HOUSTON COMMUNITY COLLEGE

Geology Program, Department of Natural Sciences

http://www.hccs.edu/geology

Course Syllabus

Environmental Science

GEOL 1305

Fall 2018 CRN 14026

INSTRUCTOR: ROBIN NAGY

Instructor contact information: robin.nagy@hccs.edu

(note that HCC email policy required that all communication be via your hccs.edu email address or the canvas inbox system)

Office Location and Hours by appointment in Spring Branch room 203

Course Location/Times: Monday & Wednesday, 12:30 – 1:50, Spring Branch room 203

Course Semester Credit Hours (SCH) (lecture, lab) If applicable

Credit Hours: 3 Lecture Hours: 3

Total Course Contact Hours

48.00

Course Length: 16-week

Type and mode of Instruction

Lecture

Course Description:

A survey of the forces, including humans, that shape our physical and biologic environment, and how they affect life on Earth. Introduction to the science and policy of global and regional environmental issues, including pollution, climate change, and sustainability of land, water, and energy resources.

Course Prerequisite(s)

- Qualify to take INRW 0420 or ESOL 0360

Geology Program Learning Outcomes

1. Students will recognize scientific and quantitative methods.
2. Students will evaluate the differences of scientific approaches and communicate these findings, analyses, and interpretations in oral and written communication.
3. Students will demonstrate knowledge of the major issues and problems facing modern science, including issues that touch upon ethics, values, religion, and public policies.
4. Students will demonstrate knowledge of the interdependence of science and technology and their influence on, and contribution to, modern culture.
5. Students will identify and recognize the differences in competing scientific theories.

Course Student Learning Outcomes (SLO) as defined by ACGM:

1. Recognize, describe, and quantitatively evaluate earth systems, including the land, water, sea, and atmosphere, and how these function as interconnected ecological systems.
minimum topics covered: Environmental Interrelationships, Organism interaction in environments, Types of ecosystems and communities, Biodiversity issues
2. Assess environmental challenges facing humans caused by their interaction with the physical and biological environment (e.g., population growth, energy resources, food production, pollution, water and resource use).
Minimum topics covered: General Population characteristics, Renewable and non-renewable energy, Land-use planning, Soil and agricultural methods, Water resources and management, Air quality and pollution, Climate change, Solid waste and hazardous waste management.
3. Acquire a scientific vocabulary and critical thinking skills related to environmental science.
Minimum topics covered: Basic scientific principles and the scientific method.
4. Assess the effectiveness and feasibility of environmental policy and its impact.
Minimum topics covered: Environmental ethics, Economics and environmental concerns, A variety of policies related to energy, land-use, pollution, resource management, waste management

Learning Objectives:

1.1 List the four categories of limiting factors for organisms in an ecological systems (raw materials, energy, waste products and interactions among organisms).
1.2 Interpret environmental trends from data (graphs or histograms or tables)

2.1 Utilize population data (e.g., from the US Census Bureau at http://www.census.gov/) to determine population growth rate, and analyze impact on resource demand and waste production.
2.2. Compare the use of fossil fuel, nuclear, and renewable energy consumption (wind, solar, biomass and hydroelectric).
2.3. Discuss current events related to environmental science as reported by news media.

3.1. Discuss the reliability of science through the Scientific Method in resolving environmental problems.
3.2. Discuss the chemical behavior of matter and states of matter (solid, liquid, or gas) in relation to kinetic and potential energy.

3.3. Support the notion that energy cannot be created nor destroyed, but when energy is converted from one form to another, some energy is converted into a less useful form.

4.1 Explore how the political process impacts environmental decision making.
4.2 Evaluate significant environmental policies (e.g., clean air act, recycling nuclear fuel rods) related to what procedures are actually in place.

