

**HOCKING COLLEGE
ON-LINE COURSE OUTLINE**

CREDIT HRS.: 3

CLASS HRS.: 3

LAB HRS.: 0

DATE: May 2009

PREPARED BY: Joni Tornwall, Instructor

TO BE UPDATED: May 2010

APPROVED BY: Molly Weiland, Dean

PREREQUISITES: None

COURSE DESCRIPTION

Scientific skills are integrated into a practical approach to the study of the human body. Basic biological concepts are covered while educating the student in using the methods of sciences to make informed choices. Evaluation of two Success skills, “Communicates Effectively” and “Demonstrates Professional Skills and Attitudes,” will occur.

COURSE OUTCOMES:

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

1. State the components of the scientific method of problem solving.
2. Apply the methods of science to solve problems.
3. Develop the success skill “Communicates Effectively” by locating scientific information using published and electronic sources at any library and incorporating the information into a written report with citations.
4. Describe the levels of organization present in the human body.
5. Identify and describe the body systems.
6. Identify the organs grouped within a specific body system and describe how the organs interact and maintain homeostasis in the human body.
7. Define the following genetic terms: DNA, RNA, mitosis, meiosis, dominant gene, recessive gene, mutation and genome.
8. Define metabolism.
9. Differentiate viruses from bacteria related to antibiotic treatments.
10. Describe how body systems or organs are affected by common pathologies.
11. Describe the stages of embryonic and fetal development.
12. Identify birth control methods and state the pros and cons of each.
13. Describe positive life-long nutrition habits.
14. Evaluate lifestyle choices according to which promote well being.
15. Analyze graphed data.
16. Engage in research applying the methods of science to determine factors which contribute to physical and emotional health.
17. Develop the success skill “Demonstrates Professional Skills and Attitudes” by participating appropriately in threaded discussions, maintaining contact with instructor via e-mail, and submitting required assignments in a timely manner.

COURSE MATERIALS:

Highly Recommended for those who do not have a strong biology background: Marieb, Elaine N., Essentials of Human Anatomy & Physiology, 9th Edition, 2009. Pearson Education, Inc., San Francisco.

- ISBN-13: 9780321661074
- The book may be purchased at the Hocking College Bookstore or ordered on-line.
- A 360-day e-book subscription can be purchased from Coursesmart at this link:
<http://www.coursesmart.com/9780321547613>

You will need access to a computer and access to the internet. For a detailed description of the hardware and software you need for an online course at Hocking College, please see this web page under the heading of **“What do I need to have in order to take an online class?”**

- <http://online.hocking.edu/info.php>

TOPICAL OUTLINE:

1. Scientific Method.
 - a. Definition.
 - b. Observation.
 - c. Interpretation.
 - d. Hypothesis.
 - e. Experimentation.
 - f. Theory.
2. Using on-line Library Sources for:
 - a. Problem Identification.
 - b. Computer Searches.
 - c. Physician’s Desk Reference check.
 - d. Collecting facts to make value judgments.
 - 1) Analysis of health claims, medical information in the media, and health care services.
3. Levels of Organization in the Human Body.
 - a. Organism.
 - b. System.
 - c. Organ.
 - d. Tissue.
 - e. Cell.
 - f. Atoms and molecules.
4. Body Systems and organs composing them.
 - a. Integumentary.
 - 1) Structure.
 - a) Epidermis.

- b) Dermis.
- c) Accessory organs: sweat glands, oil glands, hair follicles, hair, arrector pili muscles, and nails.
- d) Subcutaneous/adipose tissue.

b. Skeletal/articular.

- 1) Bone functions.
- 2) Divisions of the skeleton.
- 3) Classification of joints.
- 4) Common Pathologies: fracture, arthritis, sports injuries.

c. Muscular.

- 1) Skeletal muscle structure.
- 2) Body movements.
- 3) Building up skeletal muscles.
- 4) Smooth muscle.
- 5) Cardiac muscle.

d. Digestive.

