

Eureka! Art, Biology, and Creativity
BCUSP 104C/110B, Fall 2008
MW 11:00-3:20, UW2-131
University of Washington, Bothell, Spring 2008

Becca Price
UW2-220
425-352-3666
becca.price@uwb.edu

Kory Perigo
UW2-336
425-352-3646
kperigo@uwb.edu

Office Hours:
Tu: noon – 1pm or by appointment

Office Hours:
MW: 9 – 10:30 am or by appointment

Campus Resources

Librarian Rob Estes, LB1-310G, 425-352-5242, REstes@uwb.edu
Writing Center, UW2-124, <http://www.uwb.edu/writingcenter/about.xhtml>

Course Text

- Readings on E-Reserves:
<https://eres.bothell.washington.edu/eres/coursepass.aspx?cid=1424>
- Kolbert, E. 2006. *Field Notes from a Catastrophe: Man, Nature, and Climate Change*. Bloomsbury USA, 240 p.
- Maimon, EP et al. 2005. *The New McGraw-Hill Handbook*. McGraw Hill, 984 p.

Course Description

Superficially, the study of biology and art occupy two distinct hemispheres of inquiry, separated by a chasm too large and deep to cross. However, practitioners in these areas require the same abilities: keen powers of observation; desire to understand; aptitude for experimentation; and creating new ways of understanding. This course illustrates and explores these conceptual and practical intersections between biology and art, providing opportunities to demonstrate the proximity between these seemingly disparate fields. We employ various learning practices (including lecture, laboratory, writing and kinesthetic experiences) to elucidate the principles of the course. You'll engage in scholarly research, learning how to use the internet and the library to write argumentative essays that cross the chasm between biology and art.

Skills and Outcomes

1. Improve your skills as a biologist by employing the arts to learn and present your knowledge.
2. Challenge yourself as an artist by representing biological concepts truthfully, creatively and innovatively.
3. Begin developing college-level research skills, such as formulating a research topic and question, finding academic sources to inform your question, determining what kinds of evidence are appropriate for elucidating your question, and evaluating the claims articulated in the sources you select. Recognize that research doesn't progress in a predictable fashion, but rather you must meander through the discoveries you make, constantly revising as you go.
4. Learn to write with revision and for different purposes (note-taking, reflection, analysis, creative writing, and presentation) as you conduct research.

5. Adjust to a university culture; engage in that environment in a way that suits your professional and learning goals.
6. Work cooperatively, taking into account the different backgrounds and skills that your colleagues offer, and work independently to produce artistic and written pieces that educate your classmates, instructors and university community.

Environment

We will meet twice a week for lecture, hands-on projects, movement activities and discussions. The first part of class will consist primarily of lecture, then we will segue into a discussion, and we will conclude with a workshop. To prepare for each class, complete the assigned readings and writings and ensure that you understand the previous class's material.

Bring your lunch! Over lunch each day, we'll discuss the readings you prepared for class.

We like an informal classroom, so feel free to call us by our first names (Becca and Kory). However, if you prefer to use formal titles, you may do so (Dr. Price and Mr. Perigo).

The only way we can survive four and a half hours of class is by taking lots of breaks. Get up, move around, take a breath of fresh air, visit the restroom. And please, respect our break time, too. Save questions for class time and office hours.

Blackboard

Register for the course blackboard site ASAP, and check blackboard regularly for announcements. You will also turn in all of your assignments through this website. Go to the Assignments section, select the assignment you are turning in, and attach the local file with your completed assignment. Once we've graded the assignments, you can read our comments and discover your grade by returning to this section of the web page.

How to Succeed in this Course

- Attend class. Arrive on time.
- Participate. Read the course material, enter into discussions, ask questions, be curious, and help your classmates master the material. Provide feedback to us and to your classmates so we can learn as a team.
- Wear comfortable clothes in which you can move easily.
- Do your homework. If you want to earn above a 3.0, expect to spend an average of 2 hours out of class for every hour we spend in class. Because you have 9 hours of class time, that means we expect you to spend about 18 hours a week on homework. That's the standard formula for any college class.
- Complete assignments on time. You have many assignments to help you assess your mastery of the subject as we progress through the course. By increasing the number of projects, we aim to relax the pressure associated with each assignment. Assignments are due at the beginning of lecture. Late assignments will be marked down 5% of the initial grade for every day late; we don't accept assignments that are more than 10 days late. Extensions are possible, but must be *granted in writing two days before the deadline*. We will not make exceptions to this policy.
- Asking questions during office hours and visiting the writing center will help you succeed.

