanto News or Mother Nature News.

QUIZZES on Laulima (200 pts)

Ten quizzes will be administered throughout the semester (20 points each; 200 points total) administered on Laulima. They are open for three days during specified time period listed on your class schedule. These quizzes will address the detailed content and major concepts presented in the lectures, text readings, and study guide activities. 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 it. No make-up quizzes for missed quizzes will be administered for ANY REASON, including illness or family emergency (the student will receive no score for missed quizzes). Quizzes missed or receiving zeros or low scores because of computer and/or Internet problems may not be made up either.

EXAMINATIONS (200 points).

There are 4 exams the student will take to demonstrate understanding of information presented primarily during lectures (150 pts each). Exams will be delivered through the Internet via Laulima at the student's respective campus learning resource/testing 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). In addition, the student will be expected to provide formal documentation of the occurrence of the illness or emergency. While make-up exams will cover the same content area as a missed exam, the exam format and specific questions may be different.

METHOD OF GRADING

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

4 Online Discussion Forums at 50 pts each, total 200 pts

10 Quizzes at 20 pts each, total 200 points

4 Exams at 150 pts, total 600 pts

TOTAL 1000 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.

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 SUCEED 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 cards 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 ACCOMMODATIONS

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 Accessibility Counselor to discuss reasonable accommodations that will help you succeed in this class. Roy Inouye can be reached at (808) 235-7448, royinouy@hawaii.edu, or you may stop by Hale Kākoʻo 106 for more information.

SEX DISCRIMINATION AND GENDER-BASED VIOLENCE RESOURCES (TITLE IX)

Windward Community College is committed to providing a learning, working, and living environment that promotes personal integrity, civility, and mutual respect and is free of all forms of sex discrimination and gender-based violence, including sexual assault, sexual harassment, gender-based harassment, domestic violence, dating violence, and stalking.

If you or someone you know is experiencing any of these, WCC has staff and resources to support and assist you. To report an incident of sex discrimination or gender-based violence, as well as receive information and support, please contact one of the following:

UH CONFIDENTIAL ADVOCATE

UH Confidential Advocate

Phone: (808) 348-0663

Email: advocate@hawaii.edu

TITLE IX COORDINATOR

Karen Cho, Title IX Coordinator

Email: kcho@hawaii.edu

Phone: 808-235-7404

https://windward.hawaii.edu/about-wcc/title-ix/

Office: Hale Kākoʻo 120B

As a member of the University faculty, I am required to immediately report any incident of sex discrimination or gender-based violence to the campus Title IX Coordinator. Although the Title IX Coordinator and I cannot guarantee confidentiality, you will still have options about how your case will be handled. My goal is to make sure you are aware of the range of options available to you and have access to the resources and support you need.

For more information regarding sex discrimination and gender-based violence, the University's Title IX resources and the University's Policy, Interim EP 1.204, go to manoa.hawaii.edu/titleix/

ACADEMIC INTEGRITY

Work submitted by a student must be the student's own work. The work of others should be explicitly marked, such as through use of quotes or summarizing with reference to the original author.

In this class, students who commit academic dishonesty, cheating or plagiarism will have the following consequence(s):

Students will receive a failing grade for plagiarized assignments.

All cases of academic dishonesty are referred to the Vice Chancellor for Student Affairs.

ALTERNATE CONTACT INFORMATION

If you are unable to contact the instructor, have questions that your instructor cannot answer, or for any other issues, please contact the Academic Affairs Office:

- **Location: Alakaʻi 121**
- **Phone: (808) 235-7422**

TWO-WAY COMMUNICATION DEVICES

These devices are not allowed in the classroom. Please see to it that these devices are turned off while in class.

