Welcome to Interdisciplinary Science!

This is the second course of a three quarter sequence in science for non-science majors. We hope to provide you with an excellent science experience so that you will enjoy reading and learning about science for the rest of your life.

Later in this syllabus, there will be a more complete listing of the specific objectives for the course, but there are two primary goals:

1. To provide opportunities for you to learn about science in a fashion that will make you more curious about your world. We hope that when you complete this course that you will be more confident about science and enjoy reading and learning about science.

2. To provide you with opportunities to improve your skills in solving problems and understanding the sciences.

The organizing theme for the content is the application of science to Climate and Global Change. We hope to better understand and evaluate statements made about the Earth’s climate and the effects of human activities on the climate. To accomplish these goals there will be a variety of instructional activities, such as group problem solving, experiments, lecture-discussion sessions, and individual readings and investigations, but the primary emphasis will be developing skills through a series of laboratory (hands-on) modules. Most of our class sessions will be time for you to work with classmates on activities rather than receiving information through lectures.

Evaluation Units

Midterms- During the quarter there will be two midterm exams. There will be no make-ups on the midterms. If you know that you will be out of town on an exam date, please see one of us. Our plan is to construct the midterms with the same format used in IDS 101. If there are substantial changes in the format of the exams, we will notify you prior to the exam. The date for the midterms will be announced in class and we will try to give you a week’s notice before the exam date. We will assign a decimal grade for each exam and the decimal grade will be recorded.

Modules/Notebooks - The backbone of this course will be a series of labs/modules you will complete during class time. In some cases you may have to spend out of class time to complete the modules. At the end of the quarter, the point total for the notebooks will be converted into a decimal grade according to the scale on the next page. Please organize the notebooks chronologically, including the homework. Notebooks will be graded based on a point scale.

Quizzes- There will be a quiz at the end of most modules, or roughly one quiz per week. The quizzes are intended to provide practice in answering the kinds of questions that will appear on exams.

Project- Since learning how to conduct independent inquiry in science is a critical part of this course, you will be asked to prepare a project during this quarter that will require these skills. We will give you more specific guidelines on the project and our expectations.

Final Exam- The final exam will cover the entire quarter and will be held on Tuesday, March 18, from 11 am-1 pm. The date of the final is fixed by the college administration and cannot be changed to accommodate vacation schedules.
**Attendance**- Since this class requires in-class participation by its very nature, attendance is required. A sign-up sheet will be provided on certain days. It is your responsibility to insure that your name is signed on the attendance sheet. We consider having someone sign your name for you as cheating (special disabilities excepted). Each student will be allowed three absences without a loss of attendance points. Attendance points will be deducted for each absence following the first three.

**Grading**

Grades will be determined according to the following percentages:

- Midterms: 30%
- Quizzes: 10%
- Notebook Reviews: 15%
- Project: 15%
- Attendance: 10%
- Final Exam: 20%

The notebooks and attendance will be graded on the basis of points (the points values for each of these categories are different) and at the end of the quarter will be converted to the decimal scale noted below.

<table>
<thead>
<tr>
<th>Points</th>
<th>Grade</th>
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<tbody>
<tr>
<td>95-100</td>
<td>4.0</td>
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<tr>
<td>94</td>
<td>3.9</td>
</tr>
<tr>
<td>93</td>
<td>3.8</td>
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<tr>
<td>92</td>
<td>3.7</td>
</tr>
<tr>
<td>91</td>
<td>3.6</td>
</tr>
<tr>
<td>90</td>
<td>3.5</td>
</tr>
</tbody>
</table>

and so forth

At the end of the quarter the grades from the exams, labs/modules, and attendance will be averaged according to the weighting factors shown above to determine the final grade. If you have questions about your grade, please let us know.

**Resources in the Course:**

Additional readings may be assigned and will be announced in class. If you have questions about what you are reading, please make notes and talk to one of the instructors!

**Course Web Site:**

The IDS web site has proven to be one of the most popular features of the course. As the course progresses students will be able to find assignments, problems with solutions, and even this syllabus at the site. The address for the course web site is:

[http://www.instruction.greenriver.edu/ids](http://www.instruction.greenriver.edu/ids)
Tentative Course schedule:

The most up-to-date schedule will be posted on the course web site. Our tentative plans are:

<table>
<thead>
<tr>
<th>Week</th>
<th>Dates</th>
<th>Topics</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Jan 2 – 4</td>
<td>Intro &amp; Phases of the Moon #1</td>
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<tr>
<td></td>
<td></td>
<td>Heat &amp; Temperature (How do we measure Hot &amp; Cold)</td>
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<tr>
<td>2</td>
<td>Jan 7 -11</td>
<td>Specific Heat (Why water is “cool”)</td>
</tr>
<tr>
<td>3</td>
<td>Jan 14 -18</td>
<td>Changes in Phase (Ice, Water, &amp; Vapor)</td>
</tr>
<tr>
<td>4</td>
<td>Jan 22 -25</td>
<td>Weather</td>
</tr>
<tr>
<td>5</td>
<td>Jan 28 -Feb 1</td>
<td>Exam 1 -- Seasons &amp; Phase of the Moon Revisited</td>
</tr>
<tr>
<td>6</td>
<td>Feb 4 – 7</td>
<td>The Nature of Light &amp; the Greenhouse Effect intro (Feb 8 = No Class)</td>
</tr>
<tr>
<td>7</td>
<td>Feb 11-15</td>
<td>Greenhouse Effect Cont. / Evidence &amp; Effects of Climate Change</td>
</tr>
<tr>
<td>8</td>
<td>Feb 19-22</td>
<td>Exam 2 -- Geologic Processes #1</td>
</tr>
<tr>
<td>9</td>
<td>Feb 25-29</td>
<td>Volcanoes &amp; Earthquakes</td>
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<tr>
<td>10</td>
<td>March 3 – 7</td>
<td>Plate Tectonics</td>
</tr>
<tr>
<td>11</td>
<td>March 10-14</td>
<td>Geologic Processes #2</td>
</tr>
<tr>
<td>12</td>
<td>March 18</td>
<td>Final Exam</td>
</tr>
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</table>