Core Curriculum Objectives:
This course is in the Life and Physical Science Core Curriculum "functional component area" and meets the objectives of:

- **Critical Thinking Skills** - to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
- **Communication Skills** - to include effective development, interpretation and expression of ideas through written, oral and visual communication
- **Empirical and Quantitative Skills** - to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions
- **Teamwork** - to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal

Course Calendar

		LearnSmart Assignments (due at noon)	**Class Topic**	**Discussion Topics & Other Assignments**
1	M 8/27		What is environmental science?	
	W 8/29		Environmental Risk (3)	Discussion: Trusting Science
2	M 9/3		HOLIDAY - NO CLASS	
	W 9/5	5 (part 1)	Ecology (5)	
3	M 9/10		Organism Interactions (5)	
	W 9/12	5 (part 2)	Evolution (5)	
4	M 9/17	5 (part 3)	Biogeochemical Cycles (5)	
	W 9/19	6	Biomes (6)	
5	M 9/24	7	Populations (7)	Biomes summary due
	W 9/26		Human Population Growth (7)	HPG Worksheet due
6	M 10/1		Discussion & Review	
	W 10/3		Exam 1: Ecosystems (Ch. 1 - 7)	
7	M 10/8	8	Energy and Civilization (8)	
	W 10/10	9	Fossil Fuels (9)	
8	M 10/15	17	Global Climate Change I (17)	
	W 10/17		Global Climate Change II (17)	
9	M 10/22	10	Renewable Energy (10)	
	W 10/24		Energy Policy	Discussion: Paris Agreement
10	M 10/29		Discussion & Review	

	W 10/31		Exam 2: Energy (Ch. 8-10 & 17)	
11	M 11/5	12	Land Use Planning (12)	
	W 11/7	13	Soil (13)	
12	M 11/12	14	Agricultural Chemicals (14)	
	W 11/14	15	Water Use & Pollution (15)	
13	M 11/19		Safe Drinking Water	Discussion: Flint Water Crisis
	W 11/21		Everyday Chemical Exposure	
14	M 11/26	16	Air Pollution (16)	Discussion: Clean Air Act
	W 11/28	18, 19	Waste Disposal (18 & 19)	Discussion: Ocean Plastic
15	M 12/3	11	Biodiversity Loss (11)	
	W 12/5		Discussion & Review	
16	W 12/12		FINAL EXAM **12:00** (no class on Monday, 12/10)	

Instructional Methods

In this class, we will utilize a number of active learning techniques. Class time is not a passive "lecture" during which the professor talks while you copy a bunch of text from a powerpoint slide – rather, our class time will include dynamic instruction, active discussion and debate. You are meant to ask questions, share your ideas, bring your own background and perspective to class topics, and be prepared to contribute to the academic rigor of the course.

Student Assignments

Students are required to complete "LearnSmart" assignments via the Connect e-textbook system. These assignments will help you approach the content in each chapter efficiently and effectively, and check your learning before exams. Completion of these assignments is a part of your course grade; due dates for each assignment are clearly indicated in Connect and the course calendar above. **No late submissions will be accepted.** Students are responsible for securing internet access required to complete these assignments (instructor will not give consideration to missing/ate assignments due to technical issues). Contact the Connect support services as needed. In addition to LearnSmart, students will be asked to complete a variety of other assignments to address learning outcomes. These assignments may include (but are not limited to): written responses to prompts, drawing concept sketches, reading, data analysis, group discussions and in-class activities. Participation in all class activities is mandatory unless otherwise indicated. **You will be required to act as a discussion leader for at least one topic during the semester.** All assignments will be described in detail during class and due dates will be clearly outlined. Clear written communication is required – if writing skills are not sufficient to communicate knowledge, you may be required to visit the writing center for help. It is your responsibility to communicate with the instructor regarding make-up work and/or exams if you miss class. See HCCS attendance policy and "Student Assessments" below for more details about missed work.

Student Assessment(s)

You will be assessed via exams, completion of LearnSmart assignments, discussion leadership and a number of other assignments completed in class and at home. Please see

"Course Calendar" (above) for chapters covered on each exam and "Instructor Grading Criteria" (below) for a breakdown of the value of each assignment category. Work submitted without a name on it will not be given any credit. Late work may not be accepted. Your ideas must be clearly communicated to receive full credit – if your writing skills are not sufficient, the instructor may require that you take an assignment to the writing center for help. **Missed exams & assignments will result in a score of 0. Make-up exams & assignments may be offered on a case-by-case basis for extreme circumstances beyond control. In these cases, the instructor must be contacted via email within 24 hours of the missed class and may require documentation to confirm the reason for absence (e.g. a note from a doctor).** The deadline for the make-ups will be determined individually, and generally will be within one week of the missed class**. Make-up exams or assignments will not be allowed if you do not communicate with the instructor within 24 hours following your absence.** It is the responsibility of the student to communicate with the instructor regarding all missed classes. Note, if you know you will be missing class, communicate with the instructor in advance of your absence.

