WINDWARD COMMUNITY COLLEGE MISSION STATEMENT

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.

CATALOG DESCRIPTION

The second semester of a two-semester course in human anatomy and physiology which includes a study of human embryology, gross anatomy, microanatomy, physiology, pathology and homeostatic relationships. This course is intended for students entering health care or medically related fields such as nursing, physical therapy and medical technology. DB

Prerequisite: Credit for ZOOL141 or equivalent preparation or consent of instructor.

Activities Required at Scheduled Times Other Than Class Times

No other scheduled activities.

STUDENT LEARNING OUTCOMES

The student learning outcomes for this course are as follows:

1. Describe how lipids, carbohydrates, proteins and nucleic acids are digested, assimilated, and catabolized to obtain energy and raw materials.
2. Describe the anatomy and function of the circulatory, lymphatic, endocrine, digestive, urinary, and reproductive systems and discuss how these systems maintain homeostasis in the human body.
3. Describe the link between the anatomy of human tissues and organs and their functions within the human body.
4. Discuss how negative feedback maintains homeostasis in the human body.
5. Explain how disease and disorders disrupt the homeostasis of each of the above body systems and discuss how common medical treatments and drugs are used to restore homeostasis.
6. Write a research paper on a disease affecting one of the body systems using primary and secondary scientific literature.

**COURSE CONTENT**

**Concepts or Topics**

The anatomy and physiology of the following systems and processes will be covered:

- Anatomy of endocrine systems
- Physiology of hormone actions
- Anatomy of the circulatory system (heart & blood vessels)
- Physiological regulations on blood pressure, heart rate and cardiac output
- Anatomy of the respiratory system
- Physiology of respiration
- Anatomy of the gastrointestinal tract
- Physiology of digestion, nutrition and metabolism
- Anatomy of the urinary tract
- Renal physiology related to fluid and electrolyte homeostasis
- Anatomy and physiology of male and female reproductive systems
- Physiology of pregnancy and fetal development
- Genetics and inheritance

**Skills or Competencies**

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

1. Describe and integrate a variety of basic biological principles presented in lecture, required texts, and other instructional materials. An example of which would be to generally explain the Renin-Angiotension-Aldosterone system as it relates to both the control of blood pressure and the development of cardiovascular disease.

2. Define basic terms as above.

3. Recognize and interpret basic histopathology or gross pathology implications.

4. Evaluate and compare primary and secondary sources of scientific information and data.

5. Locate primary and secondary sources of scientific information and data online.

6. Correctly reference sources of information in original work of their own (e.g., a paper or presentation).

**COURSE TASKS**

1. Attend class at scheduled times
2. Complete assigned reading prior to lecture
3. Participate in class discussions
4. Complete 2-3 in class or online examinations
5. Complete a research assignment and give an oral presentation of findings

**ASSESSMENT TASKS AND GRADING**

Examinations – total points approximately 700 and as high as 800 points.

- Two (2) Midterms, non-cumulative, 50-100 multiple-choice questions. 100 points each exam.
• Final, cumulative, 100 multiple-choice questions. 200 points.
  o Exams are closed book, no notes allowed.
  o You will take the exam in the WCC Testing Center.
  o Each exam will be found in the Assignments, Tests and Surveys tool of Laulima for our course.
  o Exams are timed, midterm for 1 hour 15 minutes, final for two hours.
  o NO RETESTS ARE GIVEN FOR ANY REASON.
  o Make up exams will be scheduled with the instructor as proctor, using a different, but equivalent, exam than that taken by the class. Make up exams will only be offered to students who can provide a valid excuse (e.g., a doctor’s note documenting that you absolutely could not take the exam during the open period) AND if the student has contacted the instructor by email within 24 hours of the exam opening explaining the circumstances.
• “Daily” quizzes in Assignments, Tests and Surveys tool of Laulima for our course.
  o Each quiz is open for two days
  o Matching 10 items from lecture or reading (typically definitions) for 10 points
  o Open note, but timed to 5-15 minutes.
  o Number of quizzes may vary, but should add up to between 200-300 points.

Attendance is mandatory. 200 points.
• 200 points is allotted for attendance. This is a pool of points that you will LOSE if you miss class, are late or leave early for anything other than a valid excuse (e.g., with a doctor’s note). Each deduction = 25 points.
• Roll will be taken before class starts and absent student names read off prior to lecture starting. You are deducted 25 points if you are not in your seat at that time, or leave before class is over.

Research activity. 100 points.
• In this course, we will skim over a number of diseases or conditions related to each of the physiological systems we cover. You will have the opportunity to research one of these diseases or conditions (of your own choosing).
  o The product –
    1. A multimedia presentation (e.g., Power Point- style slide presentation)
       a. Minimum length = 10 minutes.
  o The topic is of your own choosing
    ▪ Any disease or condition covered in class
       • Comparing clinical trials
       • Comparing therapeutics (pharmaceuticals or other interventions)
       • Comparing advertising regarding this issue
    ▪ Epidemiological and demographic analysis
       • Who is the target of clinical trials, therapeutics, and advertising?
       • How many people are affected?

