

SYLLABUS

BIOL 112. Evolution, Form and Function of Organisms: Spring, 2016

Section 11: Monday, Wednesday & Friday, 10:30 AM – 11:20 AM, HWWE 217

Instructor: Andrew Clark, Ph.D.
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Office hours: By appointment
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Supplemental Instructor: Samuel McCauley, mccauleysa@g.cofc.edu

Prerequisites:

BIOL 111 lecture and lab (or equivalent)
BIOL 112 lab (can be a co-requisite)

Text: *Biological Science*, 5th Edition, Scott Freeman.

Course objectives:

BIOL 112 provides students an introductory foundation in the processes of evolution, the unity and diversity of organisms, and the structure and function of plants and animals. Lectures will cover topics pertaining to adaptation, speciation, evolution, natural selection, and the comparative anatomy and physiology of plants and animals. Indeed BIOL 112 is a challenging course within our sequence of introductory biology courses, and with effort, students will find this experience valuable in the improvement of their critical thinking and scientific reasoning.

Access to course information:

The syllabus, additional reading material, and copies of PowerPoint lectures will be posted on OAKS. PowerPoint lectures will be posted after lecture. Major course announcements will usually be emailed to you, so please sign into OAKS and check your email regularly to stay up to flow with the course.

Grading:

Best three of four in-class exams; 100 points per exam (60%)
In-class Quizzes; 100 points for quizzes (20%)
Cumulative final exam; 100 points for final exam (20%)

Grade scale:

A (93-100%), A- (90-92%), B+ (88-89%), B (83-87%), B- (80-82%), C+ (78-79%),
C (73-77%), C- (70-72%), D+ (68-69%), D (63-67%), D- (60-62%), F (<60%).

Honor system and academic integrity:

Be familiar with the College of Charleston's Honor System:

<http://studentaffairs.cofc.edu/honor-system/>

Any form of academic dishonesty will not be tolerated. Unauthorized collaboration between students (working together without permission), giving unauthorized assistance, copying from another student's exam, and using an unauthorized study aid are forms of cheating. Any suspected instance of academic dishonesty will be referred to the Honor Board and can bear serious consequences (e.g. failure in the course plus expulsion).

Attendance:

You are expected to attend all lectures. A significant portion of my lectures will be delivered with a chalkboard or whiteboard, which, unlike PowerPoint lectures, will not be posted on OAKS. If you miss

a lecture on the day of a quiz or exam due to serious unforeseen matters (e.g. a medical crisis), you must provide an official excuse (e.g. an official note from a medical doctor) within five business days of the date of your absence. An absence memo alone will not suffice. You are responsible for obtaining and learning the material that you miss in lecture in the event of an absence.

Lecture notes:

Learning to listen and process information while taking notes on paper is a necessary skill for students and professionals. Taking notes on paper is especially important during BIOL 112 lecture, as most of my lectures are delivered with a chalkboard or whiteboard. However, in addition to chalkboard-style lectures, PowerPoint presentations may be delivered during lecture, and if delivered, will be posted on OAKS in pdf format after each lecture session. Obviously, the material I present on a chalkboard cannot be posted on OAKS.

Exams:

All exams consist of multiple choice and short-answer questions, and cover all material from lecture, unless specified otherwise. The final exam will be cumulative. Quiz dates, if not specified on the tentative lecture schedule, will be announced in an earlier lecture. Each quiz normally takes ten minutes, is timed, and are usually is handed out to students at the beginning of a lecture session. It is important to arrive to class on time and ready to take the quiz or exam! If I mistakenly penalize you for points on a quiz or exam, you have seven days (including weekend days) upon receiving your graded test to contact me to arrange a time to review your test. Please be aware that when your test is under review, your instructor has the right, and responsibility, to review all parts of the test for mistakes. Following the review, I will record the appropriate changes to your test grade. Failure to contact me after seven days upon the receipt of your graded test will disqualify your test for review, even if there are mistaken penalties. If you have completed all four 100-point in-class exams during the semester, your instructor will drop your lowest scored exam and use your three higher scored exams when determining your final grade, which will be out of 500 points. This privilege will not be granted to students who have not completed all four in-class exams, and therefore, the scores from all three exams will be used in calculating those students' final grades, which will be out of 500 points.

