

Ecology, Biology 315 Summer 2017 -- online

Basic Information

Instructor: Dr. Michael Stokes.
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Office Hours: By appointment (email first)
Office: TCCW 335 Phone: 270-745-6009

Meeting Location online

Prerequisites BIOL 120 AND BIOL 121 AND BIOL 122 AND BIOL 123 with grades of "C" or higher.

Course Description A study of the fundamental principles of ecology. Three credit hours.

Required Material [Free online textbook from Nature Scitable.](http://www.nature.com/scitable/knowledge/ecology-102)
<http://www.nature.com/scitable/knowledge/ecology-102>

Other readings as assigned

Optional Reference Text Any ecology text published recently could serve as a good reference.
Examples: Cain et al. 2012, Molles 2013, Pianka 2011, Smith & Smith 2012, Stiling 2011, Townsend et al. 2008

Ecology is the scientific study of interactions among organisms and their environment. As a field of study, it comprises the theories of ecology and the application of ecological principles. Ecology is multidisciplinary, encompassing information from behavior, biogeochemistry, biogeography, conservation, economics, environmental science, evolution, genetics, mathematics, natural resource management, physiology, and others. This course will draw on diverse information, and will emphasize concepts, critical thinking, and connections.

Objectives: Students will:

- 1) develop a general understanding of the theoretical aspects of ecology
- 2) investigate means by which ecological principles are applied to environmental problem solving,
- 3) learn how to apply an ecological perspective to questions in other areas of biology and outside of biology,
- 4) develop an appreciation of ecology as a dynamic, rigorous, hypothesis-driven field of science, and
- 5) be introduced to the literature of ecology.

Learning Outcomes: upon successful completion of this class, students should be able to

- 1) Explain major ecological theories and approaches
- 2) Elucidate the relationship between ecology and other disciplines,
- 3) Recognize the role of research and reading the primary literature in understanding ecology,
- 4) Discuss and write critically about scientific concepts in the realm of ecology,
- 5) Formulate scientific questions and develop research approaches in ecology,

Grading: 90.0 to 100% A; 80.0 to 89.9% B; 70.0 to 79.9% C; 60.0 to 69.9% D; <60.0% F

3, 100-point exams to be taken at a testing center or proctored site 300 pts

Short writing assignments 2@ 25 pts

Short end of term research paper 1@ 50 pts

Total 400 pts

List of Topics: Critical thought, Science, Foundations of Ecology (history, organization), Evolution (natural selection, adaptation) Behavioral & Physiological Ecology, Population Ecology & Demography, Life History, Species

Interactions (predatory-prey, competition, symbiosis), Communities & Ecosystems (diversity, productivity, succession, stability, trophic dynamics), Global Ecology (Applications: Conservation, Human Condition, Management) . A list of topics with assigned readings and due dates for assignments will be posted to Blackboard.

Blackboard: <https://blackboard.wku.edu>. Classroom material will be placed on blackboard (syllabus, course schedule, lectures, assignments, etc.). Students are required to be familiar with Blackboard and use it for this course. You are required to keep track of changes in class schedule and exam schedules as well as all assignments posted to Blackboard. Visit <http://www.wku.edu/it/blackboard> for help.

POLICIES

General: The general policies are simple and based on respect. You are expected to:

- ☐ Keep up with the material and turn in all assignments on time.
- ☐ Show up on time at proctored testing sites for exams.
- ☐ Do all work on your own.
- ☐ Adhere to WKU's Student Code of Conduct

Academic Integrity and Misconduct: Please see the Student Code of Conduct: Do not cheat.

Cheating is not only disrespectful (violating general policies) but it is also dishonest. Cheating on quizzes, exams or assignments will result in a failing grade for the course and could result in expulsion from the university. It is not worth it. Do your own work.

<http://www.wku.edu/judicialaffairs/student-code-of-conduct.php>

Attendance: As an online course there is no face-to-face attendance. However, there will be many deadlines for assignments and other assessments. You must keep up with the material on a daily basis.

Deadlines: WKU sets deadlines for withdrawal from a class or the university. Please make note of these dates. Dropping the class after the university deadline requires a written explanation by you and signatures from the instructor, department head and the dean of Ogden College. These exceptions are only granted in extreme circumstances. So, ABIDE by the deadlines! See:

<http://www.wku.edu/registrar/withdrawal.php> [Ceasing to attend class does not drop you from the class. If circumstances arise that keep you from attending, then go through the proper channels to withdraw.]

Audits: You must arrange with your instructor to audit the class DURING THE FIRST WEEK OF CLASS! Changes from normal credit to audit will NOT be granted after the first week. If you audit the course, you must view all materials and complete all assignments and evaluations. If you miss any assignments or evaluations, you will be given the course grade you earn.

End of Semester:

- ☐ There is no "extra credit" for the course. Study hard, do well on the tests and assignments. Rounding is done only to the nearest 0.1 % decimal place, not to whole percentage points.
- ☐ Final grades are posted in TOPNET {the grading scale is posted on this syllabus}.
- ☐ There is no "making up" missed homework assignments, so don't wait until the last minute to submit anything. If your network goes down, that's on you.

Extra Help: If you are having difficulty in the course, please contact the instructor early, do not wait until late in the term. Be responsible - it is your responsibility to look up dates and pay attention to announcements discussed in class.

Plagiarism is a form of misconduct. The university's definition of plagiarism is: "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."

ADA accommodation: 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.

University Policies:

All current university policies regarding courses and accommodations can be found at this site: <https://www.wku.edu/syllabusinfo/index.php>