- Turn off your cell phones in class.
- Using computers in class is a privilege. If your computers interfere with classroom learning, then you will need to put the computer away.
- Practice academic integrity. In particular, don't plagiarize. The UWB Student Handbook defines plagiarism as "the use of the creations, ideas or words of someone else without formally acknowledging the author or source through appropriate use of quotation marks, references, and the like." See <http://www.uwb.edu/students/policies/integrity.xhtml> for more information.
- When you have questions, use class time, office hours, and e-mail to obtain answers. If you use e-mail, please send your message to both of us. Although we don't answer phone calls, we respond to email messages within 24 hours, except on weekends and holidays. We encourage scheduling an appointment to receive one-on-one help or to discuss any topic in greater depth. Finally, we will answer questions pertinent to a particular assignment up until 5 pm the day before it is due. Please let us know if you're struggling. We want you to enjoy this material as much as we do.
- This campus does occasionally close because of inclement weather. We recommend you sign up for UW Alert (<http://www.washington.edu/alert/index.php>), a system that will notify you by e-mail and text message if classes have been canceled. If such a situation arises, then your assignments will be due the next class day. If campus closes during final's week, then your final project is due the next day campus opens.
- If you believe that you have a disability and would like academic accommodations, please contact Disability Support Services at 425.352.5307, 425.352.5303 TDD, 425.352.5455 FAX, or at dss@uwb.edu. You will need to provide documentation of your disability as part of the review process prior to receiving any accommodations.

Evaluation

Assignment	Points
Visual Piece	50
Literary Piece	50
Performance Piece	50
Exam I	75
Exam II	75
Participation and Homework (includes journaling)	100
Research Portfolio	100
Total	500

Use the table below to convert your points to a grade. Note that the bins in this table overlap, affording us some flexibility in how we determine your grade. So, for example, if your performance improves drastically, we will boost your grade. However, once grades are assigned, we will not change them!

Your points	470-500	450-470	430-450	410-430	390-410	370-390
Grade	3.9-4.0	3.6-3.9	3.2-3.6	2.8-3.2	2.4-2.8	2.0-2.4
Your points	350-370	330-350	310-330	300-310	<300	
Grade	1.6-2.0	1.2-1.6	0.8-1.2	0.7	0.0	

Turning in Assignments

Unless we've specified different instructions, turn in your assignments via the Blackboard site. You can access the assignment from the "Assignment" section on Blackboard (makes sense!). Then, click on the appropriate assignment to view it, and save it to your desktop. We always use Microsoft Word, and you can either purchase a copy for about \$10 from the cashier's office or use one of the computer labs on campus. Once you have completed the assignment, save it with your last name and that the assignment's name, e.g., Smith_WS01 would be the name for Ms. Smith's first worksheet. Then, return to the same place in Blackboard, add a comment about what you are turning in, upload the appropriate file and press **submit**. NOTE: the save command does not send your assignment to us.

It is essential for you to look at the assignment after we've graded it. In some cases, we'll be asking you to re-do the work, and you won't know whether that's the case unless you read our comments. And you especially want to see the comments we give when you've done superb work! Access the graded assignment from Blackboard gradebook, which you approach from the "Tools" section. If the grade book has an "!", then we haven't graded the assignment yet.

Art Pieces

Visual Piece

Re-envision the results of simulations you run to understand the different mechanisms of evolution by using different symbols to represent different outcomes of the computer game.

Literary Piece

Explore one of the chapters in Kolbert's *Field Notes from a Catastrophe*.

Performance Piece

Work with a team to bring your literary pieces to the stage. You will perform for the class (and possibly a few visitors).

Exams

The two exams will combine multiple choice and short essay to reinforce what you've learned. The first exam will cover material through "Observations to Theory", and the second exam will cover material on "Structures."

Participation and Homework

We will grade participation in two main ways: first, for every reading that is assigned you will need to bring into class two questions inspired by what you read. These questions should target two levels of Bloom's taxonomy (a system for categorizing learning that you will learn about in our first session). Second, bring in the reading and highlight the Eureka! moment in the piece, that is the passage that best explains why we've assigned this reading for this course.

