

COURSE: ISC 280 Living on Earth CREDIT HOURS : 4 Spring, 2010

Lecture: Tuesdays and Thursdays 8 – 9:15 am. Science Room 374

Lab: Science Room 200 Mondays 8 – 9:50 am. Section 201 CRN 2714

 Mondays 10 – 11:50 am. Section 202 CRN 2715

 Mondays 1 – 2:50 pm. Section 203 CRN 2716

Instructor: Samuel T. Colvin, office - G-31-G Morrow Library

E- mail: colvin8@marshall.edu This is the only e-mail address to which I respond. Please do not
 send e-mails through other forums such as myMU or MU Online.

Phone: (304) 696-5432 Because of the phone system, I can only return local phone calls and
 cannot return most cell phone calls.

I only check and return phone calls and e-mails during regular office hours. But I do respond if at
all possible.

Regular office hours : Mondays noon – 1 pm.

 Tuesdays 10:45 am.- 12:45 pm.

 Thursdays 10:45 am. – 1:45 pm.

OTHER OFFICE HOURS BY ADVANCE APPOINTMENT ONLY:

 Tuesdays and Thursdays 2:30 – 4:30 pm.

I AM NOT ON CAMPUS ON WEDNESDAYS, FRIDAYS, SATURDAYS OR SUNDAYS.

Start of semester announcements:

I have a regularly scheduled First Year Seminar Planning Session every Tuesday from 1
– 2:30 pm. I am required to attend and will not be available during that time.

I serve on the Goodwill Industries Recycling Committee which regularly meets once per
quarter. There will be no office hours on Thursday, March 11 so I may attend this
meeting off-campus.

Any other changes in office hours will be announced in class and/or by e-mail and will be
posted on the office door.

MARSHALL PLAN - Upon completion of the ISC component of the Marshall Plan, students will:

1. understand and apply the processes of scientific investigation to gather information and an understanding of the natural universe.
2. know how to distinguish the differences between science and pseudoscience.
3. gather, analyze, and draw conclusions based on valid interpret of data.
4. possess and exhibit improved skills and competencies in research, writing, and oral presentations.

Course Learning Objectives:

1. learn to think critically
2. understand the scientific method and learn the process the processes of scientific investigation
3. know how to distinguish the differences between science and pseudoscience
4. gather and analyze data to draw conclusions based on valid interpretation of results
5. garner skills and competencies in research, writing, and presentation
6. acquire knowledge and gain an understanding of natural science

Assessment Tool*		Learning Objective Assessed**					
		1.	2.	3.	4.	5.	6.
A.	Pre test/post test on the scientific process	✓					
B.	<u>Portfolio Assignment I.</u> Lab Report on the Process of Science. Students will make observations, develop hypotheses, design experiments, collect data, and draw conclusions. Submit as a Word document.	✓	✓	✓	✓	✓	✓
C.	<u>Portfolio Assignment II.</u> Comparative critique of two papers one chosen as an example of science and one as an example of pseudo science. Minimum 3 pages, double spaced submitted as a Word document.	✓	✓		✓	✓	✓
D.	<u>Portfolio Assignment III.</u> Provide a synthesis based on three or more reference sources emphasizing scientific findings and the strength of those findings. Minimum, 3 pages double spaced submitted as a Word document.	✓	✓		✓	✓	✓

E.	<u>Portfolio Assignment IV</u> — Presentation or Report Summarizing an Area of Scientific Research. The emphasis is on presentation of scientific information as a stand-alone, kiosk-like presentation or report. Sound argument, clarity, and accuracy of conclusions are emphasized. Presentation in a format that allows wide distribution; PowerPoint required.	✓	✓		✓	✓	✓
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Course Conduct: Students will work in groups and/or individually to examine the world's current environmental status. Students will gather information from various sources including the Internet, books, and other scientific references. Course materials will be mainly handouts. There is no required text or recommended reading outside of class.

The instructor is responsible to: 1. Introduce concepts and issues. 2. Model a scientific approach. 3. Evaluate student submissions. 4. Make interesting and relevant presentations.

Students are responsible to: 1. Participate in activities 2. Submit individual assignments and assure their proper receipt. 3. Take tests. 4. Remain interested and apply learning to life.

POLICIES:

Accommodations for learning disabilities will be arranged when an official form is received. For further information, log onto <http://www.marshall.edu/disabled>.

Students who consistently (2 or more times) come to class late may be subject to a reduction in points not to exceed a one letter grade reduction at the discretion of the instructor.

