COURSE: Integrated Science and Technology (IST) 320 The Nature of Environmental Problems

ONLINE   CREDIT HOURS: 3   Fall, 2014 Section 101 CRN 2819 No prerequisites required.

Instructor: Samuel T. Colvin   Office – 111 Morrow Library   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.

I strive to respond to phone calls and e-mails within 24 hours of receipt and will respond if at all possible.

My Fall 2014 Schedule

Tuesdays
8:45 - 10:45 a.m. Office Morrow 111
11 a.m. - 12:15 p.m. IST 220 Science 200
12:30 - 1:45 p.m. IST 220 Science 200
2 - 3:15 p.m. IST 212 Morrow 122
3:30 - 7:50 p.m. IST 111 Science 200

Thursdays
8:45 - 10:45 a.m. Office Morrow 111
11 a.m. - 12:15 p.m. IST 220 Science 200
12:30 - 1:45 p.m. IST 220 Science 200
2 - 3:15 p.m. IST 212 Morrow 122
By advance appointment only: 3:15 - 5:15 p.m. - Office - I will not be in Morrow 111 unless a prior appointment is made.

Fridays
Noon - 1 p.m. Faculty Meeting every other week - 9/5, 9/19, 10/3, 10/17, 10/31, 11/14, 12/12

IST 320 taught on WEB only.

Class Schedule

Submissions on units are due by Monday at 11:59 p.m. of the relevant week. Late submissions will be accepted with late penalty until the cutoff, November 21, 2014 at 11:59 p.m.

Discussions will start at 11 a.m. on Tuesdays and end at 3 p.m. on Thursdays of each week.

Week 1 starting 8/25/14 - Students should review syllabus in the course content on MU Online. All units will be posted on MU Online. Units may be submitted as completed by students.

Week 2 starting 9/1 - Practice Unit - Optional submission. Not graded. Instructor comments provided to those who submit.

Week 3 starting 9/8 - Unit 1 - Sustainability Principles, Discussion on practice unit

Week 4 starting 9/15 - Unit 2 - Water, Discussion on unit 1

Week 5 starting 9/22 - Unit 3 - Land, Discussion on unit 2

Week 6 starting 9/29 - Unit 4 - Technology, Discussion on unit 3

Week 7 starting 10/6 - Unit 5 - Business, Discussion on unit 4

Week 8 starting 10/13 - Unit 6 - Population, Discussion on unit 5

Week 9 starting 10/20 - Unit 7 - Natural Cycles and Recycle, Discussion on unit 6

Week 10 starting 10/27 - Unit 8 - Huntington 2025 Plan, Discussion on unit 7

Week 11 starting 11/3 - Unit 9 - Energy, Discussion on unit 8

Week 12 starting 11/10 – Unit 10 - Biodiversity, Discussion on unit 9

Week 13 starting 11/17 - Discussion on Unit 10

　　　　　11/21/14 – Cutoff for submission of all work to be graded

Week 14 starting 12/1 - Last class discussion, class ends, no final exam

COURSE MATERIALS AND TEXT:

Links to suggested videos will be provided. The required text will be:

TITLE: Taking Sides: Clashing Views in Sustainability   AUTHOR: Robert Taylor   COPYRIGHT YEAR: 2013   Second Edition PUBLISHER: McGraw-Hill   ISBN: 978-0073514536

IST Program Learning Outcomes

1.　　Students will demonstrate proficiency in the utilization of contemporary technologies or tools to solve real-world problems.
A.　　Technology and Information Aptitude
B.　　Problem-Solving and Decision-Making Skills
2.　　In the development of a research project, students will scientifically analyze data, evaluate and incorporate relevant research, and describe potential implications.
A.　　Interpretation and Analysis Skills
B.　　Critical Evaluation of Information and its Sources
C.　　Recognition and Understanding of Limitations and Implications
3.　　Students will effectively communicate in relating findings and recommendations resulting from projects.

A. Organization Skills
B. Use of Language, Mechanics, & Delivery
C. Use of Supporting Material

How Outcomes and Traits are Practiced and Assessed

	Practiced	Assessed
1A student research, discussions, text, practice unit		submissions
1B student research, discussions, text, practice unit		submissions
2A student research, discussions, text, practice unit		submissions
2B student research, discussions, text, practice unit		submissions
2C student research, discussions, text, practice unit		submissions
3A student research, discussions, text, practice unit		submissions
3B student research, discussions, text, practice unit		submissions
3C student research, discussions, text, practice unit		submissions

Course Learning Outcomes

1. Analyze the size and scope of environmental problems.
2. Generate possible solutions to selected environmental problems by applying the scientific method.
3. Evaluate proposed solutions using objective criteria selected by the student.
4. Identify and describe preferred solution(s).
5. Predict possible outcomes if the preferred solution(s) are implemented.
6. Plan and recommend appropriate action(s) to improve the current status.

How the outcomes are practiced: practice unit, instructor responses through online discussions and in answering email questions

How the outcomes are assessed – student submissions

Units with text chapters and organized by learning outcome:

1. Analyze the size and scope of environmental problems.

Unit 1 Sustainability Principles – Text Introduction and Chapters 1, 2, 3

Unit 2 Water- Text Chapter 12

Unit 3 Land – Text Chapter 16

2. Generate possible solutions to selected environmental problems by applying the scientific method.

Unit 4 Technology – Text Chapters 4, 6, 8

3. Evaluate proposed solutions using objective criteria selected by the student.

Unit 5 Business – Text Chapters 10, 18, 19

4. Identify and describe preferred solution(s).

Unit 6 Population – Text Chapter 7

Unit 7 Natural Cycles and Recycle

5. Predict possible outcomes if the preferred solution(s) are implemented.

Unit 8 Huntington 2025 Plan – Text Chapters 11, 20

6. Plan and recommend appropriate action(s) to improve the current status.

Unit 9 Energy – Text Chapters 5, 14, 17

Unit 10 Biodiversity – Text Chapters 13, 15

Grading:

10 unit submissions each worth a maximum of 100 possible points may be submitted. A total of 1000 points is possible. Online discussions will be available, but participation is voluntary and not graded.

