

# Introduction to Natural Science

## Online - NS 150-60/61

Fall 2008: August 25-December 15, 2008

(3 credits) Pre/Co-req: ENGL 101

Distance Learning Office: SGC 52

<b>Instructor:</b>	<b>Dr. Nancy Johnston</b>
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Office Hours	Online TBA; On campus Tues or Fri by appointment Ph.D. Chemistry University of California, Irvine 2001 under Nobel Laureate F. Sherwood Rowland
Education	M.S. Chemistry University of California, Irvine 1998  B.S. Chemistry, Geoscience William Smith College 1996 Born in Buffalo, NY
Personal	Married, three children  Hobbies include ballet, sewing, crocheting, scrapbooking

### **Required Textbooks/Materials: (available at the college [bookstore](#))**

1. *A Beginner's Guide to the Scientific Method*, 3rd Edition, by Stephen Carey, 2004, Thomson/Wadsworth: United States. ISBN: 0534584500

2. *The Fly in the Ointment*, by Joe Schwarcz, 2004, ECW Press. ISBN: I-550226215

3. Pick one of the following two:

a. *The Double Helix* by James Watson, 2001, Touchstone (Simon and Schuster): New York. ISBN: 074321630X

b. *The Hot Zone* by Richard Preston, 1995, Anchor Books (a division of Random House): New York. ISBN: 0385479565

4. *An Inconvenient Truth*, film produced by Paramount, 2006 (available on 3 hr reserve at LC library; also available at other public libraries, movie rental stores or grocery store rentals)

## **Course Objectives**

This course is designed to introduce the student to the process of scientific discovery in the world around us. The student will learn concepts integral to the scientific method, scientific reasoning, and scientific research. The student will be exposed to science topics in the news and media as well as in scientific journals and texts in various sub-disciplines of science. The student will gain critical thinking and problem solving skills necessary to evaluate both scientific claims in media and in textbooks, and to differentiate between true science and pseudo-science. An additional objective is to reduce or eliminate any science phobia or misconceptions about science that some students may have. Science is accessible to anyone, not just the scientist or science major, and this class is intended to demonstrate this.

This course is not a content -based science course. In other words, it will be quite different from taking a biology course or a physics course in its content and structure. It is not designed primarily to teach a list of science concepts, but instead will put concepts in the context of investigating how science is accomplished and viewed by the world.

This course is a core requirement. All students are required to take this class as it is an introduction to the sciences, and the scientific way of thinking and knowing the world.

## **Course Policies**

ENGL 101 is a pre/co-requisite for this class. This class is reading and writing integrated.

As a participant in this online course, you are expected to check the course website (Blackboard) several times weekly. All assignments and discussions will be submitted online. Content will be delivered on a weekly basis, and at times, you may work ahead, but assessments, assignments, and discussions will all be time/date oriented with deadlines.

Cheating is NOT tolerated in any form. If you are caught or suspected of cheating or plagiarizing an author or another student, your work will receive no credit or a failing grade in the class. Always properly quote sources or references in written essays or assignments. Cutting and pasting information from other websites without referencing is severe plagiarism. Every written work is to be your own work, not a cooperative effort (unless specifically stated otherwise).

If you are not sure of any of these policies, please ask me. See also the student code of conduct (<http://www.lcsc.edu>) and the Start Here icon on the homepage for more

information. The library also has learning tools on this:  
[http://www.lcsc.edu/library/ILI/Module\\_2A/Tutor1.htm](http://www.lcsc.edu/library/ILI/Module_2A/Tutor1.htm)

I expect all students to exhibit RESPECT towards themselves, each other and myself. In our online discussions it is imperative to respect the opinions of others, regardless if you agree with them or not. I expect an open, friendly, and intellectual atmosphere of discussion online.

## **Late Policies**

All coursework is due on the specified due-date. Work received later than this will be considered late. Late assignments or coursework are penalized 10% per day up to one week. After one week (including the weekends and holidays) they are not accepted. If you feel you have special circumstances, you may fill out an accommodation form to make up missed work.

\*Incorrectly submitted assignments or broken/crashed computers are not an excuse for late assignments. Please be prepared for these events by having a backup of your files, a backup computer to work on, and always double checking whether or not your assignment or discussion post successfully submitted. If you have no access to a computer to notify me, you must CALL!

## **Testing Policies:**

The two tests scheduled during weeks 7 and 16 are the only time you will need to be in a proctored testing site. You can arrange with your own schedule to go anytime during business hours within the particular week of testing. You must arrive 1 HOUR BEFORE CLOSING. The Lewiston campus site is also opened on Saturday mornings (SGC 52). Go to the distance learning website for information of available testing centers.

[http://www.lcsc.edu/dl/dl\\_proctors.htm](http://www.lcsc.edu/dl/dl_proctors.htm)

If you cannot come to a testing center due to distance/travel constraints, or business hour/time conflicts, then you should request a proctor at least ONE WEEK prior to the test. Go to the following website to apply for a proctor.

<http://www.lcsc.edu/dl/proctor.htm>

## **Access and Accommodation**

If you feel there is any physical or mental challenge to you that impedes your ability to participate in the class, please see me so we can remove or correct the problem. Any documented learning disabilities should also be brought to my attention immediately if

accommodation is necessary. Assistance with accommodation can also be found at the Office of Student Life, Room 111, Reid Centennial Hall.

In the event of prolonged or sudden medical or other emergencies, you may request to make-up missed work by filling out an accommodation form and providing written or verbal documentation of the situation. This must be done immediately after or prior to any of these circumstances. (Ex: a scheduled surgery, jury duty, a death in the family, etc.). You may CALL or EMAIL me.