Instructor's Requirements

The key to success in this course is participation and active learning – be present and thoughtful, share your ideas, and reflect on what you are learning. Assess your understanding and be aware of your overall grade throughout the semester. If at any time you need help or guidance please communicate with the instructor immediately – I am happy to provide support but will not know that you want/need it unless you let me know. **It is your responsibility to be aware of your grades in the class.** Please arrive on time and prepared (with paper, pen/pencil, required assignments, and any other materials as required by the instructor). Do not disrupt class while you are here, and do not leave early. The early alert system may in some cases be used to refer you to an advisor in the case of excessive absences (including arriving late/leaving early), behavioral problems, lack of participation, failure to complete assignments, and/or poor grades. However, not all students with poor grades will necessarily be referred using early alert – do not assume you are passing the class! Please make sure that your cell phones and all other electronic devices are turned off during class time. See the electronic device policy for detail.

**Please note that this syllabus is subject to change , and revisions will be announced and posted on Canvas.

Program/Discipline Requirements: If applicable

All HCC policies regarding attendance, withdrawal, academic honesty, students with disabilities, grading, and student rights will be followed in this course. Refer to syllabus section titled "Instructor's Requirements", "HCC Policy Statements", and "Grading" for more details as well as the Student Handbook http://www.hccs.edu/district/students/student-handbook/

Where can you get help? Visit your instructor during office hours. Contact your instructor to meet at a time outside of office hours. Get help online via: https://hccs.upswing.io/

Instructor Grading Criteria

Exam 1 = 25%
Exam 2 = 25%
Exam 3 ("final") = 25%
LearnSmart Assignments = 15%
Other Assignments = 5%
Discussion Leadership = 5%

Instructional Materials

Required eTextbook: *Connect* access to *Environmental Science: A Study of Interrelationships, 15th ed.,* by Enger and Smith; McGraw-Hill
You will purchase an access code to use the e-book via McGraw-Hill's *Connect* system. A printed loose-leaf hardcopy of the book can be purchased (optional) if you prefer a hard copy. See canvas for detailed instructions on how to purchase access.
NOTE: you much purchase an access code for connect in order to complete required assignments for the class.

Eagle Online Canvas Learning Management System

This section of GEOL 1305 will use Eagle Online Canvas (https://eagleonline.hccs.edu) to supplement in-class assignments, exams, and activities. HCCS Open Lab locations may be used to access the Internet and Eagle Online Canvas. It is recommended that you **USE FIREFOX OR CHROME AS YOUR BROWSER**.

HCC Policy Statement:

Please familiarize yourself with campus policies in the HCC Student Handbook for topics including: ADA (students with disabilities), Scholastic Dishonesty, HCC Grading scales and Incomplete/W/FX grade definitions, General Student Attendance, Repeating courses, Electronic Devices in class, Threatening Behavior, Religious Holidays, withdrawal deadline and mores: http://www.hccs.edu/district/students/student-handbook/

Note: Intolerance of any kind is unequivocally prohibited. If at any time during this class your words or actions interfere with the rights of another student (or the instructor) to learn in a safe and accepting environment, you will be reported to HCC police and administration immediately. Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact the Dean of Students for support. Furthermore, please notify the professor if you are comfortable in doing so.

Academic Honesty: "Students are responsible for conducting themselves with honor and integrity in fulfilling course requirements. Disciplinary proceedings may be initiated by the college system against a student accused of scholastic dishonesty. Penalties can include a grade of "0" or "F" on the particular assignment, failure in the course, academic probation, or even dismissal from the college. Scholastic dishonesty includes, but is not limited to, cheating on a test, plagiarism, and collusion." **Cheating** includes looking at or copying from another

student's exam, orally communicating or receiving answers during an exam, having another person take an exam or complete a project or assignment, using unauthorized notes, texts, or other materials (including cell phones) for an exam, and obtaining or distributing an unauthorized copy of an exam or any part of an exam. **Plagiarism** means passing off as his/her own the ideas or writings of another (that is, without giving proper credit by documenting sources). Plagiarism includes submitting a paper, report or project that someone else has prepared, in whole or in part. **Collusion** is inappropriately collaborating on assignments designed to be completed independently. These definitions are not exhaustive. When there is clear evidence of cheating, plagiarism, collusion or misrepresentation, a faculty member will take disciplinary action (at his/her discretion) including but not limited to: requiring the student to retake or resubmit an exam or assignment, assigning a grade of zero or "F" for an exam or an assignment; or assigning a grade of "F" for the course. Additional sanctions, including being withdrawn from the course/program or expelled from school, may be imposed on a student who violates the standards of academic integrity. See the Student Handbook for additional details.

