Biological Literature and Communication - Biology 4700
Spring 2012

A Course on How Biologists Think, Communicate, and Spend their Time

"Readings in Biology" is a senior level undergraduate course that is part of the college's Writing Across the Curriculum (WAC) program with the following goals:

to read various styles of professional literature encountered by a biologist,

to understand the thinking processes used by both the authors and readers of this literature,

to discuss the literature in the ways of a professional,

to write short impressions and analyses of these readings using varying styles,

to learn how to find information relevant to the profession, especially using the world wide web, and

to a write longer, more critical paper on a subject chosen by the student.

WAC Philosophy

Students' initial attempts to learn about a topic in biology, as well as many other disciplines, frequently involve listening to lectures and reading texts in which the words students hear or read are not their own. The value of students talking and writing about a topic is that they put their understanding into their own words, personalizing their understanding and thus removing it from being in the words of someone else. These words, when physically set on paper as opposed to floating in the mind, can then be further honed by the student into increasingly more precise ideas and understanding. This idea has been expressed by the college's WAC program, quoting Toby Fulwiler of The University of Vermont and a nationally known consultant for college level writing programs,

> "The more students write, the more active they become in creating their own education: writing frequently ... helps students discover, rehearse, express and defend their own ideas."

The philosophy of our Writing Across the Curriculum program has become: written expression of information expands the learning process.

This requires frequent practice by the student, frequent feedback to the student, interest by the student in the topics under consideration, and importantly, student insight on how the thought processes within the student's own mind work.

Readings

One of the goals of this course is to find, and then read, a variety of biological literature in different formats. Many students when they first read primary scientific literature are surprised how difficult it is to understand. The style of the writing and the advanced level of a reader's knowledge presumed by the author cause these difficulties. A goal of this course is to help students learn how to overcome these difficulties. A large amount of class time is spent on discussing what you have read - especially the laboratory techniques used in the experiments under discussion and the thought processes of the authors.

Literature Searches

Yet another goal of this course is to learn how to conduct searches of biological literature in order to learn about some topic. Emphasis here will be placed on computer based searches of citation data bases on the world wide web and the use of electronic mail.

Assignments

A variety of written assignments occur in this course. The purpose of these assignments will be to see if the students understand what they have read and discussed. The mechanics of how to construct a paper with references, proper identification of tables and figures, and acceptable format will be discussed in class. All papers shall be prepared using a word processor.

Term Paper

Students will prepare one long review (8-12 pages) paper on some specific topic chosen by the student after consultation with the instructor. The paper should discuss the methodology and data in current scientific literature relevant to the topic, and summarize and criticize the conclusions taken from this literature and attempt to indicate possible future directions for experimentation and thought in the area. The student must **read** and **review** some of the **recent primary literature** in order to do this. This paper will be due WEDNESDAY, APRIL 25, 2012.

An oral presentation will be given during the final few days of the semester.

MiniWrites, etc.

Shorter papers, miniWrites, of 2-4 pages will be assigned frequently during the course. The assignments will relate to the readings and classroom discussion and should require little further library research. These will address a specific task as announced by the instructor. There will also be a group project with collaborative writing of a paper.

Course Grading

Plagiarism can justify a failure in this course.

The relative weighting for different exercises in determining the final grade will be as follows:

Long term paper	20%
Short Assignments	50%
Oral Presentation	5%
Class participation	25%

Class participation is what makes this class tick;
you are expected to join in.

C. Creutz
Room: 1015A BOL
Hours: MW 2:30-3:15 and by appointment
Web: www.biowac.info
Voice: 419-530-4159
Email: prof@biowac.info
Skype: Charles Creutz
Facebk: charlie creutz

1/9/12