While attendance in lecture is not recorded, attendance is recommended. Absences from labs will be excused only with written excuses in accordance with University attendance policy. A student with an excused absence is responsible to make up the missed lab within seven (7) days after the excused absence.

Plagiarism or cheating will result in no credit for that activity and may result in further University sanctions.

Work not in the prescribed format or not under the right assignment will be penalized, or at the discretion of the instructor, not accepted for grading. MU Online will be the only acceptable vehicle for submission of work unless the instructor announces a different vehicle. PLEASE DO NOT SEND SUBMISSIONS BY E-MAIL.

Submission deadlines to MU Online are detailed below and will be enforced. Late submissions to MU Online will be accepted with penalty until the cutoff. After the cutoff, MU Online will not allow submissions. Submissions will not be returned. Please keep copies of all work submitted.

No work received after the last exam will be graded. The course officially closes at the end of the last exam.

Assignments I, II, III and IV are College of Science requirements, must pertain to the topic and references chosen by the student, and must be submitted to MU Online to successfully complete the course. If assignments are not submitted properly, the minimum penalty will be a reduction in points equaling at least one letter grade reduction for each assignment not submitted. At the discretion of the instructor, the maximum penalty of a failing grade may be levied instead.

Grades will be reported on MU Online allowing students to determine their grade status anytime, but especially prior to course withdrawal deadlines and end of the class. Assignments and labs will be marked, graded and comments (if any) returned through MU Online within two weeks after the due date. It is the student's responsibility to check grades and comments (if any) to assure the proper receipt of and credit for assignments and labs.

There is no extra credit, re-testing or scaling.

The instructor may, at his discretion, consider awarding extra points to a student less than five (actual, not percentage) points away from the next grade level provided that student has completed all assignments, activities and labs in a timely fashion.

Questions from students about the class may be asked during class or sent by e-mail to colvin8@marshall.edu.

Due dates and assignments are subject to change. The final word on changes will be announcements in class. Due dates will only be moved back, not forward.

The University policies related to nondiscrimination, computing services acceptable use (<http://www.marshall.edu/ucs/CS/acceptuse.asp>), and inclement weather (http://www.marshall.edu/www/policy/policy_07.html) will be followed.

Below is the current University policy related to the granting of incompletes for courses. This policy will be strictly followed.

“Incomplete: The grade of *I* (incomplete) indicates that the student has completed three-quarters of the course, but cannot complete the course for a reason that accords with the university excused-absence policy. Students must be in good standing in the class prior to requesting an incomplete. The course instructor decides whether or not an incomplete will be granted and specifies in writing what work the student must complete to fulfill the course requirements. The student has until the end of the next fall or spring semester from the date of receipt of the incomplete grade in which to complete the course, or the instructor may establish an earlier deadline. If special circumstances exist, which prevent the student from completing the course in the prescribed time, the incomplete may be extended with approval of the instructor, the instructor's chair or division head, and the instructor's dean. If the student satisfactorily completes the course in the prescribed time he/she will receive a letter grade. If the student fails to complete the course requirements during the stipulated time, the grade of *I* changes to a grade of *F*.”

Course Evaluation: Students will be evaluated through :

- (1) laboratory activities maximum 350 points (maximum 25 points each lab);
- (2) a test (Exam 1) on lecture materials and lab notes maximum 100 points;
- (3) a test (Exam 2) on student presentations and lab notes maximum 100 points;
- (4) selected topic and references (11 total – 10 real science and 1 false science) for Assignments 1 – 4. Submitted to MU Online as a Word Document. maximum 50 points;**
- (5) Assignment I - design an experiment - scientific lab report related to the chosen topic. Students will make observations, develop hypotheses, design experiments, collect data and draw conclusions. Submitted as a Word document to MU Online. maximum 100 points; **
- (6) Assignment II - comparative critique of two papers(studies) related to the chosen topic - one chosen as an example of science and the other as an example of pseudo (false) science. Minimum 3 pages, double spaced, submitted as a Word document to MU Online. maximum 100 points;**
- (7) Assignment III - written synthesis (report) based on 3 or more references emphasizing scientific findings and the strength of those findings related to the chosen topic. Minimum 3 pages, double spaced, submitted as a Word document to MU Online. maximum 100 points; **
- (8) Assignment IV - oral presentation summarizing scientific research related to the chosen topic based on a minimum of 3 additional scientific references. Minimum 10 minutes, submitted as Power Point to MU Online. maximum 100 points; **

A total of 1,000 points is possible.

