

Climate Change, Sustainable Design & Environmental Engineering

2018/2019

Dr. Maura Shelton

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OFFICE HOURS

	Before School	After School
Monday	6:30 -7:30	
Tuesday	6:30 -7:30	
Wednesday	6:30 -7:30	
Thursday		2:30-3:30
Friday	6:30 -7:30	

Objectives: Successful Completion of this course will prepare students to understand and apply knowledge developed by integrating science learning with projects. The cause, effect, and science of global climate change will prepare student to understand and apply knowledge developed by integrating science learning with projects.

The course consists of 2 specific sections:

1. The first section builds upon the climate change material from Advanced Placement Environmental Science (APES) as well as material from articles, IPCC reports and Earth Science textbook to address the content of University of Washington Atmospheric Science 211 course (*Science of Climate Change*). Specific instruction will include sections from the UW *Earth System* textbook. In order to receive UW credit students will have to receive a B or above based on 2 unit tests, a final, textbook questions, quizzes, group research projects and other assignments. The final exam for this portion of the course will include information from lectures, textbook readings, videos, labs and homework assignments. To receive UW Credit, students will have to sign up through the UW in the High School program. UW grades will follow the 4.0 UW grading system (see below).
2. The SDE portion of the course will explore solutions to environmental issues through design, efficiency and engineering projects. Topics covered include LEED certification vs Living Buildings, renewable energy, water and waste management, transportation system design, public land use, ecosystem services, and urban design and community planning.

The class is project based and can include instruction in specific skills such as GIS/GPS, energy auditing, 2D and 3D design, model building, landscape design and engineering testing. Student groups will be encouraged to enter their projects in several national and state contests. This course will explore portions of the National Academies of Engineering Grand Challenges of Engineering including:

GRAND CHALLENGES

- Make solar energy economical
- Provide energy from fusion
- Develop carbon sequestration methods
- Manage the nitrogen cycle
- Provide access to clean water
- Engineer the tools of scientific discovery

COLLEGE CREDIT

- University of Washington Atmospheric Science 211.Science of Climate Change (5 Credits)

HOMEWORK

Generally, the course is “hands on” and project based. Students will conduct most of their work during class time.

GRADING SCALE

Your UW grade will be based on the following scale

Percentage Earned	Grade-Point Equivalent	Letter-Grade Equivalent
100-98	4.0	A+
97-96	3.9	A
95-94	3.8	A
93-92	3.7	A-
91	3.6	A-
90-89	3.5	B+
88-87	3.4	B / B+
86	3.3	B
85	3.2	B
84	3.1	B
83	3.0	B / B-
82	2.9	B-

81	2.8	B-
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Your STEM SCHOOL grade will be base on points earned during both the Climate Change and EESD portion of the course and will use the following STEM School grading scale

A	90-100
B+	87-90
B	83-87
B-	80-83
C+	77-80
C	73-77
C-	70-73
NC	0-70

TESTS(Primarily in the UW portion of the course)

Students will usually be given at least 2 days’ notice prior to a test. Students who are absent test day will make up the test before or after school within 2 days of the test date

PROJECTS –Most large projects are conducted by groups and usually all individuals will receive the same grade. It is the student’s responsibility that all members of their group will work well together.

PLAGARIM- You may work together with classmates, however you must never copy a classmate’s work. When I give you an individual assignment (i.e. anytime you write an original answer or summery for homework or hand in a paper with just your name on it) then it must be your own original work. If a classmate does provide you with insights and explanations on homework and projects, you must still write all your own responses.

If you ever turn in a paper that is identical or nearly identical to a classmate’s on open-ended assignments, you and the person with the identical work will both get zeros on the assignment. If someone ever copies your work without your permission, let me know immediately so the appropriate discipline can take place.

HOMEWORK All homework is due at the beginning of the period on the due date. Unexcused late work will receive partial credit of 50% .

APPROXIMATE PERCENTAGE OF UW CLASS GRADE BY POINTS

TEST/FINAL	60%
PROJECTS, HOMEWORK, NOTEBOOKS, QUIZZES	40%

APPROXIMATE PERCENTAGE OF CCEESD CLASS GRADE BY POINTS

TEST/FINAL	30%
PROJECTS	50%
HOMEWORK, NOTEBOOKS, QUIZZES	20%

Student Signature_____

Parent Signature_____