

B.S. in Environmental Science

Name _____ SS# _____ Updated: _____ Total Credits to Date:

Advised by: _____

I. Foundation Courses [10]

- _____ GES 120 - Environment Science & Conservation [3]
- _____ GES 220 -Lab & Field Techniques for Environmental Science [4]
- _____ Additional laboratory or field work from an approved list:
 GES 306: Field Ecology [3]; GES 405: Applied Landscape Ecology [4]; GES 406: Aquatic Ecology [4];
 GES 485: Field Research [3]; ...

II. Background Courses

Social Sciences/Humanities [6]

Two courses from the following:

- _____ ECON 101: Principles of Microeconomics [3]
- _____ POLI 100: American Governments & Politics [3]
- _____ ANTH 211: Cultural Anthropology [3]
- _____ PHIL 150: Contemporary Moral Issues *or* PHIL 152: Introduction to Moral Theory [3]
- _____ HCST 100: The Human Context of Science & Technology

Math and Natural Sciences [31]

Two MATH courses from the following: [8]

- _____ MATH 151: Calculus & Analytic Geometry I [4] *and either:*
- _____ MATH 152: Calculus & Analytical Geometry II *or:*
- _____ STAT 350: Statistics with Applications in Biological Science [4]
- _____ STAT 355: Introduction to Probability & Statistics for Science & Engineering [4]
Note: STAT 355 recommended for those seeking advanced training in statistics, physical sciences & fields employing probability & frequency distributions
- _____ PHY 121: Introductory Physics I [4] (Calculus-based; recommended for hydrology, geomorphology, earth science)
 or
- _____ PHY 111: Basic Physics I [4]

- _____ CHEM 101: Principles of Chemistry I [4]
- _____ CHEM 102: Principles of Chemistry II [3]
- _____ CHEM 102L: Introductory Chemistry Lab [2]

- _____ GES 110: Physical Geography [3]
- _____ BIOL 100: Concepts in Biology [4]
- _____ GES 206: Ecology [3]

Writing Requirement [3] one course from the following:

- _____ ENGL 383: Science Writing
- _____ ENGL 391: Advanced Exposition
- _____ ENGL 393: Technical Writing

Areas of Concentration [18]

At least six upper-level courses from the approved lists for areas of concentration (see back of sheet). At least one of these courses must be a 400-level capstone seminar or other course with a research focus. Choice of courses may involve breadth across several areas or depth in a single area, to be determined in consultation with faculty advisor.

Area of Concentration: _____

Courses:

- | | |
|--------------|--------------|
| 1] _____ [] | 2] _____ [] |
| 3] _____ [] | 4] _____ [] |
| 5] _____ [] | 6] _____ [] |

List of Electives

- BIOL**
 275: Microbiology
 301: Ecology & Evolution
 457: Physiology of Marine & Estuarine Animals
- CHEM**
 300: Analytical Chemistry
 461: Advanced Instrumentation
 490: Toxicology & Risk Assessment
- ENCE:**
 489: (...approved topics)
- GES**
 111: Principles of Geology
 280: Map Use & Cartographic Principles
 302: Natural Hazards/ Oceanography/...
 305: Landscape Ecology
 306: Field Ecology
 310: Geomorphology
 311: Weather & Climate
 312: Biogeochemical Cycles & the Global Environment
 313: Biogeography
 314: Soils
 317: Water Quality
 318: Natural Environment of Chesapeake Bay
 381: Remote sensing
 383: Statistical & Thematic Cartography
 386: Intro to GIS
 400: Advanced Soils/ Tropical Weather/ (...approved topics)
 405: Applied Landscape Ecology
 406: Aquatic Ecology
 410: Coastal Morphology
 411: Fluvial Morphology
 413: Seminar in Biogeography
 415: Climate Change
 416: Hydrology
 481: Advanced Remote Sensing
 485: Field Research
 486: Advanced GIS
 4xx: Urban Ecosystems/...
- PHYS**
 4xx: Physics & Chemistry of Atmospheric Environment
- STAT**
 414: Environmental Statistics
 451: Intro to Probability Theory
 453: Intro to Mathematical Statistics
 454: Regression
- Law School:** Environmental Law Seminar...

AREAS of CONCENTRATION for the B.S Degree in Environmental Science**Earth System Science**

GES 111: Principles of Geology
 GES 302: Natural Hazards/ Oceanography (summer only)/ ...
 GES 305: Landscape Ecology
 GES 310: Geomorphology
 GES 311: Weather and Climate
 GES 312: Biogeochemical Cycles and the Global Environment
 GES 313: Biogeography
 GES 314: Soils
 GES 400: Tropical Weather/ Hurricanes/ El Nino and Impacts on Society/...
 GES 405: Applied Landscape Ecology
 GES 410: Coastal Morphology
 GES 411: Fluvial Morphology
 GES 415: Climate Change
 GES 416: Hydrology
 PHYS 4xx (currently 235) Physics and Chemistry of the Atmospheric Environment

Watershed Processes

GES 111: Principles of Geology
 GES 302: Natural Hazards
 GES 310: Geomorphology
 GES 311: Weather and Climate
 GES 314: Soils
 GES 317: Water quality
 GES 4xx: Urban ecosystems
 GES 400: Advanced Soils
 GES 406: Aquatic Ecology
 GES 411: Fluvial morphology
 GES 416: Hydrology
 GES 485: Field research
 STAT 414: Environmental statistics
 ENCE 489: Chemistry of natural waters/ Introduction to subsurface hydrology/ Stormwater management/...

Ecosystems, Habitat and Biodiversity

BIOL 275: Microbiology
 BIOL 301: Ecology and Evolution
 BIOL 457: Physiology of marine and estuarine animals
 GES 305: Landscape Ecology
 GES 306: Field Ecology
 GES 312: Biogeochemical cycles and the global environment
 GES 313: Biogeography
 GES 314: Soils
 GES 318: Natural Environment of Chesapeake Bay
 GES 405: Applied Landscape ecology
 GES 406: Aquatic Ecology
 GES 413: Seminar in biogeography
 GES 4xx: Urban ecosystems (frequency uncertain)
 GES 485: Field research
 STAT 414: Environmental statistics

Environmental Chemistry and Toxicology

CHEM 300: Analytical chemistry (requires 351, 352 as well as 101, 102)
 CHEM 461: Advanced instrumentation
 CHEM 490/601: Toxicology and risk assessment (frequency uncertain)
 GES 312: Biogeochemical cycles and the global environment
 GES 314: Soils
 GES 317: Water quality
 ENCE 489: Chemistry of natural waters
 ENCE 489: Fate and Transport of Environmental Contaminants/ Environmental Organic Chemistry
 PHYS 4xx: Physics and chemistry of the atmospheric environment

Environmental Statistics, Risk Assessment and Valuation

CHEM 490: Toxicology and risk assessment
 ECON 437: Economics of natural resources
 ECON 439: Environmental economics