

COURSE TITLE: BIOL 122 - BIOLOGICAL CONCEPTS: Evolution, Diversity & Ecology

WINTER 2019: Primarily web-based, with short daily discussions in OCH G018 from 12:30–1:30 p.m.

TEXTBOOK (required): Biological Science, 6th Edition, Freeman et al., Pearson (note – this is an electronic text, see back page for more information)

INSTRUCTOR: Dr. Scott Grubbs – OCH G011, [e-mail: scott.grubbs@wku.edu](mailto:scott.grubbs@wku.edu)

LECTURE MATERIALS: All materials are available on the BIOL 122 Blackboard site

OFFICE HOURS: Please feel free to stop by whenever you need or want, or email me if you have questions.

WKU Catalog Course Description

BIOL 122. BIOLOGICAL CONCEPTS: EVOLUTION, DIVERSITY, AND ECOLOGY (3). Introductory course in biology that emphasizes evolutionary patterns and processes, diversity of life (bacteria, archaea, protists, fungi, and animals), ecological principles, and conservation and management.

Course Corequisite

BIOL 123. BIOLOGICAL CONCEPTS: EVOLUTION, DIVERSITY, AND ECOLOGY LAB (1).

Syllabus Statement Linking Course with WKU Colonnade Requirements and Goals

This course fulfills Category II Explorations - Natural and Physical Sciences Requirement (E-NS)

Course Purpose

Biological Concepts: Evolution, Diversity & Ecology (BIOL 122): is an introductory, majors-level course in biology that emphasizes three main themes:

- **Evolutionary patterns and processes,**
- **Diversity of life (Bacteria, Archaea, Protists, Plants, Fungi, and Animals), and**
- **Ecological principles**

BIOL 122 is a required course in the Biology major, requires BIOL 123 as a corequisite, and can be taken either prior to or after BIOL 120/121. Please note that course performance is very important for students majoring in Biology. A grade of “C” or higher in BIOL 120/121 and BIOL 122/123 is now required for the Biology major.

Course Objectives

- **Understanding fundamental concepts of biology,**
- **Understanding factual and theoretical principles of evolution,**
- **Broad surveys on the global-scale diversity of life,**
- **Understanding basic ecological principles,**
- **Developing critical thinking and scientific reasoning skills, and**
- **Understanding the relationship between modern society and biological concepts**

Learning outcomes

- **Comprehend and use basic biological vocabulary, particularly evolutionary and ecological concepts**
- **Articulate an appreciation for scientific discovery**
- **Explain important scientific developments**
- **Demonstrate sound scientific reasoning ability and critical thinking skills**
- **Evaluate scientific data and results of research projects**
- **Explain how biological science impacts society**

Tentative schedule and pertinent lecture material information

Week 1 content: Chapters 22–24

Evolutionary Processes, Speciation, & Phylogenies

Week 2 content: Chapters 25–28

Prokaryotic Life (Archaea & Bacteria), Eukaryotic Evolution, and Eukaryotic Life (Protista and Plants)

Week 3 content: Chapters 29–32 + Human Evolution

Eukaryotic Life (Fungi, and Animals) and Human Evolution

Important information

GRADING: General Information

- a. **4** Examinations (30 pts each, with lowest score dropped)
- b. **12** Dynamic Study Modules (5 pts each, 1 per chapter covered, with lowest two scores dropped).
- c. **1** Scientific Review Paper (10 points)
- d. **9** Attendance days (2.5 points each on non-exam days; one absence dropped)

Totals

90	Exams
50	Dynamic Study Modules
10	Review Paper
20	Attendance & Participation

Sum = 170

With an extra 10 (if all 12 DSMs are completed) and 2.5 (if attending/participating all) points available

Your final grade will be based on a straight scale according to WKU 10-point grading scale: A = 100-90%, B = 89-80%, C = 79-70%, D = 69-60%, F = 59-0%.

GRADING: Specific Information

- a. Exams
 - **Schedule: Exam 1 (M–1/7), Exam 2 (R–1/10), Exam 3 (T–1/15), Exam 4 (F–1/18)**
 - All questions will be based on lecture material and in-class discussions.
 - You should expect to be present for all exams. In order to qualify for a make-up exam, you need to have contacted me prior to the exam. I reserve the right to decide if a make-up exam is afforded.
- b. Dynamic Study Modules
 - With 14 chapters to cover, you can expect that one is due nearly every day (including weekends). These take approximately 30 minutes each. These are “adaptive learning” assignments.
 - The intent here is for (1) a means of independent learning, and (2) an alternative way to earn the equivalent of two exam grades. Please stay current with these.
- c. Review Paper
 - More information will be forthcoming
 - Attendance & Participation
- d. Regular attendance is required. This is the most basic requirement of performing well on exams.
 - We will start most daily discussions with a combination of lecture and DSM information.

ACADEMIC DISHONESTY: Students are expected to do their own work throughout this course and demonstrate academic integrity. Academic dishonesty in the form of cheating or plagiarism will not be tolerated. Dishonesty on

quizzes, exams, or written assignments (see WKU's plagiarism statement below) will result in a failing grade for the class. Cheating (completing an assignment for someone else, allowing someone else to copy your assignment, copying and pasting from internet sources or elsewhere when you have not been instructed that this is acceptable, etc.) on online assignments will be tracked by computer.