UH POLICY ON EMAIL COMMUNICATION

The electronic communications policy adopted in December 2005 establishes the University of Hawai'i Internet service as an official medium for communication among students, faculty, and staff. Every member of the system has a hawaii.edu address, and the associated username and password provide access to essential Web announcements and email. You are hereby informed of the need to regularly log in to UH email and Web services for announcements and personal mail. Failing to do so will mean missing critical information from academic and program advisors, instructors, registration and business office staff, classmates, student organizations, and others.

BIOL 100 Schedule Fall 2023

Fall 2023

BIOLOGY 100 - Human Biology WEB

Sec 61054

8/21-12/15

Schedule of Topics

Month	Week of	Day	PPT/Topic	Text Pages
Aug	22	T	Course Introduction THEME: SCIENCE OF BIOLOGY 01 Historical Science	Chapter 1: 1-60
Aug	24	R	02 Science Methods	Chapter 2: 61-93

Aug	29	T	03 The Characteristics of Living Things	Chapter 8: 390-395 (living things) Chapter 9: 460-467 (Homeostasis)
Aug	31	R	04 Chemical Principles	Chapter 3: 95-130 (chem)
Sep	5	T	05(a-d) Biological Molecules (origin of life, carbs, fats, proteins, nucleic acids) Quiz 1 (01-05)	Chapter 3: 131-168 (bio molecules); Chapter 4: 171-177 (origin of life)
Sep	7	R	06 Evolution	Chapter 5: 178-231
Sep	12	T	07 Human Evolution Quiz 2 (06-07)	Chapter 6: 232-308 Chapter 7: 311-329
Sep	14	R	THEME: CELL FUNCTION 08 Structure and Function of Cells 09Cell Membrane Transport Processes	Chapter 8: 349-379 (cells); 380-389 (transport)
Sep	19	T	10 Protein Synthesis 11 Reproduction of Cells Quiz 3 (08-11) Discussion 1 (stem cells) Due 11:59 pm	Chapter 8: 396-400 protein); 402-415 (cell repro)
Sep	21	R	12 From Cells to Organ Systems 13 Cancer EXAM 1 (intro to cell repro 01-11) EXTRA CREDIT 1 DUE	Chapter 9: 418-458; Chapter 10: 476-517 (integumentary); 518-523 (cancer); 524-532 (skin color); Chapter 11: 536-546 (cancer)
Sep	26	T	14 Stem Cells Quiz 4 (12-14)	
Sep	28	R	THEME: HUMAN HEALTH 15 Energy and Metabolism	Chapter 14: 688-699 (energy and metabolism)
Oct	3	T	16 The Digestive System	Chapter 12: 547-609 (digestive)

Oct	5	R	17 Nutrition Quiz 5 (15-17)	Chapter 13: 612 (nutrition)
Oct	10	T	18 Environmental Health	Chapter 16: 701-717(env health); Chapter 21: 838-847 (malaria)
Oct	12	R	19 GMO	Chapter 19: 718-725 (GMO)
Oct	17	T	20 Body Defenses and Immunity Quiz 6 (18-20) Discussion 2 (diets) Due 11:59 pm	Chapter 20:726-786 (Immune); Chapter 21: 789-837 (disease)
Oct	19	R	EXAM 2 (cells to organs to immunity 12-20) EXTRA CREDIT 2 DUE	Chapter 22: 850-907 (ns)
Oct	24	T	22-23 The Endocrine System & Stress	Chapter 23: 910-959 (endocrine)
Oct	26	R	24 Reproductive Systems & Development Life's Greatest Miracle (Video- watch online at home) Quiz 7 (21-24)	Chapter 24: 962-1075 (repro); Chapter 25: 1078-1157 (dev)
Oct	31	T	25-27 Body Systems: circulatory system (blood, heart, blood vessels)	Chapter 26: 1161-1229
Nov	2	R	28 Skeletal System (Bone) 29 Muscular system (Muscle)	Chapter 27: 1232-1288 (bone) Chapter 28: 1291-1342 (muscle)
Nov	7	T	30 Sensory System Quiz 8 (25-30)	Chapter 29: 1345-1354 (sensory)
Nov	9	R	31 Respiratory System Discussion 3 (GMO) Due 11:59 pm	Chapter 30: 1355-1398 (resp)
Nov	14	T	32 Urinary System	Chapter 31: 1401-1447 (urinary)
Nov	16	R	THEME: HUMAN INHERITANCE	Chapter 32: 1449-1537 (genetics)