Grades:	A 90-100% 900 to 1,000
	B 80-89% 800 to 899
	C 70-79% 700 to 799
	D 60-69% 600 to 699
	F < 60% 0 to 599

** Assignments I, II, III and IV are College of Science requirements, must pertain to the topic and references chosen by the student, and must be submitted to MU Online to successfully complete the course.

COURSE OUTLINE AND SCHEDULE

PLEASE NOTE: Assignments and their submission deadlines to MU Online and cutoff dates for submission are underlined, are detailed below and will be enforced. Late submissions to MU Online will be accepted with penalty until the cutoff. After the cutoff, MU Online will not allow submissions.

Tests are in bold.

Lab titles are italicized. Scheduled labs may be changed because of weather and other factors. All labs have an activity to be turned in.

Labs	Lectures
Week 1 1/11 - <i>Lab 1</i>	1/12 - syllabus, get acquainted, environmental scientist
<i>Household</i>	1/14 - explanation of assignments
Week 2 1/18 – <i>No Lab</i>	1/19 - scientific method, critical thinking
<i>Holiday</i>	1/21 – basic science concepts
	1/21 - <u>Topic & references for Assignments I, II, III and IV submitted to MU Online by 10 pm.</u>
Week 3 1/25 – <i>Lab 2</i>	1/26 - basic ecology concepts
<i>Experiment</i>	1/28 - matter, energy, systems
	1/28 – <u>Cutoff for topic and references at 10 pm.</u>
	1/28 - <u>Assignment I - Design of Experiment submitted to MU Online by 10 pm.</u>
Week 4 2/1 – <i>Lab 3</i>	2/2 - population, biodiversity
<i>Land Use</i>	2/4 - food/hunger/nutrition
	2/4 – <u>Cutoff for Assignment I at 10 pm.</u>
Week 5 2/8 – <i>Lab 4</i>	2/9 - earth and crust, soil, land use, land biomes
<i>Energy</i>	2/11 - water, water biomes, water pollution / treatment
	2/11 - <u>Assignment II - Critique submitted to MU Online by 10 pm.</u>
Week 6 2/15 – <i>Lab 5</i>	2/16 - air, weather, climate, air pollution / treatment, climate change
<i>Earth Day</i>	2/18 - To be announced
	2/18 – <u>Cutoff for Assignment II at 10 pm.</u>

Week 7 2/22 – Lab 6	2/23 - environmental health, risk
<i>EIAG</i>	2/25 - solid waste, recycling, composting
2/25 - <u>Assignments III - Synthesis submitted to MU Online by 10 pm.</u>	
Week 8 3/1 – Lab 7	3/2 – sustainability, local environmental issues
<i>Sustainability</i>	3/4 – review
	3/4 - <u>Cutoff for Assignment III at 10 pm.</u>
Week 9 3/8 – Lab 8	3/9 – Exam 1
<i>Compost</i>	
	3/11 – <u>Ten-minute student presentations begin per schedule TBA.</u>
	No office hours on 3/11- attending off-campus meeting
3/11 - <u>Assignment IV - Power Point submitted to MU Online by 10 pm.</u>	
Week 10 3/15 – Lab 9	3/16 - Presentations continue.
<i>Risk Assessment</i>	3/18 - Presentations continue.
	3/18 – <u>Cutoff for Assignment IV at 10 pm.</u>
Week 11 3/22 – No Lab	3/23 and 3/25 – No class SPRING BREAK
Week 12 3/29 – Lab 10	3/30 - Presentations continue.
<i>Env. Problem Solving</i>	4/1 - Presentations continue.
Week 13 4/5 – Lab 11	4/6 - Presentations continue.
	4/7 – University Assessment Day – Please participate.
<i>Plants/Trees</i>	4/8 - Presentations continue.
Week 14 4/12 – Lab 12	4/13 - Presentations continue.
<i>Campus Observation</i>	4/15 - Presentations continue.
Week 4/19 – Lab 13	4/20 - Presentations continue.
<i>Stream Assessment</i>	4/22 - Presentations continue. EARTH DAY

Week 16 4/26 – *Lab 14*

4/27 - Presentations continue.

Ecotourism

4/29 - Presentations continue (if necessary). Review.

Exam 2 – 5/6 8 – 10 am. The course officially closes at 10 am. on 5/6.