

City University of New York (CUNY)
CUNY Academic Works

Open Educational Resources

City College of New York

2021

Earth System Science

Karin A. Block
CUNY City College

[How does access to this work benefit you? Let us know!](#)

More information about this work at: https://academicworks.cuny.edu/cc_oers/367

Discover additional works at: <https://academicworks.cuny.edu>

This work is made publicly available by the City University of New York (CUNY).
Contact: AcademicWorks@cuny.edu



EAS 10600: Earth System Science

Course Syllabus – Fall 2021

EAS 10600 Section C-C5 Online

Required lab; 4 credits

Designation:

EAS 10600 is an introductory course in Earth Science for science and non-science majors.

It is a required course for Geology, EESS, and Architecture majors; and it is one of the courses that can be taken to satisfy the science distribution requirement in the pre-2013 core curriculum for students majoring in other sciences. It is also approved to satisfy the Life and Physical Sciences and the Scientific World requirements under Pathways.

Course Description:

A systematic global view of the features, processes, and underlying scientific concepts of the earth, atmosphere, and oceans, emphasizing environmental applications.

Prerequisites:

None

Learning Outcomes:

Students taking this course should be able to:

1. Identify common minerals and rocks.
2. Compare volcanic processes in the context of plate tectonics.
3. Relate seismic activity to plate motion.
4. Explain the geologic carbon cycle and identify at least two sources and two sinks in the global carbon budget.
5. Understand the relationship between recent continental glaciation and thermohaline circulation.
6. Relate the source of energy for hurricanes and their trajectories in the Atlantic.
7. Be able to explain at least three major factors that govern climate change.
8. Understand the relationship between wind, atmospheric circulation, and energy transfer.
9. Be able to identify energy sources and the environmental effects of obtaining those resources on the various reservoirs of the earth system.
10. Understand timescales of earth processes.

Instructor: Professor Karin Block

Optional open discussion and office hours: Wednesdays 11am. Other days/times by appointment.

Email: kblock@ccny.cuny.edu (this is the best way to contact me.)

Phone: (212) 650-8543

Course Format:

This course is completely online, providing students flexibility with their schedules. Each of the modules is available approximately one week before the lesson due date and closed on the date stated in the lesson. You will need a computer capable of running Microsoft Word and Excel, a computer browser such as Google Chrome, and internet connectivity. You can obtain Microsoft Office 365 for free with your CCNY credentials. Information on how to get access can be found [here](#). Adobe Acrobat or another PDF reader is also

recommended. If you do not have or if you lose access to a working computer or internet please reach out to me so we can figure out a solution.

Course Structure, Credit Hours and Time Commitment:

This is a 4-credit hour course, where each credit (contact hour) corresponds to fifteen 50-minute sessions per credit per semester. For an online course this translates into 200 minutes/week of direct computer-based work and supplementary assignments. This requirement is fulfilled through online mini-lectures, videos, digital assignments and quizzes and 13 laboratory modules. The course will be divided into three units:

Unit 1: The Solid Earth

Unit 2: Sediments and Earth's Fluid Envelope

Unit 3: Climate Change, Human Effects, and Resources

For the lecture portion of the course we will cover one topic per week. In addition there will be three Fact Sheet writing assignments in lieu of midterms and weekly activities in the laboratory. You should expect to spend 10 hours on each Fact Sheet assignment.

Required Texts: All are Open Educational Resources (OER) - \$0 cost to students:

1. An Introduction to Geology

Authors: Chris Johnson, Matthew D. Affolter, Paul Inkenbrandt, Cam Mosher

Salt Lake Community College – 2017

<https://opengeology.org/textbook/>

2. BC Campus Physical Geology textbook – Updated January 28, 2020.

Author: Steven Earle, Thompson Rivers University

<http://open.bccampus.ca>

3. Introduction to Oceanography

Author: Paul Webb. - 2020

<https://rwu.pressbooks.pub/webboceanography/>

4. Synoptic Meteorology – NOAA: National Weather Service

https://www.weather.gov/jetstream/synoptic_intro

Grading:

Item	Description	Percent of total grade
Lecture	Quizzes, Midterm Fact Sheets	60%
Laboratory	Quizzes, Discussions/Assignments	40%

It is your responsibility to keep up with the material and earn a grade during the semester. Borderline grades happen and I have to abide by objective cut-offs from one letter grade to another to maintain fairness. Please refrain from grade grubbing and requesting extra assignments to lift grades at the end of the semester. Both of these are appeals for special treatment that I will not receive favorably.

Please use proper grammar, complete sentences and scientific terminology whenever possible on assignments, discussions, and lab reports.

The conversion from points to letter grades is done as follows:

A+	97-100	C+	77-79
A	94-96	C	73-76
A-	90-93	C-	72-70
B+	87-89	D	60-69
B	84-86	F	0-59
B-	80-83		

Academic Integrity

All students are expected to uphold the ethical standards of CUNY's academic integrity policy. To obtain the details of the academic integrity policy, visit the following URL: <https://www.cuny.edu/wp-content/uploads/sites/4/page-assets/about/administration/offices/legal-affairs/policies-procedures/Academic-Integrity.pdf>. In addition, the Policy of Academic Integrity can be found in the Undergraduate Bulletin. All students must read policies regarding plagiarism and cheating. **Students who are caught plagiarizing or cheating will be reported to the Office of Academic Integrity and will automatically fail the assignment.**

Students with Disabilities

The City College of New York complies with the Americans with Disabilities Act in making adjustments for qualified students with disabilities. Students who so qualify must identify themselves to their instructors at the beginning of the semester so that the latter may offer provisional accommodations. If you have a disability please make sure you have contacted the AccessAbility Center/Student Disability Services Office to obtain assistance: <https://www.cuny.cuny.edu/accessability>.

Communication Policy

I receive a lot of email. I can respond quickly and effectively if you communicate clearly. Some pointers:

1. Check the syllabus and Blackboard announcements for the answer before you write to me.
2. If you are not getting Blackboard announcements make sure your Blackboard account is accessible and that you associate it with an email address you check regularly.
3. Start with a salutation (Dear Dr. Block or Dear Prof. Block).
4. Write an informative subject line that includes which course and section you are attending.
5. Sign your complete name – your email address may not contain your full name.
6. Reread before you send. Does it make sense? Could it be misinterpreted?
7. Allow at least two days for a response, three if you email over a weekend or a holiday.
8. If you have not received a reply from me in the time specified in item 7, please reread item 1 on this list.

Lab Schedule:

Week 1: Lab 1 - Introduction
Week 2: Lab 2 - The Scientific Method
Week 3: Lab 3 - Topographic Maps
Week 4: Lab 4 - Discovering Plate Boundaries
Week 5: Lab 5 - Minerals
Week 6: Lab 6 - Igneous Rocks
Week 7: Lab 7 - Sedimentary Rocks and Metamorphic Rocks
Week 8: Lab 8 - Relative and Absolute Dating
Week 9: Lab 9 - Virtual Field Trip
Week 10: Lab 10 - Ocean Circulation
Week 11: Lab 11 - Paleoclimate
Week 12: Lab 12 - Remote Sensing
Week 13: Lab 13 - Urban Heat Island
Week 14: Lab 13 - Urban Heat Island (continued)

Lab Policies:

Labs will be due one week after being posted, or as specified by your lab instructor. No late labs will be accepted.

Lab answers must be written in complete sentences and will be checked for grammar and spelling.

Students must complete all labs. Any labs that are not submitted by the assigned due date will receive a grade of zero.

The instructor reserves the right to modify the syllabus as needed during the semester.



This work is licensed under a [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-nc-sa/4.0/).