- 1) Functions.
- 2) Structures.
 - a) Alimentary canal.
 - b) Accessory organs.
- 3) Organs.
 - a) Mouth.
 - b) Throat.
 - c) Esophagus.
 - d) Stomach.
 - e) Intestines.
 - f) Liver and Gall Bladder.
 - g) Pancreas.
- 4) Healthful Nutrition.
 - a) Cholesterol/fat control.
 - b) Fast foods low in fat and calories.

e. Circulatory.

- 1) Heart.
 - a) Location.
 - b) Structure.
 - c) Valves.
 - d) Coronary circulation.
 - e) Values of fitness.
 - f) Common Pathologies: myocardial infarct, leaky valve, abnormal rhythms.
- 2) Blood.

- a) Function.
 - b) Structure.
 - c) Typing.
 - d) Effects of AIDS.
- 3) Vessels.
 - a) Arteries.
 - b) Capillaries.
 - c) Veins.
 - d) Atherosclerosis.

- f. Lymphatic.
 - 1) Vessels.
 - 2) Lymph nodes.
 - 3) Infectious Diseases and Antibiotics.

- g. Respiratory.
 - 1) Organs.
 - 2) Physiology.
 - 3) Effects of smoking.

- h. Excretory.
 - 1) Functions.
 - 2) Organs.

- i. Nervous.
 - 1) Functions.
 - 2) Major Divisions.
 - 3) Neurons.
 - 4) Nerves.
 - 5) Brain.
 - 6) Spinal Cord.
 - 7) Meninges.
 - 8) Effects of alcohol and drugs.
 - 9) Developing emotional health.

- j. Senses.
 - 1) General Senses.
 - 2) Special Senses.
 - a) Sight.
 - b) Hearing.
 - c) Taste.
 - d) Olfaction.
 - 3) Common Pathologies.
 - a) Cataracts.
 - b) Glaucoma.
 - c) Middle ear infection.

- k. Endocrine.
 - 1) Glands.
 - 2) Hormones.
 - 3) Adverse effects of taking steroids.

- l. Reproduction.
 - 1) Male.
 - 2) Female.
 - 3) Sex cell production.
 - 4) Pregnancy/fetal development.
 - 5) Birth Control.
 - 6) Prevention of sexually transmitted diseases.

STUDENT INSURANCE/COVERAGE:

Hocking College insurance does not cover a student in case of an accident or illness. Students are responsible for providing their own health and accident insurance. The Hocking College Health Center provides information on a student health insurance plan. Please see the Health Center (JL 241) for information on costs, coverage, and how to enroll in the plan.

DISABILITIES NOTICE:

If you have been diagnosed with a disability that impacts your academic success, please immediately contact the Access Center, Office of Disability Services in JL 249 regarding accommodations.

**HOCKING COLLEGE
EVALUATION OF THE STUDENT**

COURSE NO: BIOS 100

COURSE NAME: HEALTH SCIENCE: THE HUMAN MACHINE

INSTRUCTOR: Joni Tornwall

DATE PREPARED: May 2009

APPROVED BY: Molly Weiland, Dean

The instructor's objective is to teach students problem-solving skills used by scientists, while integrating these skills into a user's manual approach to the human body. Students will be evaluated on their knowledge of basic human anatomy and physiology and their participation in activities and projects designed to improve their capabilities of making wise lifestyle choices.

Responsibility for learning should be shared by instructor and student. The instructor will present information in a clear organized fashion. The student will be

responsible for recording this information, and, not just memorizing it, but being able to apply it to life situations. The instructor will give logical directions concerning student-centered activities and projects. Each student will be evaluated on the amount of effort he/she puts into completing these activities within a designated time frame and on the quality of these efforts.

The factors listed below will be used to determine your final grade for the course.