Due to variations in room availability, equipment, and even the weather, changes are inevitable. Changes to the schedules will be announced in class and on the course web site.

Overarching Goals: (Student Achievement during the course)

This course has the following primary goals:

1. Students will measure, record, and accurately represent data.
2. Students will use data and critical thinking skills to evaluate hypotheses
3. Students will revise incorrect pre-instructional ideas.
4. Students will evaluate statements about science from the newspaper, TV, and the Internet.
5. Students will learn to create meaningful experiments and interpret experimental data.
6. Students will correctly use a computer to analyze or obtain scientific data.
7. Students will develop skills to work effectively with peers in finding solutions to scientific problems

These outcomes will be demonstrated by: 1) successful achievement on the midterms and the final exam, 2) reports from labs/modules, 3) project.

Campus-wide Learning Outcomes

Critical Thinking Ability:
You will be asked to examine your scientific thinking by:
1) explaining your ideas to open-ended questions (in some cases we ask that students defend their choice of more specific answers)
2) observing features of experiments and applying them to questions posed in an assignment
3) applying information from modules to problems presented during class
This outcome will be demonstrated by student responses to answers on the final examination, midterms, reports from modules and experiments, the poster and/or paper from your project, and in-class/homework problems.

**Our Expectations:**

- I expect you to be present in class each day.
- I expect that you will treat all in the class with respect (no portable phones or audible pagers unless it is an emergency AND you check with an instructor BEFORE CLASS).
- I expect that you will be prepared for class each day and that you will have read the assigned material for that day.
- I expect that you will not talk to other classmates if an instructor is lecturing or if another student is talking to the entire group.
- I expect that you will be ready to start class, at the beginning of the class time and will remain in the class until the end of the class period.
- That you will be responsible for signing your name to the class list for attendance.

**Characteristics of an "A" Student:**

Sometimes when a student is not doing as well in this course as they would like, we hear the question, “What do we have to do to get an A?” There is no easy answer to that question, but we hope the discussion below will help you.

Although excellent students are not all the same, the following are characteristics that we have noted which are almost always present in "A" students:

- they attend class every day. Absence rates among “A” students are usually very low.
- they understand the material rather than relying upon memorization for the test. They are able to apply ideas learned in other parts of the class (and other classes) to the issues they are studying.
- they are prepared for class. They have read the assigned material before the class session and are ready to ask questions and discuss the material. Their work is on time and neat.
- they have the attitude that the primary responsibility for their learning is their own, not the instructor’s. These students will do well in spite of the particular instructor in a class.
- they work well in groups. They have good communication skills and are willing to listen to the ideas of others.
- they study actively. They do not just sit and read the text. They use the study guides provided. They outline, take notes, and solve problems as they read. This helps their retention and understanding of the material.

**Policy on Late Papers:**

**Notebooks:** A penalty of 10% will be deducted from the score of the notebook per day that it is late.

**Project:** Your project grade will be reduced 10% per day that it is late.

**Policy on Cheating:**

In this course you will be working in groups and by yourself. Individual assignments, such as most of the labs/modules and the homework, may be discussed in a group, but must be written individually. Do not give your paper to someone else! Exams are closed book, closed notes, and obviously are to be your own work. If individuals are found to be cheating, their names will be given to the Dean of Instruction for further action that may range from no credit in the exam/assignment to removal from the college.
Policy on Visitors in Class:
Faculty members at GRCC have been directed to not permit children of students to attend classes. We understand that sometimes it is very difficult to make daycare arrangements. However, the policy from our administration is very clear and we will have to enforce the rules. If a person is over 16 and would like to attend the class, please see me several days ahead of the class session to obtain permission.

Special Needs
If you believe you qualify for course adaptations or special accommodations under the Americans With Disabilities Act, it is your responsibility to contact the Disabled Students Services Coordinator in the LSC and provide the appropriate documentation. If you have already documented a disability or other condition that would qualify you for special accommodations, or if you have emergency medical information or special needs we should know about, please notify one of us during the first week of class. You can reach us by phone at 253-833-9111. The phone extension is listed below. Or, you can schedule an office appointment to meet one or both of us in our offices during posted office hours or at another mutually determined time. If this location is not convenient for you, we will schedule an alternative place for the meeting. If you use an alternative medium for communicating, let us know well in advance of the meeting (at least one week) so that appropriate accommodations can be arranged.

A FINAL NOTE
We sincerely believe that each of us can be a resource in this course. We hope you will ask questions, initiate discussion, and take an active part in making our classes an active learning situation for all of us. In this way, we think we will all learn more!

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