During exams you may not access your textbook, notes, or other course materials unless specifically authorized by the instructor. **Using a cell phone/smartwatch (or even having it visible/audible) during an exam will result in a score of zero for that exam.** You may not leave the classroom during an exam unless specifically authorized to do so by the instructor (leaving during an exam may result in a score of zero).

Policy on Electronic Devices: The use of electronic devices by students in the classroom is up to the discretion of the instructor. Any use of such devices for purposes other than student learning is strictly prohibited. If an instructor perceives such use as disruptive and/or inappropriate, the instructor has the right to terminate such use. If the behavior continues, the student may be subject to disciplinary action to include removal from the classroom or referral to the Dean of Student Services.
If a cell phone or smartwatch is used in any way (even if it passively rings, makes noise, or becomes visible) during an exam, the student will receive a zero for that exam.

Policy on Recording Devices: Use of recording devices (including camera phones, cameras, audio recorders, video recorders, or other devices capable of recording voice or image) is prohibited in the classroom. Use of a recording device during exams is considered academic dishonesty. Students with disabilities who need to use a recording device as a reasonable accommodation should contact the Office for Students with Disabilities for information regarding reasonable accommodations.

Withdrawal Policy: The withdrawal deadline is November 2. Instructor will not withdraw students for excessive absences, failing grades, or any other reason. The decision to withdraw from this class is solely the responsibility of the student. Any student wishing to withdraw from the class is responsible for doing so themselves before the stated deadline.

HCC Email Policy: When communicating via email, HCC requires students to communicate only through the HCC email system to protect your privacy. If you have not activated your HCC student email account, you can go to HCC Eagle ID and activate it now. You may also use Canvas Inbox to communicate.

disAbility Services (ADA):
HCC strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please meet with a campus Abilities Counselor as soon as possible in order to establish reasonable accommodations. Reasonable accommodations are established through an interactive process between you, your instructor(s) and Ability Services. It is the policy and practice of HCC to create inclusive and accessible learning environments consistent with federal and state law. For more information, please go to http://www.hccs.edu/district/students/disability-services/

HCC Sexual Harassment Policy and Title IX: Houston Community College is committed to cultivating an environment free from inappropriate conduct of a sexual or gender-based nature including sex discrimination, sexual assault, sexual harassment, and sexual violence. Sex discrimination includes all forms of sexual and gender-based misconduct and violates an individual's fundamental rights and personal dignity. Title IX prohibits discrimination on the basis of sex-including pregnancy and parental status-in educational programs and activities. If you require an accommodation due to pregnancy, please contact an Abilities Services Counselor. The Director of EEO/Compliance is designated as the Title IX Coordinator and Section 504 Coordinator. All inquiries concerning HCC policies, compliance with applicable laws, statutes, and regulations (such as Title VI, Title IX, and Section 504), and complaints may be directed to:

David Cross
Director EEO/Compliance
Office of Institutional Equity & Diversity
3100 Main
(713) 718-8271
Houston, TX 77266-7517 or Institutional.Equity@hccs.edu

http://www.hccs.edu/departments/institutional-equity/title-ix-know-your-rights/

HCC Campus Carry statement: For information regarding HCC Campus Carry: http://www.hccs.edu/district/departments/police/campus-carry/.

EGLS$_3$ -- Evaluation for Greater Learning Student Survey System
At Houston Community College, professors believe that thoughtful student feedback is necessary to improve teaching and learning. During a designated time near the end of the term, you will be asked to answer a short online survey of research-based questions related to instruction. The anonymous results of the survey will be made available to your professors and department chairs for continual improvement of instruction. Look for the survey as part of the Houston Community College Student System online near the end of the term.