SPECIFIC FACTORS

- 1. QUIZZES:** There will be nine unit quizzes throughout the quarter which will be available online after the student has submitted the weekly assignments for that unit. Each quiz will cover the material from the text, the class notes, diagrams, and weekly assignments. All of this material is available either in the textbook or under each unit link. The quizzes will consist of multiple choice questions, matching, and diagrams. The student will have two opportunities to take each unit quiz, but only one submission is required. If a quiz is taken only once, the grade for that quiz will be the grade that is recorded. If a quiz is taken twice, the grade for that quiz will be the average of the two quiz grades for that unit. During the last week of class, an objective final exam will be given which will be proctored. The student will need to come to Hocking or arrange for a proctor outside of Hocking to take this final exam. Please see the FAQ for further explanation regarding final exam arrangements. The final will cover information presented throughout the entire quarter. **The average of the nine unit tests will be 30% of the final course grade, and the final exam will be 20% of the final course grade. The student should have the tests completed by the due dates specified on the weekly schedule.**
- 2. PROJECTS/ACTIVITIES:**

The remaining 50% of each student's grade in the course will be determined by his/her participation in assigned projects, weekly assignments and virtual class activities (discussion board). **Weekly assignments will be worth 40% of the final course grade, and class participation via the discussion board will be worth 10%.** There will be two to four weekly assignments for each unit. **Those weekly assignments will be due at the time specified on the weekly schedule and must be turned in before the link for the unit test will become available.**

A topic relating to the week's unit or to health matters in general will be posted on the discussion board each week for group discussion. **The**

**Communicates Effectively Scoring Rubric
 BIOS 100: Human Machine
 Written Class Assignment (Indicators Used: A5)**

Name	
ID	
Due Date	

Numerical Ratings: Beginning (1), Emerging (2), Performing (3), Proficient (4), Exemplary (5)

Scoring Item	Developing 1-2	Established 3-5
Contains accurate content		
Uses appropriate vocabulary		
Uses appropriate grammar		
Uses appropriate punctuation		
Uses appropriate spelling		
Uses appropriate syntax		

Comments:

student is expected to participate in discussions and demonstrate some developing knowledge of the body systems. The student is welcome to ask questions and express opinions on the discussion board. Of course, your instructor will be monitoring the discussions and expects respectful, productive discussion and reserves the right to remove any comments that he or she deems inappropriate for any reason. One project (the database research project) will be graded for content as well as evaluated using a scoring rubric for mastery of the success skill "Communicates Effectively" (please see Database Research Project instructions). This project will have the weight of one unit's weekly assignments.

- ATTENDANCE:** This is an online class, and attendance is not recorded in the usual manner. Attendance will be reported at midterm and at the end of the quarter and is determined on the basis of how much of the course work has been completed. This class is not one in which the student does the work at his own pace and takes as long as he wants to complete the class. There is a great deal of flexibility, but **the student is expected to turn in assignments and quizzes according to the due dates listed on the weekly schedule.** (A student may work ahead of schedule if he wishes.) This online class starts the first day of the quarter and ends on the last day of the quarter, and the student will benefit most from this course if work is completed at a steady pace throughout the quarter.

This is not a PACE class, and a “PR” (progress) grade cannot be issued. **An “incomplete” will not be issued except in instances of extremely unusual personal issues, and in such a case, documentation will be required. The student will be asked to provide the instructor with a timeline for finishing the course with dates that coursework will be submitted and tests taken. The student must sign this timeline and submit it to the instructor before the end of the quarter in which the student was registered.** Again, it is very important to work at a steady pace through the course according to the weekly schedule. If a student does not have all the work finished by the end of the quarter, his grade will be calculated based on the grades he does have, and that will be the final grade issued for the course. The student should not wait until the final days of the quarter to do the course work. This almost always results in a lower grade than what would have been possible had the student kept up with the due dates.

4. **CLASS PARTICIPATION:** This will be accomplished through student participation in a weekly topic on the discussion board. Each student is required to participate each week with comments, observations, personal experiences, opinions, or questions regarding that week’s topic. **Class participation is 10% of the student’s final grade.** The topic for discussion will be posted during the weekend, and the student has until the following weekend to respond. At that time, the topic may be removed to make room for the next unit’s topic, so the student should check the discussion board at least once a week and post once a week in order to get all the potential points available from the discussion board. There are eleven weeks in the quarter, and there will be eleven topics. Each week, the student can earn up to 10 points (potential for 110 points) from posting on the discussion board providing that the posting is respectful, on topic (relevant), appropriate, and demonstrates development of knowledge of human body systems and use of critical thinking. The student will be able to follow how many points have accumulated throughout the quarter at the “My Grades” link.
5. **EXTRA PROJECTS:** There are many opportunities to earn adequate points to achieve a satisfactory grade in this course, so there are not any formal offerings of a project for extra credit. There will be an opportunity to earn extra points by answering “Flash Trivia” questions. A question about some aspect of health will be posted on the discussion board, and students will have a given amount of time (usually 24-48 hours) to e-mail an answer to the instructor. Some research on the internet or through other sources may be required to find the answer, but usually, the question is not too difficult and only requires a word or a sentence to answer. The posting will provide the details about how much time the student has to answer the question and what exactly is required. The extra point or points will usually be added to a quiz grade or the discussion board grade. The posting of the questions is unannounced and happens at irregular intervals, so the student will want to sign on to WebCT and check for new discussion at least once a day.