Method of grading. Grades are a straight percentage of the total and can be monitored using the Grade Book tool in Laulima. Points are accrued, based upon the above criteria, as follows:

Exams and quizzes = up to 800 points
Attendance = 200 points
Research = 100 points (see grading matrix PDF on our Laulima home page)
Total = (approximately) 1000 points

NOTE: “N” grades are not given for this course.

Academic dishonesty. Academic dishonesty is not condoned by the University. Such dishonesty includes cheating and plagiarism, which violate the Student Conduct Code and may result in expulsion from the University. Please refer to pages 14-15 of the 2013-2015 WCC course catalog. Zoology 142 students involved in academic dishonesty, including cheating on exams or plagiarism, will receive an “F” grade for the course.

LEARNING RESOURCES


Lecture Power Point slides: Are available and will be distributed in class for the Spring 2016 semester.

Laulima: A Laulima website has been created for this course. You are required to access the site at least twice a week to take the quizzes. You need to become familiar with the various tools available including Assignments, Tests and Surveys, where you will find the quizzes, review questions (“SLO” question sets) and exams (including practice exams). You should also become familiar with the “Chat,” “MailTool,” and “Grade Book” tools.

Once you enroll, and the University publishes the semester courses, you are automatically granted access to the site. You log in using your UH account (ID).

Additional Information

Student responsibilities.
1. Attend all lectures, participate in all activities and discussions – be present, but also be engaged.
2. Arrive on time and complete assignments on time – be organized and considerate.
3. Keep track of deadlines for assignments, for administrative or registration issues (e.g., the academic calendar dates) and for the online quizzes and exams - stay informed by reading the announcements posted weekly in Laulima.
4. Maintain a positive attitude as you tackle the material, regardless of how overwhelming it may first appear – take small steps and you will achieve big goals.

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.

Last Updated December 2015
Schedule subject to change. This schedule does not reflect holidays in an accurate manner. Please refer to the schedule available as a PDF online on our Laulima home page.

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<thead>
<tr>
<th>Week</th>
<th>#</th>
<th>Topics</th>
<th>Reading</th>
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<tbody>
<tr>
<td>1.</td>
<td>1</td>
<td>Introduction and overview</td>
<td>Syllabus</td>
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<td>2</td>
<td>Endocrine 1</td>
<td>Chp 16</td>
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<td>2.</td>
<td>3</td>
<td>Martin Luther King Holiday</td>
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<td>4</td>
<td>Endocrine 2</td>
<td>Chp 16</td>
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<td>Blood</td>
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<td>Hemostasis, Blood types</td>
<td>Chp 17</td>
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<td>4.</td>
<td>7</td>
<td>Anatomy of the Heart</td>
<td>Chp 18</td>
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<td>8</td>
<td>Cardiac Physiology</td>
<td>Chp 18</td>
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<td>5.</td>
<td>9</td>
<td>Anatomy of blood vessels &amp; Hemodynamics</td>
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<td>10</td>
<td>Finish Cardiovascular, or catch up</td>
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<td>6.</td>
<td>11</td>
<td>President’s Day Holiday</td>
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<td>12</td>
<td>Lymphatics and immunity</td>
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<td>Cell and Antibody mediated immunity</td>
<td>Chp 21</td>
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<td>14</td>
<td>Finish immunity</td>
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<td>8.</td>
<td>15</td>
<td><strong>Midterm #1 – Endocrine - Immunity</strong></td>
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<td>16</td>
<td>Anatomy of the lungs</td>
<td>Chp 22</td>
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<td>9.</td>
<td>17</td>
<td>Gas exchange and regulation</td>
<td>Chp 22</td>
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<td>Gastrointestinal anatomy</td>
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<td>19</td>
<td>Nutrition and metabolism</td>
<td>Chp 24</td>
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<td>20</td>
<td>Renal anatomy and glomerular filtration</td>
<td>Chp 25</td>
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<td>11.</td>
<td>21</td>
<td>SPRING BREAK (approximate)</td>
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<td></td>
<td>22</td>
<td>Renal physiology continued</td>
<td>Chp 25</td>
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<td>23</td>
<td>Fluid, electrolytes and acid-base balance</td>
<td>Chp 26</td>
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<td>24</td>
<td>Urinalysis and clinical chemistry</td>
<td>Supplement</td>
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<td><strong>Midterm #2 – Lungs - Kidneys</strong></td>
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<td>26</td>
<td>Male Reproductive System</td>
<td>Chp 27</td>
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<td>27</td>
<td>Female Reproductive System</td>
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<td>28</td>
<td>Pregnancy and Development</td>
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<td>29</td>
<td>Genetics and Inheritance</td>
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<td>29</td>
<td>Genetics activity</td>
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<td>Oral presentations</td>
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