Marshall University Syllabus

Course Title/Number: NRE 212 Energy CRN 3384 Section 101

Credit Hours: 3

Semester/Year: Fall 2018

Days/Times/Locations: Tuesdays and Thursdays 930 - 1045 a.m. WAEC 1203

Instructor: Samuel T. Colvin

Office: Morrow 111 Phone: 304 696 5432 E-Mail: colvin8@marshall.edu

Instructor Schedule: Fall 2018

Mondays, Wednesdays and Fridays 9 – 950 a.m. NRE 120 WAEC 1227

Tuesdays and Thursdays 930 – 1045 a.m. NRE 212 WAEC 1203

11a – 1215p.m. NRE 111 WAEC 2235

NRE 320 Online only

Office Hours Tuesdays and Thursdays 8 – 915 a.m.

By Prior Appointment Only, Potential Office Hours – Tuesdays and Thursdays 1215 to 2 p.m.

Faculty Meetings – noon every other Friday starting 8/31/18. (8/31, 9/14, 9/28, 10/12, 10/26, 11/9, and 11/30 or 12/7)

University Policies By enrolling in this course, you agree to the University Policies listed below. Please read the full text of each policy by going to www.marshall.edu/academic-affairs and clicking on “Marshall University Policies.” Or, you can access the policies directly by going to www.marshall.edu/academic-affairs/policies/. Academic Dishonesty/Excused Absence Policy for Undergraduates/Computing Services Acceptable Use/Inclement Weather/Dead Week/Students with Disabilities/Academic Forgiveness/Academic Probation and Suspension/Academic Rights and Responsibilities of Students/Affirmative Action/Sexual Harassment

**Policy for Students with Disabilities:** Marshall University is committed to equal opportunity education for all students, including those with physical, learning and psychological disabilities. University policy states that it is the responsibility of students with disabilities to contact the Office of Disability Services (ODS) in Prichard Hall 117 (304.696.2467) to provide documentation of their disability. Following this, the ODS Coordinator will send a letter to each of the student’s instructors outlining the academic accommodation he/she will need to ensure equality in classroom experiences, outside assignment, testing, and grading. The instructor and student will meet to discuss how the accommodation(s) requested will be provided. For more information, access the website for the Office of Disabled Student Services: http://www.marshall.edu/disabled

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

Course Description: From Catalog

The course introduces the students to the properties and the interfaces of biological and physical systems with emphasis upon energy concepts, production, and distribution in both systems.

Course student learning outcomes How practiced How assessed

1. Students will demonstrate instructor presentations, exams, activities, assignments

proficiency in and knowledge in-class analyses

of the properties and the

interfaces of energy in

biological systems.

1. Students will demonstrate instructor presentations, exams, activities, assignments

proficiency in and knowledge in-class analyses

of the properties and the

interfaces of energy in

physical systems

1. Student will demonstrate instructor presentations, exams, activities, assignments

proficiency in and knowledge in-class analyses

of energy concepts, production,

and distribution.

Text: No required text

Grading Policy

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

Course Evaluation - Students will be evaluated through:

Attendance (minus 3 points for each unexcused absence) 100

7 Activities (worth 30 points each) 210

3 Analysis Papers (worth 100 points each) 300

Personal Energy Audit 90

3 Exams (worth 100 points each) 300

Total: 1000 points possible

Course Requirements / Due Dates

Attendance 100 points (minus 3 for each unexcused absence)

7 activities, 30 points each, 210 points total, submitted to MU Online by 1159 p.m. on due date:

1: 8/30, 2: 9/6, 3: 9/13, 4: 9/20, 5: 10/4, 6:10/11, 7: 10/18

Exam One 100 points on 9/27

Analyze the future of fossil fuels 100 points due to MU Online by 1159 p.m. 10/25

Analyze the future of nuclear energy 100 points due to MU Online by 1159 p.m. 11/1

Exam Two 100 points on 11/13

Analyze the future of renewable energy 100 points due to MU Online by 1159 p.m. 11/15

Perform personal energy audit and develop personal conservation plan 90 points due to MU Online 1159 p.m. 11/29

Cutoff for all work except Exam Three due to MU Online by 1159 p.m. 12/6

Exam Three (Final, not comprehensive, material covered from 11/15 to 12/6) - Tuesday 12/11/18 - 8 to 10 a.m.

The course ends at 10 a.m. on 12/11/18.

Course Policies

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

2. MU Online is the only acceptable vehicle for submission of work. Such submission is required so that your work becomes part of the permanent record of the class.

3. Work not submitted to or available on MU Online may be penalized or not accepted for grading at the discretion of the instructor.

4. Late submissions to MU Online will be accepted with penalty until the cutoff. After the cutoff, MU Online will not allow submissions.

5. Please do not email submissions to me. They may not be graded at my discretion.

6. Grades will be reported in MU Online My Grades allowing students to determine their grade status anytime, especially prior to course withdrawal deadlines and prior to the final.

7. Assignments will be graded with comments (if any) within two weeks after the due date.

8. It is the student's responsibility to check grades and comments (if any) to assure the proper receipt of and credit for assignments.

