

BIO291W ADVANCED WRITING IN BIOLOGY
ENV291W ADVANCED WRITING IN ENVIRONMENTAL SCIENCE
Course Syllabus Fall 2008

Instructor: Dr. Charles Acosta

Office: SC 346

Office Hours: M 10:00-11:00; T 10:00-11:00, or by appointment

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Class: TR 1:40-2:55 in SC263

Textbook: McMillan VE. 2006. Writing papers in the biological sciences. 4th ed.

Boston: Bedford Books. 207p

- OR ALTERNATE: Pechenik, J.A. 2006. A short guide to writing about biology.
6th ed. New York: Longman. 240p. (ISBN 0321385926)

COURSE DESCRIPTION

BIO291W (3,0,3) Introduction to scientific literature, experimental design, research, and proposal development. Advanced techniques in information search and retrieval, scientific writing, and effective presentation. A general education course (Writing Communication II). PREREQ: ENG 101 and BIO151

COURSE OBJECTIVE

The goal of this advanced writing course is to expose students to the **scientific literature**, **scientific research methodology**, and **writing techniques** in the Biological Sciences and Environmental Science.

STUDENT LEARNING OUTCOMES

Students will:

1. Review and practice effective writing techniques and standards: word choice, sentence structure, grammar, and essay development.
2. Distinguish categories of scientific literature: primary, secondary and gray literature
3. Discuss the scientific process: scientific method, plagiarism, publishing, and ethics in scientific research.
4. Learn effective literature search strategies: search engines, search techniques, internet and library resources.
5. Critically read and interpret the scientific literature: accurate interpretation, research a topic, write a review paper;
6. Formulate a research project: review subject literature, consult research faculty, write a grant proposal, develop and conduct effective presentation of proposed research project.
7. Learn objective peer review strategy, editing, proofreading, and revision.

STUDENT LEARNING ASSESSMENT

Students will demonstrate their mastery of the learning outcomes in written assignments (see below). All 100 point assignments (review paper, research proposal and oral

presentation) will be graded on a letter scale: A, A-, B+, B, B-, C+, C, C-, D+, D, D-, F. Points will then be assigned to the letter grades as follows: A+=100, A= 95, A- = 90, B+ = 88, B = 85, B- = 80, C+ = 78, C= 75, C- = 70, D+ = 68, D = 65, D- = 60, F<60. All draft and in-class assignments will be graded and assigned points up to 20 points per assignment.

COURSE FORMAT

- **Research**

We will use resources in Steely Library and on the internet. Students must have access to the internet to download assignments and course materials on **BlackBoard**. Students must check **BlackBoard** daily for handouts, updates, and announcements.

- **Written Assignments**

All assignments must be turned in on their due date – no late work will be accepted. Written assignments must be typed in 12 point font, double-spaced, and printed double sided or on used paper. Multiple pages must be numbered. It is essential that you proofread and edit written assignments for errors in content, format, punctuation, grammar, and spelling.

- **Attendance and in-class work**

Attendance is mandatory. Students must sign the attendance roster at every class session. Missed in-class work or assignments generally cannot be made up; the exceptions to this policy are: 1) students have made prior arrangements with the instructor to complete the assigned work when you know you will have to miss class, and/or 2) students have proof of a legitimate emergency (medical or family).

- **Important Dates**

Last day to drop the course – September 15

Last day to withdraw with a grade of “W” – November 3

- **Classroom Policies**

- Students are required to read and abide by the University Honor Code and other requirements described in the Code of Student Rights & Responsibilities at the following website:

<http://www.nku.edu/~deanstudents/policies.htm>

- Students with disabilities should inform the instructor of special circumstances. You should review the information on available resources and accommodations at the following website:

<http://www.nku.edu/~disability/>

- Grades cannot be given to students over the phone or via email. Grades will be posted on **Blackboard**.

- Study: As a general minimum, you should spend 3 hours study time for each hour of class time; therefore, you should be prepared to spend 9 hours per week preparing for this course. This period includes reading, research, and writing on assigned discussion topics.

- Disruptions: Any behaviors that are disruptive to student learning will not be tolerated. Loud personal conversations are particularly disruptive to other students who are focused on learning. Please turn off cell phones and beepers during class time. Please come to class on time. Also, please resist the urge to pack your belongings before the class ends. This is particularly inconsiderate and disruptive, especially when student groups are holding discussions. Visitors are welcome to this class if extra seats are available. If you must bring young children with you, please sit in the back of the class near the rear door so that you can leave if they become disruptive.

BIO291W Fall 2008 Tentative Schedule

<u>Date</u>	<u>Topic</u>	<u>Documents</u>	<u>Reading</u>	<u>Assignments due/ in-class work/ points</u>
8-26	Faculty Disciplines & Interests	Faculty Research Research Primer		
8-28	Scientific Literature	Scientific Literature	Pgs 1-4	
9-2	General Library Resources	Library Handouts Assignment – Science Journals	Pgs 5-26	
9-4	Effectively Searching Scientific Literature		Pgs 5-26	1. Science Journals - 20 points
9-8	Labor Day	No Class	-----	----- -----
9-11	Effectively Using the Internet	Search Strategies*	Pgs 5-26	2. Search Strategies - 20 pts
9-16	Review Papers; Writing Skills	Example Review Paper	Pgs 68-136	Writing skills – word usage
9-18	Bioethics, plagiarism and fraud; Writing Skills	Bioethics	-----	Writing skills – plagiarism exercise
9-23	Scientific method, experimental design; Writing Skills	Experimental design	Pgs 33-44	Writing skills – concise writing, paragraphs, flow
9-25	Evaluating Primary Research Articles; Writing Skills	Ecology Article	Pgs 27-32	3. Primary Article Evaluation; 20 pts; editing and revision
9-30	Evaluating Primary Research Articles; Writing Skills	Biomedical Article	Pgs 27-32	4. Primary Article Evaluation; 20 pts; editing and revision

10-2	Evaluating Primary Research Articles; Writing Skills	Microbiology Article	Pgs 27-32	5. Primary Article Evaluation; 20 pts; editing and revision
10-7	Citing Articles; Writing Skills	CBE Style Manual	Pgs 137-166	editing and revision
10-9	Citing Article; Writing Skills	Literature Citations*	Pgs 137-166	6. Literature Citations -20 pts
10-14	Scientific and Technical Writing; Proofreading Skills; Editing		Pgs 167-195	Timed writing, proofreading, editing
10-16	Review Paper Peer Review	Review Paper Peer Review*	-----	7. Review Paper Peer Review 20 pts
10-21	Fall Break	No Class		
10-23	Research Proposals	Proposal Format		8. Review Paper – 100 pts
10-28	Proposed Hypothesis	Proposal Hypothesis*		9. Proposal hypothesis – 20 pts
10-30	Proposal Introduction	Example Proposals		In-class work on proposal
11-4	National Election Day	No Class		
11-6	Project Summary, Materials and Methods, Budget			In-class work on proposal
11-11	Proposal Peer Review	Proposal Peer Review*		10. Proposal Peer Review – 20 pts 11. Proposal first Draft – 20 points
11-13	Effective Powerpoint Presentations	Example Presentations	Pgs 196-205	
11-18	Work on Presentation/Proposal			In-class - editing
11-20	Work on Presentation/Proposal			In-class - editing
11-25	Work on Presentation/Proposal			In-class - editing
11-27	Thanksgiving Break	No Class		
12-2	Student Presentations			12. Presentation – 100 pts
12-4	Student Presentations			12. Presentation
12-9	Student Presentations			12. Presentation
12-11	Student Presentations			12. Presentation 13. Final Proposal – 100 pts