Rubric for Grading – Demonstrate technological fluency, develop two reliable strategies, evaluate evidence, analyze research literature, identify limitations/implications, submit well-structured product, use proper language/mechanics/delivery, use respected supporting material

Percentages and Points

Grades: A 90-100% 900 to 1000 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

POLICIES:

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

Work not in the prescribed format 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. Late submissions to MU Online will be accepted with penalty until the cutoff. After the cutoff, MU Online will not allow submissions. Please do not e-mail submissions to me because they do not then become part of the permanent record of the class.

Submissions will not be returned. Please keep copies of all work submitted.

No work received after the class ends will be graded.

Grades will be reported in MU Online allowing students to determine their grade status anytime, especially prior to course withdrawal deadlines and prior to the final. Assignments will be marked, graded and comments 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. Final grades are based on the number of points earned out of 1,000. Only point calculations prepared by the instructor are official.

There is no extra credit, re-testing or scaling. At the end of the course, the instructor may, in his discretion, consider awarding extra points to a student less than five points (actual, not percentage) away from the next grade level provided that student has completed all assignments in a timely fashion.

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

Due dates and assignments are subject to change. Due dates will only be moved back, not forward.

Below is the current University policy related to incompletes for courses. It 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

Other University policies can be found at http://www.marshall.edu/academic-affairs/?page_id=802 (?page_id=802, note underline between page and id) and will be followed. They include:

1. Academic Dishonesty

2. Excused Absence Policy for Undergraduates

3. University Computing Service Acceptable Use

4. Inclement Weather

5. Dead Week

6.   Students with Disabilities

7.   Academic Dismissal

8.   Academic Forgiveness

9.   Academic Probation and Suspension

10. Academic Rights and Responsibilities of Students

11. Affirmative Action

12. Sexual Harassment

Student support, resources and online tutorials are listed on MU Online. Please take advantage of that assistance as needed.

IST Software Store

The IST department maintains agreements with various software publishers to provide software for its computer labs as well as for its faculty, staff, and students. Students enrolled in IST department courses are eligible to receive a variety of software applications at no cost for use in their academic endeavors. This includes many of the same applications used in IST courses. You can find this information and more on the IST Web site at http://www.marshall.edu/isat/software/.

Accessing the Store

Students enrolled in this course will receive an email sent to their Marshall accounts containing information on accessing the store. Students will need to complete their account registration – which involves entering their name and setting a password – in order to browse and download the software. Once completed, students can use their individual accounts to "purchase" the applications. Purchasing an application will provide a license key and a link to download an installer.

INSTRUCTOR BIOGRAPHICAL SKETCH

Sam Colvin received a bachelor's degree and a master's degree from WVU. He has taken postgraduate courses at Marshall.

Sam has worked on environmental issues since the first Earth Day in 1970. He was appointed as the first WV Youth Adviser to the newly-formed U.S. Environmental Protection Agency. As a student, he worked on a federally funded environmental education grant developing and testing course materials from elementary school to college level. He served a six month internship with the WVU Extension Environmental Education Specialist.

Sam has been employed at the city, county and state levels in West Virginia. He was an Extension Agent for two years, administrative assistant for admissions to the MU School of Medicine for six months, and the Community Development Director of Huntington for three years. He served as Executive Director of the WV Resource Recovery-Solid Waste Disposal Authority for eleven years. He was a market development representative for a major

environmental company for one year. He has operated an environmental consulting business since 1990.

Sam has been a member of the WV Solid Waste Management Board and the WV Water Quality Advisory Committee. He served two years as Executive Director of the Ohio River Basin Consortium for Research and Education.

Sam's major environmental emphasis is solid waste, including recycling and composting. He is a certified yard waste facility operator and has received the National Backyard Compost training and the Compost Facility Best Management Practices training.

Sam has taught at Marshall since the spring of 2000. He has taught First Year Seminar 100, Integrated Science (ISC) 211 Living on Earth, Integrated Science and Technology (IST) 111 Living Systems, IST 120 Connections I, IST 220 Connections II, IST 320 Nature of Environmental Problems, and IST 321 Resolution of Environmental Problems. He has been involved in two Campus Compact service learning grants. He has completed Quality Matters for online teaching, critical thinking and service learning training.

Sam has completed Sustainability Awareness, Pollution Prevention and Environmental Management System training sponsored by WV Department of Environmental Protection, the National Pollution Prevention Roundtable and Bridgemont Community & Technical College.

His current research and service projects include: (1) Monitor and modify as needed the IST 320 online course; (2) Continue work on improvement of the impaired Fourpole Creek; (3) Continue evaluation of state-mandated waste reduction goal of 50%; (4) Monitor the reclamation of the former City of Huntington landfill; (5) Study the WV solid waste management system.

Sam lives in rural Wayne County, WV with his wife, Prudence. Prudence graduated from Marshall with bachelor's and master's degrees and is now retired after 34 years as an elementary teacher. They are active as volunteers in church and community activities. Sam is a volunteer assistant high school baseball coach.

They have two sons.

Andrew is a 2013 graduate of the United States Military Academy and an August, 2014 graduate of the Naval Dive School. He is currently a second lieutenant in the Army serving as an engineer dive officer.

Samuel is a 2014 graduate of the University of Charleston and the Army ROTC program. He is currently a second lieutenant in the Army serving as a military intelligence officer.