SI Sessions:

There are many incentives for attending and participating in SI sessions during the semester. In addition to enhanced learning, extra credit (up to 12 points) can be earned through attendance and participation in SI sessions. Students can earn one point per SI session attended per week. There are usually two or three SI sessions scheduled per week, therefore, attending and participating in one of these three sessions per week will grant you the extra credit point. Attending more than one SI session for a given week does not grant you more points for that week.

Laboratory (BIOL 112L):

BIOL 112L, the Evolution, Form and Function of Organisms Laboratory, is a separate course. However, please read below:

Some of you will be adding/dropping courses during the first week. Please use caution when doing this. Be sure to not accidentally drop yourself from a class that you want to stay in (e.g. your BIOL 112 lecture). In the past, I have had students request that I add them in the 112 lecture after they have accidentally dropped it when trying to drop out of a different course (e.g. BIOL 112L). If your BIOL 112 lecture reaches maximum capacity, you will be unable to add yourself back in once you drop it, even if by accident. Please be careful.

Special needs:

If you need any special accommodations to complete the requirements for this course, please contact me as soon as possible.

| Tentative Lecture Schedule | | | | |
|-----------------------------------|-------|---|----------------------|---|
| Week | | Topic | Chapters | Exams/Quizzes |
| 1 (Jan 8) | | No Lecture | | |
| 2 (Jan 11, 13 & 15) | Clark | Introduction to organismal biology & Evolution by natural selection | 1 25-26 | |
| 3 (Jan 18, 20 & 22) | Clark | MLK, Jr. Holiday (No class on Jan 18) Speciation | 27 | Quiz 1 (Jan 22) 15 points |
| 4 (Jan 25, 27 & 29) | Clark | Intro to plant form, function & diversity & Plant reproduction & development | 31, 37 24, 37, 41 | Exam 1 (Jan 29) 100 points |
| 5 (Feb 1, 3 & 5) | Clark | Transpiration: water transport in plants | 38 | |
| 6 (Feb 8, 10 & 12) | Clark | Translocation: sugar transport in plants | 38 | Quiz 2 (Feb 12) 15 points |
| 7 (Feb 15, 17, 19) | Clark | Plant nutrition & sensory systems | 39, 40 | Exam 2 (Feb 19) 100 points |
| 8 (Feb 22, 24, 26) | Clark | Intro to animal form, function & diversity | 42 | |
| 9 (Feb 29, Mar 2 & 4) | Clark | Osmoregulation | 43 | Quiz 3 (Mar 2) 20 points |
| 10 (Mar 7, 9, & 11) | | SPRING BREAK (No class from March 6-13) | | |
| 11 (Mar 14, 16, & 18) | Clark | Animal nutrition and feeding | 44 | Quiz 4 (Mar 16) 15 points |
| 12 (Mar 21, 23, & 25) | Clark | Electrical signals & Sensory systems | 46, 47 | Exam 3 (Mar 23) 100 points |
| 13 (Mar 28, 30, Apr 1) | Clark | Musculoskeletal systems | 48 | |
| 14 (Apr 4, 6, & 8) | Clark | Respiratory & cardiovascular systems | 45 | Quiz 5 (Apr 6) 20 points |
| 15 (Apr 11, 13, & 15) | Clark | Endocrine system, immune system, & Animal reproduction and development | 49-51 | Quiz 6 (Apr 13) 15 points |
| 16 (Apr 18 & 20) | Clark | Loose ends and course sum-up | | Exam 4 (Apr 18) 100 points |
| Monday Apr 25 (8am-11am) | | Final Exam | | |