6. **GRADING SCALE:** The grading scale for The Human Machine is outlined below:

94% - 100%	=	A	81% - 82%	=	C+
92% - 93%	=	A-	75% - 80%	=	C
90% - 91%	=	B+	65% - 74%	=	D
85% - 89%	=	B	0% - 64%	=	F
(failure)					
83% - 84%	=	B-			

7. **POLICY REGARDING HONESTY:** Honesty and integrity are major elements in professional behavior and are expected of each student. This is part of the **Success Skill** "Maintains a Code of Ethics." All work is assumed to be your own unless special permission is granted from the instructor or sources are appropriately cited. It is expected that you will be honest in all endeavors related to the completion of this course, just as you must be in all activities at work.

The definition of academic misconduct that is provided in the Hocking College Student Guide applies to this course and all other courses that you are taking at the College. It is a Code I Offense:

A. **Academic Misconduct** refers to dishonesty in examination (cheating); presenting the ideas or writing of someone else as one's own (plagiarism); knowingly furnishing false information to the college by forgery, alteration, or misuse of college documents, records or identification. Academic dishonesty includes but is not limited to:

1. Permitting another student to plagiarize or cheat from your work,
2. Submitting an academic exercise, written work, project, or computer program that has been prepared totally or in part by another,
3. Improperly acquiring knowledge of the contents of an exam,
4. Using unauthorized material during an exam, to include notes, information, calculators, or other electronic devices or programs during exams or for assignments from which they have been expressly or implicitly prohibited,
5. Submitting the same paper in two different courses without knowledge and consent of all faculty members involved,
6. Obtaining academic material through stealing or other unauthorized means,
7. Falsification of research findings and methodology.

Academic Misconduct is unacceptable behavior in all Hocking College courses. A student observed or found to be engaged in academic misconduct on a test or assignment in this course will receive a grade of zero on that test or assignment.

A written report of the incident, signed by the instructor and the student, will be submitted to the Campus Judiciaries Office. Should a second incident of cheating occur in any course, the student will receive a failing grade for the course.

Instances of dishonesty will be reported to Campus Judiciary.

Further information pertaining to Academic Misconduct can be found by contacting the Office of Campus Judiciaries, Oakley 210, or by referring to the Student Code of Conduct found on the Hocking College website (www.hocking.edu).

8. **FINAL GRADE DETERMINATION:** The average of the nine unit tests will be 30% of the final course grade, the final exam will be 20% of the final course grade, and the remaining 50% of each student's grade in the course will be determined by his/her participation in assigned projects, weekly assignments and virtual class activities as outlined above.
9. **ACADEMIC GRADE APPEAL PROCESS:** Academic grade appeals consist of complaints from students concerning final grades given. The Appeals Process is available only for final grades not for an individually graded assignment. When a student believes that his or her academic performance has been unfairly or improperly graded, the first recourse will be communication with the faculty member in an attempt to resolve the complaint. A student appeal of a final grade must be formally initiated within one term of the grade being posted. Students should understand that the burden of proof will be theirs to demonstrate.
10. **STUDENT GRIEVANCE DUE PROCESS PROCEDURES:** Due process procedures for the College are located in the current Student Code of Conduct listed as Hocking College Student Grievance Procedures available online under the current student link on the Hocking College website.
11. **DISABILITIES NOTICE:** If you have been diagnosed with a disability that impacts your academic success, please immediately contact the Access Center, Office of Disability Services in JL 249 regarding accommodations.