

*Welcome to Henry Ford Community College and to  
Biology 130: Evolution and Behavior  
Linda Brandt, Instructor*

**Instructor Information**

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**Required Texts**

Krukonis, Greg and Barr, Tracy. Evolution for Dummies. Wiley Publishing. 2008.  
and

Robinson, Tara Rodden. Genetics for Dummies. Wiley Publishing. 2010.

Both of these texts are from For Dummies: Bestselling Book Series

Carroll, Sean B. Into the Jungle: Great Adventures in the Search for Evolution. Pearson Benjamin Cummings. 2009.

**Pre-requisite and Note on Reading Assignments**

The reading assignments are a vital part of BIO 130 *Evolution and Behavior*. To enroll in this class, students must have placed into ENG 131 or have successfully completed ENG 081. Reading the assignments is a necessity for success in BIO 130.

**Goals of Biology 130**

After completing Biology 130, the successful student will understand the nature of science, the nature of life, and the nature of evolution. Students will also understand how evolution relates to physiology and behavior in animals, including humans. In addition, students will have knowledge of the structure and function of genes and inheritance patterns, including sex determination. Students will be familiar with forces of evolutionary change, including natural selection, mutation, migration, random gene flow, and sexual selection. Students will gain a basic level of knowledge of animal development and the vast roles of hox and homeobox genes in evolutionary change. Students will also learn the basics of biological theories of social evolution. The course is divided into Sections I, II, III, and IV; each Section is divided into Weeks. This as a helpful way to organize your learning.

*Weekly Instructions* will describe each week's activities, including:

**Lecture & Discussion Topics,  
Reading Assignments,  
Learning Objectives,  
Weblinks,  
Media Watch,  
Practice Activities,  
Critical Thinking Activities,  
Discussion Questions and Reflections**

## Measurable Course Objectives of Biology 130

By successfully completing the assignments of this course, students will be able to:

1. Give a working definition of science.
2. List the characteristics of living organisms.
3. Answer the questions “What is evolution?” and “What is natural selection?”
4. Summarize how Darwin came to his theory of evolution by the process of natural selection.
5. Provide examples to illustrate that proximate and evolutionary explanations are not mutually exclusive, but are both important.\*
6. Give proximate and evolutionary explanations of why we have diseases like Ebola virus, cancer, and cystic fibrosis.\*
7. Explain why bacteria develop antibiotic resistance.\*
8. Speculate on the question of why we age.\*
9. List characteristics that distinguish animals from organisms in the other kingdoms of life.
10. List the characteristics of the animals in the major phyla of the animal kingdom.
11. Describe the genetic bases and evolutionary development of social behaviors in human and insect societies, including the concept of the selfish gene.\*
12. Define *Animal Behavior*, *Ethology* and *Behavioral Biology*.
13. Compare and contrast mitosis and meiosis.
14. Describe the roles that genes, chromosomes, and proteins play in determining traits.
15. Describe how chromosomes determine sex in various animals, especially humans.
16. Describe mechanisms of evolutionary change and how they cause evolution to occur.\*
17. State the biological definition of a species.
18. Describe causes of extinction.
19. Explain scientific evidence that supports evolution.
20. Describe the evolutionary histories of *Homo sapiens*.

\*Objectives marked with an asterisk, as well as many others in this course, require the student to use critical thinking skills.

## Methods of Achieving Objectives in online sections of BIO 130

Using an inquiry based approach successful students will achieve learning objectives by:

1. Studying lecture material much as in a traditional class.
2. Completing reading assignments.
3. Using Weblinks.
4. Viewing and listening to media.
5. Completing online practice activities.
6. Completing critical thinking activities.
7. Completing discussion questions and reflections which will either be submitted to the instructor or will be shared on a discussion board.

## Spelling, Grammar, Punctuation

In this class, as in most of life, proper use of language does matter. Points may be subtracted on assignments, exams, etc., for poor writing. Make use of the Writing Lab in the Learning Resources Center and other resources available to you.

## Grading Scale

Following are the total points possible on each type of assessment in this course:

Each of the four Sections of the course will count 100 points. Activities completed in class, homework, a book review, and professional behavior will add up to 100 points, totaling 500 points for the course:

Exam 1 = 100 points

Exam 2 = 100 points

Exam 3 = 100 points

Exam 4 = 100 points

Other activities submitted to the instructor = 200 points

TOTAL = 600 POINTS

Earn 90-100% (540-600 points) and you will earn a grade of *A*.

Earn 80-89% (480-539 points) and you will earn a grade of *B*.

Earn 70-79% (420-479 points) and you will earn a grade of *C*.

Earn 60-69% (360-419 points) and you will earn a grade of *D*.

Earn less than 60% (359 points or less) and you will earn a grade of *E*.

Therefore, you can calculate your grade in the course at any time throughout the semester.

### **Online Conduct Policy**

Students at HFCC are expected to show respect for order, law, the personal rights of others, and the educational mission of the College, as well as to maintain standards of personal integrity.