			33 Human genetics Quiz 9 (31-33)	
Nov	21	T	EXAM 3 (NS system to urinary 21-32) EXTRA CREDIT 3 DUE	
Nov	23	R	Thanksgiving Holiday	
Nov	28	T	THEME: HUMAN ENVIRONMENT 34 Climate Change (Global Warming)	Chapter 33: 1540-1548 (climate change)
Nov	30	R	35 Human Population	Chapter 34: 1549-1595 (pop)
Dec	5	R	36 Hawaii's Biodiversity Hawaii: Strangers in Paradise Video (watch online at home)	Chapter 35: 1597-1634 (biodiv)
Dec	7	T	37 Sustainability Quiz 10 (34-37) Discussion 4 (climate change) Due 11:59 pm	Chapter 35: 1648-1656 (sustain)
Dec	12	T	EXAM 4 (genetics to sustainability 33-37) EXTRA CREDIT 4 DUE	8 am to 10 pm

BIOL 100 Quiz Schedule Fall 2023

Quizzes on Laulima

The quiz is available for 3 days and you have 30 minutes to complete it. It is due on the date listed below and closes down 1 minute before midnight.

Due dates:

Q1 (PPT: 01-05) open 9/1 12:01 am; and due 9/5 11:59 pm

Q2 (PPT: 06-07) open 9/8 12:01 am; due 9/12 11:59 pm

Q3 (PPT: 08-11) open 9/15 12:01 am; due 9/19 11:59 pm

Q4 (PPT: 12-14) open 9/22 12:01 am; due 9/26 11:59 pm

Q5 (PPT: 15-17) open 9/29 12:01 am; due 10/5 11:59 pm

Q6 (PPT: 18-20) open 10/13 12:01 am; due 10/17 11:59 pm

Q7 (PPT: 21-24) open 10/20 12:01 am; due 10/26 11:59 pm

Q8 (PPT: 25-30) open 11/3 12:01 am; due 11/7 11:59 pm

Q9 (PPT: 31-33) open 11/10 12:01 am; due 11/16 11:59 pm

Q10 (PPT: 34-37) open 12/1 12:01 am; due 12/7 11:59 pm

BIOL 100 Discussions Fall 2023

Go to **Discussion and Private Messages**. Select the discussion topic. Read the instructions and post your comment with a link to your article. Don't forget to comment on another student's post.

Discussion Topics on Laulima

Topic 1 - The Use of Human Embryonic Stem Cells

9/12 12 am – 9/19/2023 11:55 PM

Topic 2: Diet & Health

10/10 12 am – 10/17/2023 11:55 PM

Topic 3: The Use of Genetically Modified Organisms in Foods on Hawai‘i

11/2 12 am – 11/9/2023 11:55 PM

Topic 4- What Should We Do About Climate Change?

11/30 12 am- 12/7/2023 11:55 PM

BIOL 100 Exam Schedule Fall 2023

Exams are posted on **Laulima** (**Tests and Quizzes**) You will be provided with the password on the day of the exam.

1. You are required to sign the **honor pledge**;
2. There are 50 questions multiple choice. It is timed for 1 hr 50 minutes.
3. You are permitted to use an 8.5x11" inch double-sided handwritten note sheet.
4. Submit your **extra credit** by the end of the day. Extra credit is usually a review of a recent article related to any BIOL 100 topic. Try to avoid our discussion topics. Write a 1-page minimum, double spaced, typed review, provide the link to the article. Please don't use WebMD or other fact sites. Science Daily is a good choice. If you are not sure, then email the link to me in advance and give me enough time to get back to you. Upload to Assignments.

