

**Biogeochemistry and Climate Change**  
**(BIOL 4933)**  
**Spring 2009, T/Th 11-12:30, OH 107**  
**Syllabus & Schedule**

**Instructor:**

**Dr. Michelle Evans-White**

**SCEN 623**

**575-4706**

[mevanswh@uark.edu](mailto:mevanswh@uark.edu)

**Office hours:** MW 8:00-9:30

**Prerequisites:** General Ecology, college-level chemistry or biochemistry

**Course Objective:** The primary objective of this course is to introduce you to chemical, biological, and geological processes regulating energy and elemental cycling at ecosystem and global scales. An understanding of these processes will be used to help you and your classmates examine current societal problems including climate change and biodiversity loss. Class discussions of current literature should serve to increase communication and critical thinking skills.

**Text:** Biogeochemistry An Analysis of Global Change (2<sup>rd</sup> Edition) by William H. Schlesinger

**Grading:**

Final Grade Components

3 midterm exams and 1 final exam = 75% of grade

Leading class discussions: = 15% of grade

Class participation = 10% of grade

**Midterm exams and finals:** These will be composed of matching and short essay questions worth 100 points each. The final exam will primarily cover material from the last quarter of the course but will contain some cumulative aspects due to the cumulative nature of the material covered. For example, basic principles such as thermodynamics and redox potential will aid your understanding of biogeochemical processes throughout the course. Questions for these exams will come from lectures, readings, and class discussion literature. *Graduate students will be expected to refer to specific people and studies within essay questions to highlight their points. Undergraduate students will be expected primarily to address basic underlying concepts in essay questions. Undergraduates may receive up to 5 points extra credit for referring to specific people or studies, but can not receive any higher than 100% on an exam.*

**Do not miss an exam.** A make-up exam will be given to an individual only under rare circumstances and if the person has contacted me before the regularly scheduled exam. You must make up the exam within a week after you miss an exam or you will receive a 0. **Missing an exam earns a score of 0.**

**Leading class discussions:** Students will be expected to lead 2-3 class discussions on course literature as a team (2 people, preferably a graduate and an undergraduate student team). These discussions will take up a class period each. So, expect to take up at least 30 minutes per paper for 2 papers or 20 minutes per paper for 3 papers. We will break for 15 minutes mid-way through class. For class discussions later in the semester (after we finish IPCC chapters), you must pick one paper from the current literature (< 5 years old) to discuss with class along with the literature I have assigned. The paper your team picks should be within the same general topic area as the one I assign. You should be prepared to outline the major points within all papers and bring up a few discussion questions or criticisms (for class to consider) you have about particular sections. If there is a particular section that your group does not understand, you are encouraged to look up studies that address that topic and learn more about it before your assigned discussion time. You will be graded by your classmates and I (see attached grading sheet).

**Class participation:** Your participation grade will be made up of participation during discussions and class attendance. You are expected to participate in class discussions about readings. Read the assigned papers and think of at least 1-2 questions that can be discussed during class. You are also expected to attend class regularly.

**Grading scale** will be approximately: A  $\geq$  90, B  $\geq$  80, C  $\geq$  70-79%, D  $\geq$  60-69%

UNDER NO CIRCUMSTANCES WILL ANY GRADE BE ALTERED FOR ANY REASON EXCEPT A GRADING ERROR. When your grade is returned, check the addition of your score. If you think your grade should be changed, you have 1 week from the day the work is returned to see me. Make no notes or alterations on your work if you seek re-grading.

**Disclaimer:** The information contained in this syllabus does not constitute a contractual agreement. Exam dates, course content, and grading policy may be changed at the discretion of the instructor.

**Inclement weather policy:** In the case of bad weather, the class will be canceled if the university closes or if you receive an email notification from me prior to 9 am of that morning.

**Academic dishonesty:** Academic dishonesty includes any effort to circumvent the evaluation procedures of the course to improve a grade for yourself or your peers. Cheating includes but is not limited to unauthorized examination of written materials, misrepresentation of the cause of an absence during an exam, submitting the work of another partially or entirely as your own, and alteration of an exam answer to be submitted for re-grading. You are encouraged to report academic dishonesty. Anonymity will be protected. Students caught cheating may be given a failing grade in the course and may be subject to dismissal or further discipline. If you have any questions of what constitutes academic dishonesty, please ask me or refer to the brochure entitled "Academic Honesty" available from the Division of Student services.