Students working online will be held to the same behavioral standards as students in traditional classrooms. Please be aware that I will be observing your threaded discussions with each other, and I will review those discussions, commenting where appropriate with the goal of helping you to better understand the course content. Specifically, you should adhere to the following guidelines:

- Personal correspondence should be conducted elsewhere.
- Treat and respect others as you would like to be treated.
- “Flaming”, an angry series of words or comments used to personally attack others who may disagree with you, is not permitted.
- Take time to review the tone, language, word choice, spelling, and grammar of any written correspondence prior to sending it. You will be judged by the quality of your work.
- HFCC’s computer use policy is in effect. It can be found at <http://www.hfcc.edu/resources/policy.htm>.
- Students are responsible for completing their own online course work.

### **Campus Support Services**

### **Data & Voice Administration**

If you need assistance with username and password issues, please contact Data & Voice Administration. Data & Voice Administration is located on the second floor of the Andrew Mazzara Administrative Conference Center. To reach the help desk, please dial 313.845.6345.

### **Instructional Technology**

If you require assistance accessing UCompass Educator courses, please contact Instructional Technology at 313.845.9663, ext.4, 5, or 6 via e-mail at [signorelli@hfcc.edu](mailto:signorelli@hfcc.edu), [kolin@hfcc.edu](mailto:kolin@hfcc.edu), or [gagaddis@hfcc.edu](mailto:gagaddis@hfcc.edu). Instructional Technology is located on the lower level of the Learning Technology Center (same building as Campus Safety), room A-004.

### **Media Center**

Located on the second floor of the Library, the Media Center is an open access computer lab where students can go to work on computer assignments, access the internet, and/or check their e-mail. For more information, you may contact the Media Center at 313.845.6386. For more information regarding Library Services, you may phone 313.845.9606.

### **Counseling - Assisted Learning Services**

The Counseling Department offers an Assisted Learning Services Program. This program is designed to assist physically challenged, learning disabled or academically disadvantaged students at Henry Ford Community College to overcome barriers to education through supportive services. In addition, the Assisted Learning Services Department also provides tutoring services to the general student population. Assisted Learning Services is located in the LRC (Learning Resources Center), north side (parking lot side) main level. For more information, you may contact the office at 313.845.9617 or for the hearing impaired 313.845.9804.

### **Learning Lab**

Located on the second floor of the Learning Resource Center, the Learning Lab assist HFCC students with identifying and improving the skills needed for success in the areas of Reading, Writing, and Math.

Although operation hours may slightly vary each semester, generally, the Learning Lab is open Monday, Tuesday, Wednesday, Thursday, from 7:30 a.m. – 8:40 p.m., on Friday from 7:30 a.m. – 4:30 p.m., and Saturday from 9:40 a.m. – 1:40 p.m. For more information, contact the Learning Lab at 313.845.9643.

### **Academic Dishonesty**

**Dishonesty (cheating) in any form is not acceptable. Dishonesty (cheating) can result in a lower grade than indicated by the number of points earned or might result in a failing grade (E). Refer to the attached *HFCC Policy on Academic Dishonesty*.**

### **Policy on Academic Dishonesty (Cheating)**

Henry Ford Community College considers academic dishonesty to be a serious offense. It is the policy of the College that determination of and appropriate action in respect to academic dishonesty by a student shall be a matter of individual judgment by the instructor. The instructor may administer a penalty up to and including failure in the particular course. It is the professional obligation of the faculty to enforce academic integrity in their courses.

Academic dishonesty is any activity intended to improve a student's grade fraudulently.\* It includes, but is not limited to, the following:

1. Unauthorized acquisition of tests or alteration of grades (such as the stealing of tests, test keys, or grade books from faculty offices or elsewhere, or the purchasing of tests or grade books);
2. Unauthorized use of notes, books, or other prohibited materials during an examination;
3. Open cheating on an examination (such as copying from another student's paper);
4. Permitting another person to take a test in the student's place or receiving unauthorized assistance with any work for which academic credit is received;
5. Providing unauthorized assistance with any work for which academic credit is received;
6. Revision of graded work in an attempt to receive additional credit fraudulently;
7. Plagiarism (using another person's work without acknowledgment);
8. Any other conduct intended to obtain academic credit fraudulently or dishonestly. If an instructor fails a student in a course for academic dishonesty, the instructor must immediately notify in writing the student and the registrar of the infraction, retaining copies of both notifications.

The registrar maintains a record of all such violations. If a student fails two classes as a result of academic dishonesty, he or she is dismissed from the College for two academic years. In addition, a notation of the reason for academic dismissal is placed on the student's transcript. The notation may be expunged at the discretion of the appropriate vice president if the student petitions for its removal after at least two years have elapsed since the disciplinary action. If a student believes that the accusation is false, he or she may appeal through the Student Complaint Procedure. If the appeal reaches the Student Complaint Board, the Board may consider only whether the charge is justified. The Board may not set aside or change the penalty given by the instructor unless the charge of academic dishonesty is set aside.

\*Any action that violates the Student Conduct Policy and Due Process Procedure is also subject to review under that policy.