## **Coursework Description**

Your grade will be based on a variety of factors. The best way to succeed is to stay on schedule with the content and submit assignments on time.

**Assignments** There will be regular assignments associated with the course content that week. Late assignments are penalized 10% per day up to one week. After one week (including the weekends and holidays) they are not accepted. I will provide feedback to you online as well. Use the assignment dropbox tool in Blackboard and submit all assignments in .rtf format unless otherwise specified. You will get feedback on your assignments under the "Assignment" area via a posting or a downloadable file (with corrections in red type). Please include your name in all documents submitted, and your initials should be in the document file name.

You may also use the Text box to type directly your assignment. This features an online html editor so please use it to double space and make your assignment easy to read on screen.

Once your submission has been submitted, the assignment moves from the INBOX to the SUBMITTED box. Please double check after submitting that this was done successfully. Blank or errors in submitting assignments will result in a zero grade, unless documented by IT.

In general, assignments are due on Wednesdays.

- **Getting Started, Everyday Scientific Method**  
These assignments are to check for your understanding and are fairly brief in nature.
- **Book Analysis/Movie Critique:** You will be asked to read one non-fiction science book in addition to the main textbooks (see list on top page). You will be given specific topics to address in the writing and discussion assignments. The objective is to see

science in the lives of real people. You will also view a movie related to a current scientific issue, and write a report and critique of it.

- **Causal Link Assignment:** This short essay involves analyzing a science story in the popular media that claims a link or possible link between two variables. Your job will be to compare and contrast the original science source of this information to the news or general article. The essay should be about 2-3 pages in length and you will critique the two articles based on principles we learn in class.
- **Debate Presentation:** Several different debate discussions will take place towards the end of the semester. You will be allowed to pick your topic, and each person will provide facts and arguments for AND against the topic. You will be graded on your debate discussion contribution, and a written summary highlighting your arguments/facts with a list of sources used.

### **Discussions**

Participation in class via online discussion forums is very important. Active participation will be based on the number of times you post a discussion message, and the quality of these postings. You are expected to post at least twice a week to the weekly discussions, and read other students' messages as well. Some assignments take place in the Discussion area only.

In general, discussion posts are due by the following Monday.

- **Weekly Discussion:** This discussion is based on the weekly content, reading and activities for the course. You are expected to comment at least twice by the following Monday.
- **Fly in the Ointment:** This discussion assignment is based on short readings from the Fly in the Ointment textbook. You will answer questions or respond to the reading. You need only to participate in 6 of the 12 weeks for this particular discussion.
- **Science in the News:** This assignment involves finding a web based science report or news article and summarizing it. As a class member, you should be prepared to read, interpret, and ask questions about the news of the week.

### **Assessments**

Two proctored tests will be given in during the semester. The tests will be worth 75 and 100 points each and will be based on weekly course content, discussion material and/or reading or debate topics. Tests will

be given in a proctored computer location near you during a specific time and week window. You are to arrive at least 1 hour before closing. It is best to call and double check the hours of the center if you are not at the main Lewiston campus. You may also request a proctor (see Course Policies)

Generally there are no make-up tests but if you have an emergency, let me know prior or immediately after and I will decide what arrangements should be made.

There will also be self-quizzes that you can do at your own computer. The only graded one is Syllabus Quiz, during the first week. It is worth 20 pts, and you may retake it as often as you want to achieve a perfect score.

- Syllabus quiz: August 25-September 7 (not proctored)
- Test 1: October 6 - October 14 (proctored)
- Test 2: December 8-December 15 (proctored)

## **Course Help**

Technical Help: I am your course instructor, not the Information & Technology (IT) or computer help staff. If you have a technical or computer problem or difficulties, you should contact IT for help: EMAIL: [helpdesk@lcsc.edu](mailto:helpdesk@lcsc.edu) or Website [http://www.lcsc.edu/dl/BbCE/student\\_info.htm](http://www.lcsc.edu/dl/BbCE/student_info.htm)

Writing Resources: The LCSC Writing Center can be found on campus in Room 115 of Spalding Hall. Email [writlab@lcsc.edu](mailto:writlab@lcsc.edu) or go to <http://www.lcsc.edu/writinglab/> for more information.

## **Grading:**

The following grading system will be used. The numerical values are the total percentage of points achieved out of those possible. To calculate your gradet to date and the final grade, add up all your points received. Divide this number by the total amount of points possible to date and then multiply by 100. Grades will be updated on the Blackboard system for your viewing every couple of weeks.

<b>Grade</b>	<b>% points</b>	<b>Grade</b>	<b>% points</b>
A	>93	C+	77-79
A-	90-92	C	73-76
B+	87-89	C-	70-72
B	83-86	D+	67-69
B-	80-82	D	60-66
		F	

<b>Grading Distribution</b>	<b>POINTS</b>
Weekly Discussions (5 pts/week)	70
Science in the News and Fly in the Ointment Discussions (30 each)	60
Tests and Syllabus Quiz	200
Getting Started Assignment & Everyday Scientific Method Assignment (30 each)	60
Causal Link Assignment	50
Inconvenient Truth Assignment	50
Book Assignment	50
Debate Assignment	50
<b>TOTAL</b>	<b>590</b>

### **Schedule of Events**

A detailed listing for our course will be posted on the Homepage for the Course, but the general academic calendar is at :

<http://www.lcsc.edu/registrar/AcademicCalendars/>

**Important Dates:** THANSGIVING BREAK : November 24-28, 2008

Last Day to Withdraw from Class : October 31, 2008