9. There is no extra credit or re-testing. Scaling may be used at the discretion of the instructor in grading submissions.

10. If you need to earn a certain grade in this class for any reason (scholarship, aid, graduate school, etc.), you should devise a personal plan now to work toward your desired grade.

11. Final grades are based on the number of points earned out of 1,000. Only point calculations prepared by the instructor are official.

12. At the end of the course, the instructor will consider in his discretion whether to award extra points to a student less than five points (actual, not percentage) away from the next grade level provided the student has completed all assignments in a timely fashion.

13. No work received after the class ends will be graded.

14. Please do not contact me during exam week or after the class ends attempting to negotiate a better final grade.

15. A calm and respectful learning atmosphere is expected to be maintained during class. Any person who chooses to create or contribute to a disruptive atmosphere may be requested to leave the room at the discretion of the instructor. Refusal to comply with such a request may lead to referral of the matter to appropriate University officials.

Attendance Policy

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 in class 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, but is always willing to listen.

Contact The Instructor

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

person at class, during office hours or at other times in accordance with the instructor’s schedule below.

colvin8@marshall.edu 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.

Due Dates / Changes in Schedule / Inclement Weather

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

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.

Classes will be held as scheduled unless the University cancels classes because of inclement weather.

Copies / Copyright

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

Some materials used in this class may be copyrighted and should not be shared with individuals not enrolled in this course.

Course Outline and Schedule

Important Dates - Fall 2018

August 20, Monday - First day of classes

August 20, Monday - August 24, Friday - Schedule add/drop

September 3, Monday - Labor Day Holiday - University closed

October 8, Monday - noon, Freshmen/Sophomores midterm grades

October 26, Friday - Last day to drop a full semester individual course

November 19, Monday - November 24, Saturday - Thanksgiving break

November 26, Monday - Classes resume

December 3, Monday - December 7, Friday - "Dead week"

December 7, Friday - Last class day, Last day to completely withdraw from fall semester

December 10, Monday - Exam day

December 11, Tuesday - Exam day

December 12, Wednesday - Study day

December 13, Thursday - Exam day

December 14, Friday - Exam day

December 15, Saturday - Winter Commencement, Big Sandy Superstore Arena

December 17, Monday - noon, Final class grades due

Week 1  8/21 - syllabus, get acquainted       8/23 - explain assignments

Week 2 8/28 – Energy Introduction, The Sun       8/30 - Earth/Crust - Energy for Life, Activity 1 due

Week 3 9/4 - 10 Stream Flows                        9/6 - 14 Energy Delivery, Activity 2 due

Week 4 9/11 - Preindustrial, John Marshall       9/13 - Preindustrial video, Activity 3 due

Week 5 9/18 - Future                                      9/20 - Future, Activity 4 due

Week 6 9/25 - Review                                     9/27 - Exam One

Week 7 10/2 - Energy Sources / Sectors      10/4 - Fossil Fuels - Oil, Activity 5 due

Week 8 10/9 - Fossil Fuels - Oil                     10/11 - Fossil Fuels - Coal, Activity 6 due

Week 9 10/16 - Fossil Fuels - Coal                10/18 - Fossil Fuels - Natural Gas, Activity 7 due

Week 10 10/23 - Nuclear Energy                  10/25 - Nuclear Energy, Fossil fuel analysis due

Week 11 10/30 - Renewable                          11/1 - Renewable, Nuclear analysis due

Week 12 11/6 - Renewable                            11/8 - Renewable, Review

Week 13 11/13 - Exam Two                          11/15 - Atom, Power, Capacity, Grid, Storage -

Renewable analysis due

11/ 19 - 24 Thanksgiving Break

Week 14 11/27 - Transportation           11/29 - Government Policies, Energy Efficiency –

Personal audit due

Week 15 12/4 - Environmental Impacts       12/6 - Review

Cutoff for all work except Exam Three 12/6 at 1159 p.m. to MU Online

Exam Three (Final, not comprehensive) Tuesday 12/11/18    8 - 10 a.m.

The course ends at 10 a.m. 12/11/18.

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) 120 Connections I, IST 220 Connections II, Natural Resources and Environment (NRE) 111 Living Systems, NRE 120 Discussions in Environmental Science, NRE 212 Energy, NRE 320 Nature of Environmental Problems, and NRE 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 educator – 27 as an elementary teacher and 7 as a reading coach. 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 May, 2013 environmental engineering graduate of the United States Military Academy at West Point, an August, 2014 honor graduate of the Naval Dive School, a graduate of the Army Air Assault Course, a paratrooper, and a licensed professional engineer. He was formerly an engineer dive officer and professional diver for the Army. In 2015 he returned from deployment in the Middle East. He is currently a captain in the Army serving as a special operations – civil affairs officer.

Samuel graduated in May, 2014 with honors from the University of Charleston and was selected as Senior of the Year. He served as battalion commander of the Army ROTC combined programs for WV State, Glenville State, WVU Tech and the University of Charleston and was named Cadet of the Year. He is currently a captain in the Army serving as a military intelligence officer, is a paratrooper, and graduated from the Army Reconnaissance Course in 2015. He is a licensed private pilot and a commercial drone pilot.