SUSTAINABILITY SCIENCE (B.S.)

Unless otherwise noted, 120 credits of coursework is required for a baccalaureate degree with a minimum 2.0 overall GPA, and a minimum 2.0 major GPA.

Program Requirements Overview

Code	Title	Credits
General Education Requirements		29
World Languages and Cultures Requirements		3-9
Major Requirements		75-76
Free Electives [1]		13-6
Total Credits		**120**

[1] Graduate Swing Courses will count toward free electives for students in combined (UG/GR) programs.

Major Requirements

Code	Title	Credits
Core Courses		
EAES 101	Planet Earth	4
EAES 160	The Human Environment	3
EAES 202	Introduction to Sustainability Science	3
EAES 370	World Resources and Industries	3
EAES 402	Sustainability Science Seminar	3
Collateral Courses		
BIOL 113	Principles of Biology: Organisms and Diversity	4
BIOL 213	Introduction to Ecology	4
CHEM 120	General Chemistry I	4
CHEM 121	General Chemistry II	4
ECON 101	Applied Macroeconomics	3
ECON 102	Applied Microeconomics	3
Select two of the following courses:		7-8
AMAT 120	Applied Calculus A	
or MATH 122	Calculus I	
AMAT 220	Applied Calculus B	
or MATH 221	Calculus II	
MATH 111	Applied Precalculus	
STAT 230	Data Science and Statistics	
Major Electives		
Complete one course from each of the 6 categories below, plus an additional 7-14 credits of additional electives to reach a total of 30 credits.		30
Total Credits		**75-76**

Major Electives

Global Systems

Code	Title	Credits
ANTH 360	Environmental Anthropology	
ANTH 423	Community and Health	
ANTH 429	Building Sustainable Communities	
EAES 300	Energy Transitions: A Global Dependence	
EAES 475	Environmental Economics	
ECON 215	The Economics of Social Problems	
ECON 414	Economics of Natural Resources and Global Warming	
ECON 419	Economics Of Energy And Environmental Policy	
SOCI 220	Sociology of Rich and Poor Nations	
SOCI 312	Environmental Sociology	
SOCI 314	Environmental Justice	

Urban Systems

Code	Title	Credits
ANTH 255	Urban Anthropology	
ANTH 422	Environment and Community	
EAES 281	Introduction to American Urban Studies	
EAES 283	Urban Georgraphy	
EAES 380	Transportation	
EAES 385	Urbanization and Environment	
EAES 391	Quantitative Methods in Geography and Urban Studies	
EAES 484	Urban Planning	
POLS 315	Urban Administration	
SOCI 311	Urban Sociology	

Decision-Making Systems

Code	Title	Credits
Select one of the following:		
EAES 361	Environmental Policy	
EAES 363	Geopolitics	
EAES 460	Environmental Law	
ECON 371	World Trade and Investment	
INBS 250	Introduction to International Business	
LAWS 220	Conflict and Its Resolution	
MGMT 231	Management Processes	
MGMT 315	Organizational Behavior	
MGMT 363	Business and Society	
MGMT 436	Strategic Project Management	
POLS 324	Advanced Public Policy Analysis	

Surface Processes

Code	Title	Credits
EAES 200	Geomorphology	
EAES 210	Introduction to GIS and Remote Sensing	
EAES 310	Geographic Information Systems (GIS)	
EAES 311	Fundamentals of Remote Sensing of Environment	
EAES 321	Economic Geology	
EAES 340	Sedimentology	
EAES 341	Principles of Soil Science	
EAES 410	Special Topics in Advanced GIScience	
EAES 451	Coastal Marine Geology	

Climate and Hydrologic Processes

Code	Title	Credits
EAES 201	Understanding Weather and Climate	
EAES 230	Hydrology	

EAES 250	Introduction to Marine Sciences	
EAES 330	Fluvial Geography	
EAES 331	Geohydrology	
EAES 332	Hydroclimatology	
EAES 350	Oceanography	
EAES 403	Meteorology	

Biological and Chemical Processes

Code	Title	Credits
BIOL 254	Applied Microbiology	
BIOL 300	Environmental Biology and Related Controversial Issues	
BIOL 351	Introduction to Aquatic Ecology	
BIOL 370	Principles of Ecology	
BIOL 460	Biological Oceanography	
BIOL 461	Aquatic Ecology	
CHEM 230	Organic Chemistry I	
CHEM 231	Organic Chemistry II	
CHEM 232	Experimental Organic Chemistry I	
CHEM 233	Experimental Organic Chemistry II	
CHEM 320	Environmental Chemical Analysis	
CHEM 325	Atmospheric Chemistry	
CHEM 330	Green Chemistry	
EAES 322	Environmental Geochemistry	
EAES 427	Organic Geochemistry	

