**BIOL 425: How is Climate Change Impacting Your Favorite Species?**

TH Morgan Bldg 205, Fridays 11-11:50, Spring 2020

    

**Instructor:** Danielle Herrig, PhD | [danielle.herrig@uky.edu](mailto:danielle.herrig@uky.edu) | Office hours by appointment

**Class website:** <https://climatechangeandmyfavoritespecies.weebly.com/>

I will be updating the class website and will be anonymously including the best summary for each species each weekly (please let me know if you do not want your summaries online).

**Course Objectives:**

1. Investigate how climate change in impacting species around the world.
2. Improve your ability to find, read, and interpret scientific articles.
3. Hone your oral presentation skills and how to discuss a complicated topic.
4. Practice translating scientific findings into language that is accessible to the public.

**Course Description:**

As our global climate changes, the species the inhabit different areas of the globe are feeling the pressure of surviving in ecosystems that are responding to changes in the levels of rainfall and temperatures. Species are taking opposing strategies to overcome these pressures with varying degrees of success. In this class, you will need to find, read, analyze, present, and discuss primary literature that focuses on how species are responding to these changes. You may choose any species and paper that interests you, but the papers must be peer-reviewed and approved by me at least 2 weeks before you are scheduled to present.

**Course Format:**

Most weeks, we will read and discuss 2-3 papers and you will submit a summary of each of the papers you read each week using only “common words”. Over the course of the semester, each student will present two ten-minute presentations related to a primary research article and lead a discussion on the second paper.

**Grading:**

**A** = 100% to 90%; **B** = 89.9% to 80%; **C** = 79.9% to 70%; **D** = 69.9% to 60%; **F** =< 60%

**Grade Breakdown (1000 points available):**

20% First oral presentation\* = 200 points

40% Second oral presentation\* = 400 points

4% Leading group discussion after your second presentation = 40 points

24% Weekly “Aunt Gladys” letters = 240 points (20 points/peer presentation week)

12% Weekly peer evaluations = 120 points (10 points/peer presentation week)

**Tentative Schedule:**

Jan 17th: Syllabus Day, How to Choose a paper

Jan 24th: How to dissect a paper and presentation tips

***First set of Presentations***

Jan 31st: Presentation 1 for students 1-3

Feb 7th: Presentation 1 for students 4-6

Feb 14th: Presentation 1 for students 7-9

Feb 21st: Presentation 1 for student 10-12

Feb 28st: Presentation 1 for students 13 & 14

***Second Set of Presentations with Discussions***

Mar 6th: Presentation 2 for students 1 & 2

Mar 13th: Presentation 2 for students 3 & 4

Mar 20th: No Class—Spring Break

Mar 27th: Presentation 2 for students 5 & 6

Apr 3rd: Presentation 2 for students 7 & 8

Apr 10th: Presentation 2 for students 9 & 10

Apr 17th: Presentation 2 for students 11 & 12

April 24th: Presentation 2 for students 13 & 14

***Presenting science to the public***

May 1st: Strategies for talking about science with the public

**Assignments:**

*2-10 Minute Presentations (60%)*: Evaluation of presentations will be based on both content and delivery, according to the presentation rubric at the end of the syllabus. More generally, to give a successful presentation, students will need to: (1) understand the paper (which will require reading many times and looking up unfamiliar concepts and vocabulary), (2) distill key concepts into an organized and polished powerpoint presentation, and (3) practice (many times) what you plan to say. In other words, this is not an assignment that can be done last minute. **Two weeks prior to your presentations, you must send your selected paper to me for approval** (failure to do so will result in a 10% point reduction from the presentation grade for each day past the two-week due date!).

\*These two presentations for this course fulfills **part** of the Graduation Composition and Communication Requirement (GCCR). This course provides credit for the **GCCR oral component only**. To receive GCCR credit a student must: (a) Earn an average grade of C or better on all GCCR assignments and (b) Have completed at least 30 credit hours of college-level coursework prior to registering.

*Discussion Leader (4%):* After your second presentation, you will lead a 10-20 minute discussion on the ideas that you present. The discussion leader should be familiar with aspects of the rationale, experimental design, results, and conclusions, prepare discussion topics, and accurately communicate them to the class.