Please refer to the WKU Student handbook for policies and definitions regarding academic integrity at:

<http://www.wku.edu/Dept/Support/StuAffairs/StuLife/handbook/academicOffenses.htm>

WKU'S PLAGIARISM DEFINITION: "To represent written work taken from another source as one's own is plagiarism. Plagiarism is a serious offense. The academic work of a student must be his/her own. One must give any author credit for source material borrowed from him/her. To lift content directly from a source without giving credit is a flagrant act. To present a borrowed passage without reference to the source after having changed a few words is also plagiarism."

THE LEARNING CENTER (TLC): Should you require academic assistance with your WKU courses, The Learning Center (located in the Downing University Center, A330) provides free supplemental education programs for all currently enrolled WKU students. TLC @ DUC offers certified, one-on-one tutoring in over 200 subjects and eight academic skill areas by appointment or walk in. Online tutoring is offered to distance learners. TLC is also a quiet study area (with side rooms designated for peer-to-peer tutoring) and offers a thirty-two machine Dell computer lab to complete academic coursework. Additionally, TLC has three satellite locations. Each satellite location is a quiet study center and is equipped with a small computer lab. These satellite locations are typically located in Douglas Keen Hall, McCormack Hall, and Pearce Ford Tower. Please call TLC @ DUC at (270) 745-6254 for more information or to schedule a tutoring appointment. www.wku.edu/tlc

ADA ACCOMODATION STATEMENT:

In compliance with University policy, students with disabilities who require academic and/or auxiliary accommodations for this course must contact the Student Accessibility Resource Center located in Downing Student Union, 1074. SARC can be reached by phone number at 270-745-5004 [270-745-3030 TTY] or via email at sarc.connect@wku.edu. Please do not request accommodations directly from the professor or instructor without a faculty notification letter (FNL) from The Student Accessibility Resource Center.

TITLE IX, DISCRIMINATION, HARASSMENT AND SEXUAL MISCONDUCT POLICY SYLLABI STATEMENT:

Western Kentucky University (WKU) is committed to supporting faculty, staff and students by upholding WKU's Title IX Sexual Misconduct/Assault Policy (#0.2070) at

<https://wku.edu/eoo/documents/titleix/wkutitleixpolicyandgrievanceprocedure.pdf>, and

Discrimination and Harassment Policy (#0.2040) at

https://wku.edu/policies/hr_policies/2040_discrimination_harassment_policy.pdf.

Under these policies, discrimination, harassment and/or sexual misconduct based on sex/gender are prohibited. If you experience an incident of sex/gender-based discrimination, harassment and/or sexual misconduct, you are encouraged to report it to the Title IX Coordinator, Andrea Anderson, 270-745-5398 or Title IX Investigators, Michael Crowe, 270-745-5429 or Joshua Hayes, 270-745-5121.

Please note that while you may report an incident of sex/gender based discrimination, harassment and/or sexual misconduct to a faculty member, WKU faculty are "Responsible Employees" of the University and **MUST** report what you share to WKU's Title IX Coordinator or Title IX Investigator. If you would like to speak with someone who may be able to afford you confidentiality, you may contact WKU's Counseling and Testing Center at 270-745-3159.

LIBRARY SERVICES

Research Appointments with your Personal Librarian: At WKU Libraries, your Personal Librarians are always ready to help! We have librarians for every program on campus, plus Special Collection librarians and archivists. Our goal is to save you time and help you be successful on term papers and research projects by showing you what you need to know to get started and be successful. Start your research by scheduling an appointment with your Personal Librarian. Find them at http://www.wku.edu/library/dlps/subj_lib_subject.php, call Helm-Cravens Reference at 270-745-6125, or email web.reference@wku.edu.

WKU CENTER FOR LITERACY: The WKU Center for Literacy is available for all WKU students who would benefit from assistance with reading college-level materials. In addition to a quiet study area, we can also offer small group and one-on-one assistance for reading and writing needs. A weekly study skills seminar series called College Reading Success takes place every Wednesday at 12:45 in GRH 2064. A Blackboard organizational site is available for any distance learners or other interested students who may not be able to physically attend. Please call the Center for Literacy at 270-745-2207, visit us in Gary A. Ransdell Hall 2066, or email at jeremy.logsdon@wku.edu with any questions. More information can be found at www.wku.edu/literacycenter

TEXTBOOK: DO NOT PURCHASE – READ BELOW

Please read prior to purchasing your textbook

- Freeman et al. 2017. Biological Science (6th edition) Pearson Higher Education, Hoboken.

The Biology Department at WKU has developed a new model for textbook adoption. In order to save money, maximize effective use of your textbook, increase learning, and evaluate the best ways of teaching you difficult topics, we have entered into a partnership with Pearson Higher Education. By enrolling in this course, you agree to purchase the digital materials associated with this course. These materials include a 24-month (depending on the course) access to MasteringBiology, a downloadable e copy of the textbook which is yours to keep, and the option to print a gray-scale copy of your textbook at greatly reduced cost. The cost per text, with all online materials, is \$75, about 35% to 50% the cost of purchasing a new textbook, even before purchasing online materials. If you want a printed copy, that's about \$25, but you must order that through the WKU Store during the first week of class. In order to make these savings available to you, WKU must institutionalize the purchasing process. As a result, about two weeks into the semester, you will be billed the cost of the materials for the course. The nice thing about this is that you will have access to all the course materials from day one, without doing a thing! If you choose to drop the course during the regular add-drop period, you won't be charged for the book. You should note that for this course, you WILL be charged for the digital materials, and ONLY the digital format will be used in this course. If you are enrolling in a two-semester course sequence (= BIOL 120–122), you have full access to the digital materials online for 24 months, plenty of time to take both courses and even take a semester off in between without paying twice for the materials.