Additional Electives

Code	Title	Credits
ANTH 255	Urban Anthropology	3
ANTH 360	Environmental Anthropology	3
ANTH 422	Environment and Community	3-4
ANTH 423	Community and Health	3-4
ANTH 429	Building Sustainable Communities	3-4
BIOL 254	Applied Microbiology	3
BIOL 300	Environmental Biology and Related Controversial Issues	3
BIOL 351	Introduction to Aquatic Ecology	4
BIOL 370	Principles of Ecology	3
BIOL 460	Biological Oceanography	3
BIOL 461	Aquatic Ecology	3
CHEM 230	Organic Chemistry I	3
CHEM 231	Organic Chemistry II	3
CHEM 232	Experimental Organic Chemistry I	2
CHEM 233	Experimental Organic Chemistry II	2
CHEM 320	Environmental Chemical Analysis	3
CHEM 325	Atmospheric Chemistry	3
EAES 200	Geomorphology	3
EAES 201	Understanding Weather and Climate	4
EAES 210	Introduction to GIS and Remote Sensing	3
EAES 230	Hydrology	3
EAES 250	Introduction to Marine Sciences	4
EAES 280	Principles of Land Use	3
EAES 281	Introduction to American Urban Studies	3
EAES 283	Urban Georgraphy	3
EAES 300	Energy Transitions: A Global Dependence	3
EAES 310	Geographic Information Systems (GIS)	3
EAES 311	Fundamentals of Remote Sensing of Environment	3
EAES 321	Economic Geology	3
EAES 322	Environmental Geochemistry	3
EAES 330	Fluvial Geography	3
EAES 331	Geohydrology	3
EAES 332	Hydroclimatology	3
EAES 340	Sedimentology	4
EAES 341	Principles of Soil Science	3
EAES 350	Oceanography	3
EAES 361	Environmental Policy	3
EAES 363	Geopolitics	3
EAES 380	Transportation	3
EAES 385	Urbanization and Environment	3
EAES 391	Quantitative Methods in Geography and Urban Studies	3
EAES 403	Meteorology	4
EAES 410	Special Topics in Advanced GIScience	3
EAES 427	Organic Geochemistry	3
EAES 451	Coastal Marine Geology	4
EAES 460	Environmental Law	3
EAES 484	Urban Planning	3
ECON 215	The Economics of Social Problems	3
ECON 371	World Trade and Investment	3
ECON 414	Economics of Natural Resources and Global Warming	3
ECON 419	Economics Of Energy And Environmental Policy	3
INBS 250	Introduction to International Business	3
LAWS 220	Conflict and Its Resolution	3
MGMT 231	Management Processes	3
MGMT 315	Organizational Behavior	3
MGMT 363	Business and Society	3
MGMT 436	Strategic Project Management	3
POLS 315	Urban Administration	3
POLS 324	Advanced Public Policy Analysis	3
SOCI 220	Sociology of Rich and Poor Nations	3
SOCI 311	Urban Sociology	3
SOCI 312	Environmental Sociology	3
SOCI 314	Environmental Justice	3

General Education Requirements

Click here for a list of courses that fulfill General Education categories. (http://catalog.montclair.edu/programs/general-education-requirements-ba-bs/)

Code	Title	Credits
A. New Student Seminar		
Complete a 1 credit New Student Seminar course.		1
C. Communication		
1. Writing		*3*
2. Literature		*3*
3. Communication		*3*

D. Fine and Performing Arts		
Complete a 3 credit Fine and Performing Arts course.		3
F. Humanities		
1. Great Works and Their Influences		*3*
2. Philosophical and Religious Perspectives		*3*
G. Computer Science		
Complete a 3 credit Computer Science course.		3
H. Mathematics		
Fulfilled in the major.		
I. Natural Science Laboratory		
EAES 101	Planet Earth (Fulfilled in the major.)	
J. Physical Education		
Complete a 1 credit Physical Education course.		1
K. Social Science		
1. American and European History		*3*
2. Global Cultural Perspectives		*3*
3. Social Science Perspectives		
EAES 160	The Human Environment (Fulfilled in the major.)	
L. Interdisciplinary Studies		
ECON 102	Applied Microeconomics (Fulfilled in the major.)	
Total Credits		**29**

World Languages and Cultures Requirements

Click here for a list of courses that fulfill World Languages and Cultures categories. (http://catalog.montclair.edu/programs/world-languages-and-cultures-requirements/)

Code	Title	Credits
World Languages		
Based on language placement exam, complete one or two sequential courses in the same language. **Requirement is automatically fulfilled by language major courses.**		3-6
World Cultures		
Requirement may be fulfilled by course selected in General Education - Social Science: Global Cultural Perspectives. Requirement may also be fulfilled by major coursework. See list of courses.		0-3
Total Credits		**3-9**

Recommended Roadmap to Degree Completion

This four-year plan is provided as an outline for students to follow in order to complete their degree requirements within four years. This plan is a recommendation and students should only use it in consultation with their academic advisor.

First Year

Fall	Credits	Spring	Credits
GENERAL EDUCATION: (A) New Student Seminar	1	GENERAL EDUCATION: (C2) Literature	3
GENERAL EDUCATION: (C1) Writing	3	GENERAL EDUCATION: (D) Fine and Performing Arts	3
GENERAL EDUCATION: (J) Physical Education	1	GENERAL EDUCATION: (G) Computer Science	3
EAES 101	4	EAES 202	3
EAES 160	3	Collateral Math/Applied Math/Statistics course.	4
Collateral Math/Applied Math/Statistics course.	4		
	16		**16**

Second Year

Fall	Credits	Spring	Credits
GENERAL EDUCATION: (C3) Communication	3	GENERAL EDUCATION: (F2) Humanities – Philosophical and Religious Perspectives	3
GENERAL EDUCATION: (F1) Humanities – Great Works and Their Influences	3	GENERAL EDUCATION: (K1) Social Science – American and European History	3
World Language 1	3	World Language 2	3
BIOL 113	4	BIOL 213	4
EAES 370	3	Major Elective Group A	3-4
	16		**16-17**

Third Year

Fall	Credits	Spring	Credits
GENERAL EDUCATION: (K2) Social Science – Global Cultural Perspectives	3	World Cultures	3
CHEM 120	4	CHEM 121	4
ECON 101	3	ECON 102	3
Major Elective Group B	3-4	Major Elective Group D	2-4
Major Elective Group C	3	Major Elective Group E	3-4
	16-17		**15-18**

Fourth Year

Fall	Credits	Spring	Credits
Major Elective Group F	3-4	EAES 402	3
Additional Major Electives	7-13	Free Electives	12-0
	10-17		**15-3**

Total Credits 120