City College
Department of **EARTH & ATMOSPERIC SCIENCE (EAS)**

Mission Statement

The Department of Earth and Atmospheric Sciences (EAS) of the City College of New York integrates research, teaching, and service dedicated to inspire, educate and prepare students to be leaders in the field of earth systems science. Based on the emerging awareness of the interrelationships between natural and social systems EAS promotes and sustains:

- fundamental and innovative research for the understanding of the Earth as an integrated, dynamic system.
- the integration of earth science and science education research to promote students' learning as well as their awareness of the obligatory role of the environmental context in all of their future endeavors.

Program goals

The following Program Education Goals are established to provide a quality education in Earth Systems Science:

1. Promote inquiry, analytical, technical, and communication skills necessary to succeed in the earth and atmospheric science professions.
2. Promote scientific literacy and the critical thinking skills needed for continued, life-long learning.
3. Promote the understanding of ethical, economical and social issues as an integrated system, necessary to recognize the need to include an evaluation of societal impact and consequences of scientific development on policy matters.
4. Develop instructional and research collaborations with stakeholders.
5. Conduct research in areas of local, national, and global importance.
6. Promote a system's approach in the integration of research and teaching.
7. Serve the community and the earth science profession.
8. Improve access for an increasingly diverse student body.

Last revised, Spring 2012

Learning Outcome Grid

(Outcomes are numbered from 1 to 10 as listed below)

1. Design field research programs
2. Use computers for earth system science applications
3. Perform quantitative calculations
4. Reason scientifically in context of the earth system
5. Discuss issues and controversies in earth system science
6. Identify and work with earth materials and earth structures
7. Function well in team-coordinated activities
8. Identify, formulate and solve real world earth science problems
9. Communicate effectively at all levels, orally and in writing
10. Use earth science instruments

Courses	Learning Outcomes									
SEMESTER (B=BOTH;PO=PHASE OUT;S=SPRING; F=FALL	1	2	3	4	5	6	7	8	9	10
106 (B) Earth System Science I				X						
213 (PO) Engineering Geology			X	X		X	X	X	X	
217 (B) Systemic Analysis of the Earth					X	X			X	
227 (S) Structural Analysis of the Earth			X	X						X
308 (F) Data Analysis-ESS Modeling		X		X	X			X	X	
311 (F) Environmental Field Methods			X	X			X			
317 (S) Atmospheric Change		X	X	X	X			X		
318 (S) Fund. of Atmospheric Science NEW										
328 (F) Global Hazards		X		X		X		X		
330 (S) Geographic Inf.			X	X						
345 (S) Hydrology		X		X				X		
413 (F) Environmental Geo. Chem.			X	X	X	X	X	X		
426 (S) Environmental Remote Sensing		X	X		X	X			X	
439 (S) Mineral/Energy Resources or similar			X		X	X			X	X
446 (F) Ground Water Hydrology		X		X	X			X	X	X
472 (B) Field Project		X								X
488 (S) Climate Change		X			X			X		
528 (S) Plate Geotectonics			X		X					

Learning Outcome Grid

(Outcomes are numbered from 1 to 10 as listed above)

Courses	Learning Outcomes									
	1	2	3	4	5	6	7	8	9	10
561 (F) Geophysics	X	X		X				X	X	
565 (F) Environmental Geophysics Field			X	X	X	X			X	
A2300/EES79903 (S) Subsurface Remediation	X	X		X	X		X		X	X
A3300 (F) Earth Science Instrumentation	X									