



DEPARTMENT OF GEOGRAPHY & ENVIRONMENTAL ENGINEERING
ENVIRONMENTAL SCIENCE MAJOR (ESC1)
CLASS OF 2020



ESC1 or ESC1H

NAME:

TERM 1	TERM 2	TERM 3	TERM 4	TERM 5	TERM 6	TERM 7	TERM 8
MA103	MA104	MA206	PY201	PL300	SS307	MX400	LW403
CH101	CH102	EV203	PH205	HI302	CY305	EV471	EV487
EN101	EN102	SS201	SS202	EV310	CES EV350	CES EV450	Field Elective
HI10X	HI10X	LX203	LX204	CSC3 SCIENCE	EV388a	CSC1 EV365	Field Elective
PL100	IT105	CES EV301	CSC2 BIOLOGY	Atmosphere Elective	Tools Elective	Depth Elective	Depth Elective
						Honors: EV Sci Elective	Honors: EV489a

22	Core Course	10	EV Science Course
1	Science Depth	3	Core Engineering Sequence
1	STEM Depth	3	Complementary Support Course

Frequently Asked Questions

- **Can I choose any engineering sequence?** No, all EV scientists take the EV Engineering sequence.
- **Do you have any AIADs?** Yes. In recent years we've travelled OCONUS to Uganda, Panama, Honduras, Guatemala and Israel. In addition, we sponsor internships with U.S. agencies such as the US Army Corps of Engineers, US Army Public Health Command, the US Army Environmental Command, the Federal Emergency Management Agency and many others.
- **Can I apply to do a semester abroad?** Yes. Recent majors have spent a semester in Brazil, China and Germany as well as at the Air Force Academy.
- **Can I double major or take a minor?** Possibly especially if you have validated courses. Please ask if you are interested as sequencing your coursework becomes the key to solving this puzzle.
- **Can I go to medical school if I major in Environmental Science?** Yes, four courses are required for medical school admission (CH375, CH383, CH384 and CH387) and they can all be taken as part of the Environmental Science major. Medical schools value diversity and applying as an EV Science major makes you a little bit different from others.
- **What do environmental scientists do?** Environmental scientists can work as scientists for any agency or company dedicated to environmental research, management or restoration, as medical doctors, as lawyers protecting the environment through legal means, as business men or women dedicated to green company principles and at all levels of government from local to national to include agencies such as the EPA, US Geologic Survey, Bureau of Land Management, Fish and Wildlife Service and National Park Service.
- **Are there any Army branches that especially require my skills?** Yes, the Medical Service Corps has a concentration in Preventive Medicine that has slots specifically for environmental scientists. These Army officers are known as 72Ds.

ENVIRONMENTAL SCIENCE

CORE CURRICULUM AND ENGINEERING SEQUENCE

- Complete the 22-course core curriculum.
- Complete CH102 as the Science Depth course.
- Complete CY305 or IT355 as the STEM Depth course.
- Complete the Environmental Engineering Sequence.

FOUNDATION COURSES

- Complete the **three** courses listed below:

Course	Course Title
EV310	Aquatic Science
EV388a	Physical Geology
EV471	Ecology

ATMOSPHERE COURSE

- Complete **one** of the following courses:

Course	Course Title
EV387	Meteorology
EV389b	Climatology

TOOLS ELECTIVE

- Complete **one** of the three courses listed below:

Course	Course Title
CH387*	Human Physiology
EV377	Remote Sensing
EV398	Geographic Information Systems

DEPTH ELECTIVES

- Complete **two** of the seven courses listed below:

Course	Course Title
CH383	Organic Chemistry I
CH384*	Organic Chemistry II
EV391a	Land Use Planning and Management
EV391b	Natural Hazards & Risk
EV396	Environmental Biological Systems
EV398	Geographic Information Systems
XS391	Principles & Applications of EV Chemistry

FIELD ELECTIVE

- Complete **two** of the forty six courses listed below:

Course	Course Title
CH383	Organic Chemistry I
CH384	Organic Chemistry II
CH385*	Introduction to Cell Biology
CH387*	Human Physiology
CH388*	Genetics
CH457*	Microbiology
CH460*	Human Anatomy
CH473*	Biochemistry
CH481*	Physical Chemistry I
DS350*	Military Communications
EM381*	Engineering Economy
EV371	Geography of Russia
EV372	Geography of Asia
EV373	Geography of Latin America
EV375	Geography of Africa
EV376	Geography of Middle East
EV377	Remote Sensing
EV378	Cartography
EV380	Principles of Surveying
EV384	Geography of North America
EV386	Geography of Europe
EV387	Meteorology

NOTE: “” denotes a course with pre-requisites*

EV388b	Geomorphology
EV390b	Urban Geography
EV391a	Principles of Land Use Planning and Management
EV391b	Natural Hazards and Risk
EV394	Hydrogeology/Hydraulic Systems
EV396	Environmental Biological Systems
EV397	Air Pollution Engineering
EV398	Geographic Information Systems
EV482	Military Geography
EV489a	Advanced Individual Study I
LW473	Environmental Law
LW481	International Law
MA363*	Vector Calculus and Ordinary Differential Equations
MA366*	Applied Engineering Math
MA376	Applied Statistics
MA391*	Mathematical Modeling
MA396*	Numerical Methods for the Solution of Differential Equations
MA476	Mathematical Statistics
PL396*	Science Network Analysis for Public Policy
PY373	Topics in Ethics
PY386	Philosophy of Science
SS381*	Cultural/Political Anthropology
SS387*	Public Finance
SS485	Politics and Development of Sub-Saharan Africa
XS391	Principles & Applications of EV Chemistry

COMPLEMENTARY SUPPORT COURSES

- Complete the following course:

Course	Course Title
EV365	Geography of Global Cultures

- Complete **one** of the following two biology courses:

Course	Course Title
CH275	Biology
CH375	Advanced Biology

- Complete **one** of the following five math/science courses:

Course	Course Title
PH206	Physics II
PH256	Advanced Physics II
MA205	Calculus II
MA376	Applied Statistics
CH457*	Microbiology
CH473*	Biochemistry

INTEGRATIVE EXPERIENCE

- Complete the following course:

Course	Course Title
EV487	Environmental Security

HONORS PROGRAM IN ENVIRONMENTAL SCIENCE

- Cadets pursuing the honors program will complete two additional courses: 1) EV489A Advanced Individual Study and 2) an additional course from the *field electives* list. Cadets also must graduate with an APSC of at least 3.0 in the USMA core curriculum and an APSC of at least 3.5 in the major.

REQUIRED COURSES

Course	Course Title
EV489a	Advanced Individual Study I
XXXXX	One course from the Field Electives list