

COURSE: BI 110 - People and Nature.

TIME: 1:30-2:20 p.m. MWF (January 14 – May 5, 2013)

INSTRUCTOR: Dr. Frederique Kandel

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OFFICE: 123C

OFFICE HOURS: By appointment.

E-mail is the best way to reach me. Please be sure to use your **chaminade.edu** account for all messages you send to me. I am unable to verify the identity of persons using other email accounts.

TEXT: G. Tyler Miller Jr., Scott Spoolman, Environmental Science, 14th Edition (Useful but not required).

COURSE DESCRIPTION: This course is designed to introduce you to our relationship with the natural environment and the consequences of our actions/inaction in dealing with it. We will be combining ideas and information from both the natural sciences (i.e., biology, geology, physics, chemistry, etc.) and the social sciences (i.e., economics, politics, ethics, etc.) to try to gain an understanding of man's present relationship with the environment, what historical events have brought us here and what we must accomplish to insure our survival and the survival of other species.

OBJECTIVES:

1. To understand the way in which the scientific method is used to gain knowledge.
2. To gain some basic knowledge of the processes of our natural environment.
3. To increase awareness of the complex relationships among all living things and their non-living environment.
4. To examine man's past and present relationship with his environment and the possible affects of these relationships on our future.
5. To increase awareness of the environmental problems facing us today and to present some solutions to these problems.
6. To enhance your knowledge and awareness of our environmental problems to enable more informed political and economic decisions.

LECTURES:

1. Lecture topics are listed in the course outline.
2. Examination dates are also listed in the course outline.
3. The instructor reserves the right to add, omit, or change the materials as she sees fit.

EXAMS, QUIZZES & GRADES:

1. All exams & quizzes will consist of multiple choice, true-false, and short essay questions. You will be graded on your ability not only to answer the question (some can be answered in several ways), but also in how effectively you can defend your answer/position using your knowledge of the subject & applying what you learned through the use of appropriate facts/examples. Thus all questions asking for your opinion or position, whether stated or not have an implied "Why?" or "How?" question attached.
2. Quizzes will be unannounced & if missed cannot be made up w/o a valid excuse.
3. If you are absent it is your responsibility to inform the instructor and to inquire about missed assignments, tests, etc. & to make these up on the day of your return to class. Otherwise this will be considered an unexcused absence & the work cannot be made up.
4. Grades will be based on the following system & scale:

Grade Scale:

90% & above = A

80% & above = B

70% & above = C

60% & above = D

Below 60% = F

Grading System:

Quizzes and participation. 50 points

First Exam 100 points

Second Exam 100 points

Final 100 points

Total possible 350 points

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| Monday | 01/14/13 | Humans and Nature. Introduction. |
| Wednesday | 01/16/13 | Science. Matter and energy. |
| Friday | 01/18/13 | Introduction to Ecosystem/Ecology |
| Monday | 01/21/13 | Fr. Chaminade, Martin Luther King Day holiday |
| Wednesday | 01/23/13 | Energy Transfer and Nutrient Cycling in the Biosphere |
| Friday | 01/25/13 | Energy Transfer and Nutrient Cycling in the Biosphere |
| Monday | 01/28/13 | Human Population |
| Wednesday | 01/30/13 | Biodiversity |
| Friday | 02/01/13 | The 6th Extinction? |
| Monday | 02/04/13 | Watershed/Fresh Water Use and Consequences |
| Wednesday | 02/06/13 | Fresh Water Use (and consequences) |
| Friday | 02/08/13 | The Ocean and Atmosphere |
| Monday | 02/11/13 | The Ocean and Atmosphere |
| Wednesday | 02/13/13 | Harvesting the Ocean |
| Friday | 02/15/13 | Harvesting the Ocean |
| Monday | 02/18/13 | Presidents' Day holiday observed. No classes |
| Wednesday | 02/20/13 | Harvesting the Ocean |
| Friday | 02/22/13 | The Tragedy of the Commons |
| Monday | 02/25/13 | Whales and Whaling |
| Wednesday | 02/27/13 | EXAM 1 |
| Friday | 03/01/13 | Oceans Ecosystem Services |
| Monday | 03/04/13 | Whale Watching Field Trip |
| Wednesday | 03/06/13 | Earthquakes and Tsunamis and Volcanic Eruptions |
| Friday | 03/08/13 | Food, Soil and pest management |
| Monday | 03/11/13 | From Subsistence Farming to Agribusiness |
| Wednesday | 03/13/13 | Sea Life Park Field Trip |
| Friday | 03/15/13 | From Subsistence Farming to Agribusiness (cont.) |
| Monday | 03/18/13 | GMO: What Do We Know? (and What We Don't). |
| Wednesday | 03/20/13 | Aliens! (Species). |
| Friday | 03/22/13 | Aliens! (cont.) |
| March 25 - March 29. | | SPRING RECESS |
| Monday | 04/01/13 | Humans and Microorganisms |
| Wednesday | 04/03/13 | Solid and Hazardous Wastes |
| Friday | 04/05/13 | Solid and Hazardous Wastes |
| Monday | 04/08/13 | Energy: Fossil Fuels and Nuclear plants |
| Wednesday | 04/10/13 | Fossil Fuels and Climate Change |
| Friday | 04/12/13 | Climate Change, Observed and Predicted Consequences. |
| Monday | 04/15/13 | Diamond Head Tide Pools Field Trip |
| Wednesday | 04/17/13 | Energy: Wind, Water, Geothermal, Biofuels from the Sea etc... |
| Friday | 04/19/13 | Energy: Wind, Water, Geothermal, Biofuels from the Sea etc... |
| Monday | 04/22/13 | Field Trip TBA |
| Wednesday | 04/24/13 | EXAM 2 |
| Friday | 04/26/13 | You Choose! |
| Monday | 04/29/13 | Zoo Field Trip |
| Wednesday | 05/01/13 | Course evaluation |
| Friday | 05/03/13 | Review session. |

BIOLOGY 110L General Biology Lab I

Mondays 2:30pm-5:30 pm

Henry Hall Room L4

You will need to buy a lab coat for Bio 110L. These can be obtained from Heidi Harakuni in Wesselkamper Science Center room 115.

You will be given a **separate** grade for lab and lecture.

Your grade for Bio 101L will be determined as follows:

Lab team assignments: 40%

Lab individual presentation: 40%

Participation: 20%

Lab Team Assignments:

Lab exercises will be conducted in randomly assigned teams of 4 students.

Assignments will consist of putting together a PowerPoint presentation of the topic of the day. A student voting system will contribute to the grade. Voting will be done by e-mail from your chaminade.edu email account.

For each lab exercise, your team will create a PowerPoint presentation that clearly and creatively:

1. Gives background information on the topic
2. Accurately explains what you learned during the lab or field trip using pictures and text.

You are encouraged to use a lot of photographs and information from outside sources (Google, Wikipedia, etc.) but make sure you give proper credits.

Tentative schedule for laboratory exercises and field trips:

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| 01/14/13 | Humans and Nature. Introduction/lab safety. |
| 01/21/13 | |
| 01/28/13 | Manoa Heritage Center? |
| 02/04/13 | Board of water supply |
| 02/11/13 | What's in your water?/ Case study Atrazine |
| 02/18/13 | |
| 02/25/13 | Coconut Island Field trip |
| 03/04/13 | Whale Watching Field Trip Makapuu |
| 03/11/13 | Loe Field Trip |
| 03/18/13 | Movie: Food Inc. What's in your Food? |
| | |
| 04/01/13 | Aquarium |
| 04/08/13 | Inconvenient Truth/Students Final presentation |
| 04/15/13 | Manoa Gardens |
| 04/22/13 | Diamond Head Tide Pool? |
| 04/29/13 | Zoo Field Trip |