Exams on Laulima:

9/21, 8am to 10 pm, EXAM 1 (intro to cell repro 01-11)

10/19, 8am to 10 pm, EXAM 2 (cells to organs to immunity 12-20)

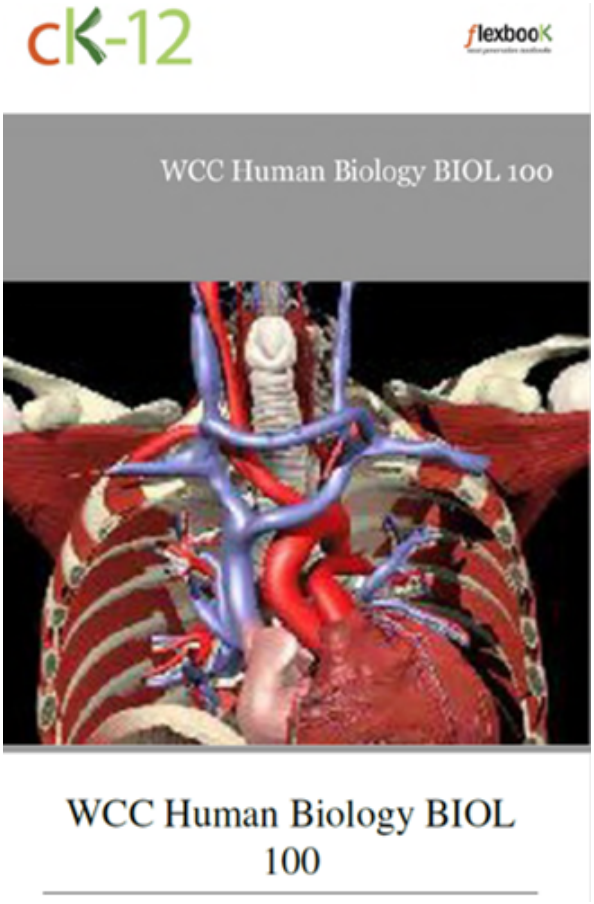
11/21, 8am to 10 pm, EXAM 3 (NS system to urinary 21-32)

12/12, 8am to 10 pm, EXAM 4 (genetics to sustainability 33-37)

BIOL 100 Textbook

The textbook we are using is CK-12 Flexbook modified for WCC Biol 100.

Click here: textbook



BIOL 100 Study Guides

Study Guide 1 (PPTs 01-11)

Study Guide 2 (PPTs 12-20)

Study Guide 3 (PPTs 21-32)

Study Guide 4 (PPTs 33-37)

BIOL 100 Recorded Lectures

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Go to this link for PPT

Go to this link for MP4

Go to this link for Youtube

BIOL 100 Office Hours

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Sustainably Focused Course & Academic Subject Certificate

BIOL 100 Is an S-focused course.

Sustainability (S) focused courses are designed to teach students about sustainability across a variety of academic disciplines. This certificate is a campus-wide effort that connects social sciences, natural sciences, and Hawaiian indigenous knowledge systems to understand our current ecological crises.

Requirements include the following:

- One 3-credit S-focused course in Natural Sciences
- One 3-credit course in Humanities, Social Sciences, Math & Business or Language Arts
- One 3-credit course in Hawaiian Studies
- One 3-credit Independent Study. This can be a research project or service learning project, with a final presentation, that has been approved by the Sustainability Curriculum Committee.

*The issuance of the Academic Subject Certificate requires that the student must earn a grade of “C” or higher for all courses required in the certificate.

S-focused courses can be found at our website:

https://windward.hawaii.edu/Committees/Sustainability_Curriculum/s-designated_courses.php

Worksheets

Supersize me'

Life's greatest miracle

Hawaii Stranger in paradise

Cosmos episode 7 clean room