

COURSE: ISC 211 Living on Earth CREDIT HOURS: 4 Summer Intersession, 2011

Lecture and Lab Science Room 200 Mondays, Tuesdays, Wednesdays and Thursdays

8 am. – 12:15 p.m. Section 301 CRN 3096

Instructor: Samuel T. Colvin Office – 213 Prichard Hall Phone: (304) 696-5432

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

Because of the phone system, I can only return local phone calls and often cannot return some cell phone calls. I normally check and return phone calls and e-mails only when on campus, but I do respond if at all possible.

Office hours: In lieu of office hours, please contact me at class.

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.	✓	✓		✓	✓	✓

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.

Attendance is recorded.

Absences will be excused only with written excuses in accordance with University attendance policy. Students are responsible to make up any work missed because of an excused absence at the next attended class after that absence. No credit will be recorded (1) unless the missed work is made up at the next attended class after the absence and (2) until the University approved excuse is received by the instructor. Only the instructor can amend this policy at his discretion in cases of extreme hardship.

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

It is the student's responsibility to assure the receipt by the instructor of assignments and labs in the prescribed format so that the work can be opened and graded. 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.

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, scaling, or rounding. No work received after the last exam will be graded. The course officially closes at the end of the last exam. After the class is over, please only contact me if I can be of assistance such as being a reference or if you feel there has been a point total error. Please do not contact me attempting to negotiate a better grade.

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.

If the instructor must change the time or place of a scheduled event, he will make every effort (1) to announce the change in a prior class, (2) to e-mail students in advance and / or (3) at a

minimum to have a sign posted on the original room with the instructor's name on the sign. The same type of notification can be expected if the instructor must cancel a scheduled session,

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*. ”

- *The Greenbook, Marshall University*

Course Evaluation: Students will be evaluated through :

- (1) laboratory activities maximum 350 points (maximum 25 points each lab);
- (2) an exam on lecture materials and lab notes maximum 150 points;
- (3) attendance 5 points per class maximum 75 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 25 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 points
	B 80-89%	800 to 899 points
	C 70-79%	700 to 799 points
	D 60-69%	600 to 699 points
	F < 60%	0 to 599 points

** 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. If there is no submission properly received by the cutoff, no credit will be recorded for that assignment.

Tests are in bold.

Labs and Lectures

Day 1 - 5/9 - syllabus, get acquainted, environmental scientist, explanation of assignments, scientific method, critical thinking, Lab 1

Day 2 - 5/10 - systems, basic science concepts, non-living systems, Lab 2

Day 3 – 5/11 - basic ecology concepts, Lab 3

Day 4 - 5/12 - population, biodiversity, food/hunger/nutrition, Lab 4
5/12 - Topic & references for Assignments I, II, III, & IV submitted to MU Online by 10 pm.

Day 5 – 5/16 - earth and crust, soil, land use, land biomes, Lab 5

Day 6 – 5/17 - water, water biomes, water pollution / treatment, Lab 6
5/17 - Assignment I - Design of Experiment submitted to MU Online by 10 pm.

Day 7 – 5/18 – air, weather, climate, climate change, air pollution / treatment, Lab 7

Day 8 – 5/19 - environmental health, risk, Lab 8

Day 9 - 5/23 - - solid waste, recycling, composting, Lab 9

Day 10 - 5/24 – sustainability, Lab 10

5/24 - Assignment II - Critique submitted to MU Online by 10 pm.

Day 11 – 5/25 local environmental issues, Lab 11

Day 12 – 5/26 Lab 12

No class on Monday, 5/30 – Memorial Day

Day 13 – 5/31 Lab 13

5/31- Assignment III - Synthesis submitted to MU Online by 10 pm.

Day 14 – 6/1 – Student Presentations, Lab 14

6/1 - Cutoff for topic and references at 10 pm.

6/1 - Cutoff for Assignment I at 10 pm.

6/1 - Cutoff for Assignment II at 10 pm.

6/1 - Cutoff for Assignment III at 10 pm.

6/1 - Assignment IV - Power Point submitted to MU Online by 10 pm

6/1 - Cutoff for Assignment IV at 10 pm.

Day 15 – 6/2 **Exam** 8 a.m.

The course officially closes at 12:15 p.m., Thursday, 6/2. No work submitted after that time will be considered or graded.

Below are the titles of labs which are typically conducted. The exact order is dependent upon weather and other factors. All labs have an activity to be turned in for credit. The lab title will be announced at each lab.

Grade/Point Plan, Scientific References, Experiment, Land Use, EIAG, Plants / Trees, Plan Earth Day, Campus Observation, Stream Assessment, Risk Assessment, Energy, Biodiversity, Environmental Problem Solving, Compost, Sustainability, Ecotourism