

# 4970/7970 Global Change Biology: Fall 2007

**COURSE DESCRIPTION:** This course will provide an introduction to topics within the broad field of Global Change Biology. It is intended to equip participants with: 1) the basic knowledge they need to understand the extent to which the biosphere has changed, is changing, and will change at multiple levels of organization, and 2) to understand the scientific approaches and tools that are being employed in the study of global change processes and mechanisms. A second, but no less important goal is to gain an understanding and appreciation of sustainability practices and research. In this course, the inclusion of sustainability is to help identify and to explore the connections between global change and sustainable practices as they relate specifically to activities within the Biological Sciences. Thus, in addition to covering the causes and consequences of global change from a biological perspective, the course will highlight studies that seek biologically-based, sustainable solutions to the challenges presented by these unprecedented changes.

**Course format** will include lectures on background information, readings, discussion, short writing assignments and student presentations.

**This offering is designed:** 1) to provide basic knowledge of patterns and processes of global change that are manifest across broad levels of biological organization from the organism to the biosphere, and 2) to build familiarity with sustainability concepts, practices, and research within the Biosciences in this emergent and rapidly expanding discipline.

**Lectures and readings will provide** general and specific background on principles of global change and sustainability.

**Writing assignments** will reinforce understanding of the subject matter as well as provide students with an opportunity to develop skills in writing summaries and critiques of published research. Students will be required to turn in these weekly assignments for grading.

**Student Presentations** will reinforce understanding of specific areas within Global Change Biology. The presentations will also provide an alternate forum for class discussion during the "question and answer" period. Here, the overall objective is to help students improve their skills at presenting original scientific research through constructive feedback from their instructor and peers. Conversely, the experience should help students improve their abilities: 1) to identify the components of a well-delivered scientific oral presentation, and 2) to provide constructive criticism on improving oral communication within science.

**Students completing this course will have gained:** 1) an appreciation of the diversity and complexity of studies within global change biology, 2) familiarity with sustainability as it relates specifically to the Biological Sciences, and 3) have had an opportunity to develop scientific writing, oral presentation, and critical evaluation skills.

**INSTRUCTOR:** Kevin T. Fielman  
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**OFFICE HOURS:** The diversity of schedules among class participants largely precludes standard office hours this semester. Thus, I will keep an "open-door" policy. Feel free to contact me and schedule an appointment for any reason at any time.

**COURSE MATERIALS:** No required text. Reading and reference materials will be provided as necessary and distributed either electronically or in class. AU Access Blackboard is currently the preferred course management tool. It is still being implemented at Auburn and we will use it on an "as needed" basis.

**TESTS /EXAMS:** No formal tests or exams (This could change during the semester if the instructor believes their inclusion will improve attendance or performance)

**GRADING:** 40% Written assignments  
40% Presentation  
20% Participation (presentation evaluations, active learning, and attendance)

90 – 100% = A  
80 - 89% = B  
70 - 79% = C  
60 - 69% = D  
Below 60% = F

**ATTENDANCE:** Students are expected to attend all classes. Your participation grade depends on it. In addition, materials covered in class will complement the assigned reading and often cover unique material not found in the written materials.

**HONOR CODE:**

We will adhere to the Student Academic Honesty Code of Auburn University. Each student is expected to conduct all work within the letter and spirit of this Code. Academic dishonesty or plagiarism will result in a zero for that assignment and the filing of a report with the Academic Honesty Committee. A second occurrence will result in failure of the course and a permanent notation on the student's transcript. Details of the honesty code are found in Title XII of the SGA Code of Laws, in the Tiger Cub Student Handbook, and can be viewed at: <http://www.auburn.edu/tigercub/rules/index.html>.