In general we will discuss the reading in small groups over lunch. Each group will have a moderator, asker, note taker, reporter, and illustrator (in some cases one person will take on two roles). Begin discussion by taking turns reading Eureka! moments. Everyone

will submit his or her questions to the asker who then chooses which questions to ask the rest of the group.

Aside from the reading assignments (your two questions and Eureka! moment) you will have a series of small and large homework assignments (check out the course outline). Try not to procrastinate.

Portfolio


During your college experience you will be expected to write research papers, and, in order to write successful research papers, you will need to develop and employ effective research techniques. All through this quarter you will develop your research skills by amassing a **research portfolio**. This portfolio will demonstrate a quarter-long research process into a topic relating to both biology **and** art.


The complete portfolio will be due at the end of the quarter, but the contents of this portfolio will be due at various points throughout this quarter. The components are:

- 1) Title Page
- 2) Table of Contents
- 3) Statement of Topic
- 4) Concept Map (multiple drafts)
- 5) Research Log
- 6) Essay on Research Log
- 7) Analysis of Sources
- 8) Essay on the Research Process
- 9) Bibliography

Proposed Outline

Date	Topic and Texts
Introduction	
Wed Sept 24	Introduction
Mon Sept 29	<p>“A hundred visions and revisions” McGraw-Hill: 2-20; 353-354</p> <p>Due: Questionnaire and HW on Learning Styles http://www.engr.ncsu.edu/learningstyles/ilsweb.html</p>
From Observation to Theory	
Wed Oct 1	<p>What is art? Kuhn, 1973 Definitions of art primer</p>

Mon Oct 6	<p>Empiricism and Rationalism Carroll, 2006: 215-217 McGraw-Hill: 35-44; 278-283</p>
Wed Oct 8	<p>What is biology? Zimmer, 2001: 73-97</p>
Mon Oct 13	<p>Gene Pools and Frequencies Gonick and Wheelis, 1991</p> <p>Due: Statement about research topic</p>
Wed Oct 15	<p>Dance, Dance, Evolution Booth et al., 2003 McGraw-Hill: 288-312; 322-329 http://www.lib.washington.edu/uwill/research101/index.html http://www.lib.washington.edu/uwill/research101/basic02.htm http://www.lib.washington.edu/uwill/research101/Search07.htm http://www.lib.washington.edu/uwill/research101/Search08.htm</p>
Mon Oct 20	<p>Mechanisms of Evolution http://www.nyas.org/ebriefreps/ebrief/000659/video/jansen/jansen.html</p>
Wed Oct 22	<p>Variation Gould, 1980</p> <p>Due: Research Log</p>
Mon Oct 27	<p>Synthesis Edwards, 2008 selections</p> <p>Due: Visual Piece</p>
 Wed Oct 29 Happy Halloween!	<p>Exam I</p>
Structures	
Mon Nov 3	<p>Development echoes evolution Reading to be determined</p> <p>Due: Research Log; How I selected my sources</p>
Wed Nov 5	<p>Golden rectangles Doczi, 1994: 1-13</p>

Mon Nov 10	<p>Soft skeletons Gordon, 1978: 149-167 McGraw-Hill: 150 (section 7d) - 157</p> <p>Due: Literary Piece</p>
Wed Nov 12	<p>Synthesis Gould, 2003</p> <p>Due: Concept map; reflection on research log</p>
Mon Nov 17	Exam II
Experiments and Exhibits	
Wed Nov 19	<p>Burke Museum Alexander, 1997 McGraw-Hill: 94-105; 108-115 (through section 5i)</p> <p>Due: Annotated Bibliography <i>Hint: refer to McGraw-Hill 427-465 for tips on how to construct a bibliography that follows APA format.</i></p>
Mon Nov 24	<p>What do your instructors do when they're not teaching? Edwards, 2008: 126-128</p>
<p>Wed Nov 26</p>  <p>Day before Thanksgiving – no class</p>	<p>Judgment Day http://www.pbs.org/wgbh/nova/id/program.html (watch the whole documentary, 108 minutes; note that the program transcripts are also available from this website) McGraw-Hill: 237-241</p>
Mon Dec 1	<p>Bioart Cohen, 2002</p> <p>Due: Cartoon based on <i>Judgment Day</i></p>
Wed Dec 3	<p>Show time!</p> <p>Due: Performance Piece</p>
Mon Dec 8	Finals Week. No Class. Portfolio due at 11:00 am. No exceptions.