



## ENVIRONMENTAL SCIENCE AND STUDIES PROGRAM

### ENVIRONMENTAL SCIENCE MAJOR

#### CORE COURSES

COURSE No.	COURSE Name	CO-REQUISITE (S)	PRE-REQUISITE (S)
ES200	Introduction to Environmental Health (4		
ES 211	Introduction to Environmental Science & Lab (4)	-	-
ES 251	Air and Atmospheric Sciences (4)	-	ES211
ES 252	Introduction to Geosciences & Lab (4)	-	ES211
ES 312	Water Resources & Management & Lab	-	ES211
ES 314	Environmental Biology (4)		ES211
ES 425	Global Environmental Change		ES211, ES 252, ES 312
ES 435a	Environmental Science Research (b)	-	ES211, ES251, ES252, ES 312
ES4 35b	Environmental Science Research (a)	-	ES211, ES251, ES252, ES 312
ES 452	Applications to Environmental Science – a capstone experience	-	ES211, ES251, ES252, ES 312

### COGNATE COURSES

COURSE No.	COURSE Name	CO-REQUISITE(S)	PRE-REQUISITE (S)
BIO 110	Biological Communities, Evolution and Biodiversity (4)		
BIO 115	Organismal Form and Function (4)	-	-
BIO 120	Cellular Biology (4)	-	-
CHE 111	General chemistry I (3)	MATH 115	-
CHE 111L	General chemistry I laboratory (1)	CHE 111; math 115	-
CHE 112	General chemistry II (3)	-	CHE 111, 111L
CHE 112L	General chemistry II laboratory (1)	CHE 112	CHE 111, 111L
CHE 231	Organic chemistry I (4)	-	CHE 112, 112L
CHE 232	Organic chemistry II (4)	-	CHE 231
CHE 311	Biochemistry I (4)	CHE 234L, CHE 313L	BIO 115 and 120; CHE 232, 233L
CIS 111	Discovering computer science (4-3-2)	-	-
CIS 121	Computer science I (4-3-2)	Math 115	College placement exam.
MATH 205	General statistics (4)		MATH 107 (or 115, 116, 120, or 193).
MATH 116	Pre-calculus Mathematics II (4)		MATH 115
MATH 120	Pre-calculus (accelerated) (4)		MATH 110 or college exam
MATH 211	Applied calculus I(4)	-	Math 115 (or 120) or college placement exam.
MATH 212	Applied Calculus II		MATH 116 (or 120) and MATH 211, or college placement exam.
Math 231	Calculus I (4)	-	MATH 115 and 116 (or MATH 120), or college placement exam.
Math 232	Calculus II (4)	-	Math 231 (or 295), or college placement exam.
Math 355	Biostatistics (4)	-	A calculus course or consent of the instructor.
PHY 111 & Lab	General Physics I (4)	-	MATH 116 or equivalent (algebra and trigonometry).
PHY 112 & Lab	General Physics II (4)	-	PHY 111

**SUGGESTED ELECTIVES FOR ALL TRACKS IN THE ENVIRONMENTAL  
SCIENCE MAJOR**

Students in all Tracks will have the option of selecting electives to complete the minimum of 120 hours required for graduation.

***HIGHLY SUGGESTED ELECTIVES FOR PREMED TRACK:***

<b>COURSE No.</b>	<b>COURSE Name</b>	<b>CO-REQUISITE(S)</b>	<b>PRE-REQUISITE (S)</b>
BIO 233	Microbiology (4)	-	BIO 110, BIO115, BIO 120, BIO 125
BIO 312	Genetics (4)	-	BIO 110, BIO 115, BIO 120, BIO 125
BIO 471	Cellular and molecular biology (4)	-	BIO 110, BIO 115, BIO 120, BIO 125, and at least one upper-level (200 or higher) biology course.

Epidemiology - Morehouse College (3)

***ES/STEM ELECTIVES***

<b>COURSE No.</b>	<b>COURSE Name</b>	<b>CO-REQUISITE(S)</b>	<b>PRE-REQUISITE (S)</b>	<b>-</b>
ES 215	Introduction to Toxicology (4)		ES 200	
ES 315	Sustainable Development	-	ES 211	-
ES 384	Industrial Ecology (4)	-	-	-
ES 403	Environmental Science Seminar (2)	-	ES 211	-
ES 420	Risk management and containment systems	-	ES 211, ES 312	-
ES 437	Computer simulation (4)	-	CIS 121 and MATH 205 (Statistics)	-
ES 250	Food and Energy			
ES 453	Environmental Chemistry (3)	-	CHE 232; CHEM 231	
ES 499	Independent Studies	-		-
ES 355/BIO 255	Ecology		BIO 110, BIO 115, BIO 120, BIO 125	

BIO 312	Genetics (4)		BIO 110, BIO 115, BIO 120, BIO 125	
CIS 437	Computer Simulation (4)	-	CIS 121 and MATH 205 (Statistics)	-
BIO 328	Food Toxicology Immunology (4)		BIO 110, BIO 115, BIO 120, BIO 125	
BIO 329	Nutrition and Cancer		BIO 110, BIO 115, BIO 125	
MATH 353	Decision Sciences (4)	-	-	-
MATH 355	Biostatistics (4)	-	A calculus course or consent of the instructor.	-
MATH 358	Mathematical Models (4)	MATH 232	<i>Prerequisite for MATH 232: MATH 231 (or 295), or college placement exam.-</i>	
MATH 311, ES 311	Rotating Fluids: Application to Atmosphere and Ocean Flows (forthcoming)	-	C or better in MATH 212: Applied Calculus II or MATH 232: Calculus II or equivalent.	

### **GENERAL ELECTIVES**

<b>COURSE No.</b>	<b>COURSE Name</b>	<b>CO-REQUISITE(S)</b>	<b>PRE-REQUISITE (S)</b>
ECON 241	Principles of Macroeconomics (4)	-	-
ECON 242	Principles of Microeconomics (4)		
PSC 315	American Constitutional Law (4)		PSC 201
PSC 320	Environmental Politics and Policy (4)		
PSC 321	International Relations (4)		

PHI 130	Introduction to Ethics (4)		
PHI 295	Biomedical Ethics (4)		
SOC 402	The Sociology of Health (4)		