General Science 1000

Course Outline, Section 1, FW 2012-13

Section 1.(a) Sept. 11 and Sept. 18, 2012

Section 1.(b) January 8, 2013

Section 1.(c) April 2, 2013

Contact Information

Section Instructor: C. D. MacKinnon Office: CB-4038, CB-2030 (lab)
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http://www.chemistry.lakeheadu.ca/personal/mackinnon/GS1000.html

Office hours: Section 1.(a): M-Th 3:30 – 4:30 am (September)
Section 1.(b), (c): TBA

Overview

These modules will introduce both practical and philosophical aspects of the nature of scientific enquiry, focusing how measurements are made, reported, and used.

Topics:

Section 1.(a) Definitions of terms (large/small numbers, S.I. units, etc.)
Definitions of fields (science, engineering, technology, etc.)
The nature of science (scientific revolutions, experimental *vs.* observational)
Causality, use of statistics in science

Section 1.(b) Science presentation, science fairs, description of culminating project

Section 1.(c) Presentation of culminating project to the class

Evaluation:

Item	*Value:* (% of this section)	(% of entire course)
quiz (September 25)	30	6
culminating project (April 2)	70	14
Total:	100	20

QUIZ: Tuesday Sept. 25 at the beginning of class. Multiple choice, 30 minutes. Material from section 1. (a) (first two classes), CLOSED BOOK (calculators are allowed). Note: the university has a policy of NO ELECTRONIC COMMUNICATION EQUIPMENT at any test or exam. This would include using a cell phone for a calculator or timepiece!

CULMINATING PROJECT: This is a group project. Details will follow in class on January 8. The project will be presented briefly to the entire class on April 2, and will also be submitted to the course instructors for scientific evaluation. This will be a "poster" presenting some aspect of science that interests you and your group members. It can be on any topic, but must be scientific and the topic must be cleared with the course coordinator (C. MacKinnon) by Tuesday March 5.

The amount of content may vary (depending on the font used), but must be readable on a typical 14" laptop screen (from a comfortable distance!) with the entire poster is on the screen at once. The entire content should take ~10 minutes to read. The poster must be self-explanatory, so it could be read and understood by someone without any input from the group members. POSTERS MUST BE PREPARED AS AN ELECTRONIC FILE (Powerpoint or Adobe .pdf) AND ARE DUE (by email) SUNDAY MARCH 31, 11:59 PM.