*Weekly “Aunt Gladys” Letters (24%)*: After reading the papers, you are required to submit 500-600 word “Aunt Gladys Letter” by **9pm on Thursdays that incorporates information learned from all assigned papers including the weeks you give your presentation**. The purpose of this exercise is to prepare you to “talk science” with non-scientists. To do so, we must acknowledge when we are using jargon and find ways to communicate effectively with people that don’t use the same jargon that we do. To guide this exercise, we will be using <https://www.wordandphrase.info/analyzeText.asp> which will flag any words that are not in the 3000 most common words. Each week you will be allotted only 5 words that are not in this list (you may also use proper nouns such as locations and species names). Late submissions will receive a 50% penalty if turned in before class begins. Once class begins, these letters will no longer be accepted for the week as these demonstrate that you came prepared for class. Being prepared for class also includes reading the syllabus before the first day—send me an email telling me one of your favorite animals before our first class to get five extra bonus points added to your first presentation grade!

*Peer reviews (12%):* Each student will submit a peer review for each presentation (except for their own). Evaluation forms will be provided at the beginning of each class and then collected at the end of the class period. As it is necessary for you to be present to evaluate your peers, these are essentially your attendance and precipitation points. As we have limited meeting opportunities – there are no “free” absences. I am more than reasonable with excused absences but, except in emergencies, I must be notified ahead of time (email me!) and we can make arrangements to make up these points.

**Other notes:**

**Academic Integrity, Cheating, and Plagiarism:**

PLAGIARISM and CHEATING are serious academic offenses. I will follow “Students Rights and Responsibilities Handbook, University of Kentucky” guidelines for the definitions of plagiarism and cheating. **Charges of an academic offense will be made against any student that cheats or commits plagiarism.** The MINIMUM penalty for such an offense is the assignment of a zero on the assignment on which the offense occurred. More severe penalties include suspension or dismissal from the University. **I have a zero-tolerance policy regarding academic offenses.**

**Classroom Behavior, Civility, and Decorum:**

The University, college and department all have a commitment to respect the dignity of all and to value differences among members of our academic community. There exists the role of discussion and debate in academic discovery and the right of all to respectfully disagree from time-to-time. Students clearly have the right to take reasoned exception and to voice opinions contrary to those offered by the instructor and/or other students (S.R. 6.1.2). Equally, a faculty member has the right – and the responsibility – to ensure that all academic discourse occurs in a context characterized by respect and civility. Obviously, the accepted level of civility would not include attacks of a personal nature or statements of denigrating another on the basis of race, sex, religion, sexual orientation, age, national/regional origin or other such irrelevant factors.

**Accommodations due to disability:** If you have a documented disability that requires academic accommodations, you must provide me with a Letter of Accommodation from the Disability Resource Center (Suite 407 Multidisciplinary Science Center; Phone: 257-2754; Email: [dtbeach1@uky.edu)](mailto:dtbeach1@uky.edu)).

Poor Excellent

**PRESENTATION SKILLS (30%)**

Eye contact (good eye contact, rarely looks at notes or slides) **1 2 3 4 5**

Body language (appropriately animated with gestures, minimal fidgeting) **1 2 3 4 5**

Poise (seems relaxed and confident; few mistakes) **1 2 3 4 5**

Enthusiasm (positive about topic and presentation) **1 2 3 4 5**

Speaking (clear voice, good volume and pace) **1 2 3 4 5**

Timing (-1 for each minute over or under 10 minutes) **1 2 3 4 5**

**VISUAL AIDS (25%)**

Visual aids are well prepared, informative, and effective **1 2 3 4 5**

Visual aids are well explained **1 2 3 4 5**

Visual aids are VISUAL (no more than 10 words /slide excluding axis labels, etc) **1 2 3 4 5**

Editing (no typos or grammatical errors) **1 2 3 4 5**

Good color/font choices **1 2 3 4 5**

**CONTENT (35%)**

Organization (information presented in a logical order) **1 2 3 4 5**

Introduction (big picture, necessary background info, and specific questions) **1 2 3 4 5**

Methods (details sufficient to interpret results, but not excessive) **1 2 3 4 5**

Results (key results highlighted and explained) **1 2 3 4 5**

Conclusions (overall significance and relevance to bigger picture questions; **1 2 3 4 5**

important take-home messages; possible future directions)

Minimal inclusion of irrelevant/filler information **1 2 3 4 5**

Content is accurate and presenter has a clear understanding of the material **1 2 3 4 5**

**OVERALL IMPRESSION (10%)** **\_\_\_\_\_\_\_** **/ 10**

**COMMENTS**

**Total score \_\_\_\_\_\_\_ / 100%**

**TOTAL POINTS TOWARD GRADE (\_\_\_\_\_/200 for 1st or \_\_\_\_\_/400 for 2nd presentation)**