The ENST concentration in Environmental Health gives students the concepts and skills to work in this broad and increasingly important field with wide ranging applications in the environmental science and public health fields. The field encompasses environmental factors and ecosystem functions that affect human health and the effects of human activities on the ecosystem products and services we depend on. Example topics within the field include ecological risk analysis, environmental toxicology, environmental impact assessment, chemical fate and transport, human health risk assessment, industrial hygiene, air quality, environmental microbiology, food safety and security, biodiversity and human health, and children's environmental health.

Science and Math Fundamentals Required (56-57 credits):

- **ENST 200** Fundamentals of Soil Science (4)
- **ENST 233** Introduction to Environmental Health (3)
- **ENST 360** Ecosystem Ecology (4)
- **ENST 389** Internship (3)
- **ENST 471** Capstone I (2)
- **ENST 472** Capstone II (3)
- **BSCI 170/171** Principles of Biology I (4)
- **BSCI 160/161** Principles of Biology II (4)
- **BSCI 207** Principles of Biology III (3)
- **BSCI 223** General Microbiology (4)
- **CHEM 131&132** Fundamentals of General Chemistry & Lab (4)
- **CHEM 231&232** Organic Chemistry I & Lab (4)
- **CHEM 241/242** Organic Chemistry II & Lab (4)
- **MATH 140** Calculus I (4) - or - **MATH 120** Elementary Calculus I (3)
- **PHYS 121** Fundamentals of Physics (4)
- **BIOM 301** Introduction to Biometrics (3)

Concentration Depth (12 credits):

- **ENST 333** Ecosystem Health and Protection (3)
- **ENST 334** Environmental Toxicology (3)
- **ENST 434** Toxic Contaminants: Sources, Fate, and Effects (3) - or -
- **ENST 436** Emerging Environmental Threats (3)
- **ENST 445** Ecological Risk Assessment (3)

Ecosystem Health and Human Health Electives (12 credits)

Example courses listed on reverse side. Courses applied to elective requirements may not be applied to other curriculum requirements.

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Highlighted Courses are ENST CORE

Students must maintain a 2.0 grade point average in major required courses

Benchmark to be completed by 30 credits
Benchmark to be completed by 60 credits
Benchmark to be completed by 90 credits
Requires prior approval

last updated on 08/2016
Students will take approximately 6 credits each of Ecosystem Health and Human Health electives to tailor their program to their specific interests (total = 12 credits). Ecosystem Health electives cannot be double-counted as Human Health Electives, and vice-versa. This is not an exhaustive list of electives; other ecosystem and human health courses can be substituted with advisor approval. Required electives may not be applied in more than one category, e.g. Elective selections will not also satisfy Concentration Depth requirements.

**Ecosystem Health Electives (at least 6 credits):**
- ANSC 252  
  Introduction to the Diseases of Wildlife (3)
- AOSC 200/201  
  Weather and Climate & Lab (4)
- AOSC 434  
  Air Pollution (3)
- BSCI 222  
  Principles of Genetics (4)
- BSCI 330  
  Cell Biology and Physiology (4)
- BSCI 447  
  General Endocrinology (3)
- BSCI 467  
  Freshwater Biology (4)
- BSCI 473  
  Marine Ecology (3)
- CHEM 271/272  
  General Chemistry and Energetics & Bioanalytical Lab (4)
- ENST 314  
  Fisheries Sustainability and Management (3)
- ENST 405  
  Energy and Environment (3)
- ENST 415  
  Renewable Energy (3)
- ENST 421  
  Soil Chemistry (4)
- ENST 422  
  Soil Microbial Ecology (3)
- ENST 423  
  Soil-Water Pollution (3)
- ENST 430  
  Wetland Soils (3)
- ENST 434  
  Toxic Contaminants: Sources, Fate, and Effects (3)
- ENST 436  
  Emerging Environmental Threats (3)
- ENST 440  
  Sustainable Agriculture (3)
- ENST 443  
  Industrial Ecology (3)
- ENST 450  
  Wetland Ecology (3)
- ENST 460  
  Principles of Wildlife Management (3)
- ENST 461  
  Urban Wildlife Management (3)
- ENST 462  
  Field Techniques in Wildlife Management (2)
- ENST 463  
  Wildlife Habitat and Population Modeling (3)
- ENST 479  
  Tropical Ecology and Resource Management (3)
- ENST 499  
  Special Topics in Environmental Science and Technology (1-4)
- GEOG 331  
  Introduction to Human Dimensions of Global Change (3)
- GEOG 372  
  Remote Sensing (3)
- GEOG 373  
  Geographic Information Systems (3)
- GEOL 452  
  Watershed and Wetland Hydrology (3)
- LARC 450  
  Environmental Resources (3)
- PLSC 400  
  Environmental Plant Physiology (3)

**Human Health Electives (at least 3 credits must come from the Human Dimensions area):**
- BSCI 201  
  Human Anatomy and Physiology I (4)
- BSCI 202  
  Human Anatomy and Physiology II (4)
- BSCI 330  
  Cell Biology and Physiology (4)
- BSCI 417  
  Microbial Pathogenesis (3)
- BSCI 422  
  Principles of Immunology (3)
- BSCI 424  
  Pathogenic Microbiology (4)
- BSCI 425  
  Epidemiology and Public Health (3)
- BSCI 437  
  General Virology (3)
- BSCI 440  
  Mammalian Physiology (4)
- ENST 499  
  Special Topics in Environmental Science and Technology (1-4)
- ENST 432  
  Environmental Microbiology (3)
- ENST 436  
  Emerging Environmental Threats (3)
- GEOG 331  
  Introduction to Human Dimensions of Global Change (3)
- LHAL 140  
  Personal and Community Health (3)
- NFSC 430/434  
  Food Microbiology & NFSC 434 Food Microbiology Lab (5)

**Human Dimensions Area (subset of Human Health Electives):**
- ANTH 410  
  Theory and Practice of Health and Community Development -or-
- ANTH 450  
  Theory and Practice of Environmental Anthropology (3)
- AREC 240  
  Introduction to Economics and the Environment -or-
- AREC 241  
  Ecosystem Services: an Integrated Analysis (3-4)
- AREC 332  
  Introduction to Natural Resource Policy (3)
- AREC 365  
  World Hunger, Population, and Food Supplies (3)
- ENSP 102  
  Introduction to Environmental Policy -or-
- ENSP 330  
  Introduction to Environmental Law -or-
- ENSP 340  
  Water: Science, Ethics, and Law (3)
- GEOG 331  
  Introduction to Human Dimensions of Global Change -or-
- GEOG 341  
  Culture and Natural Resource Management (3)
- LARC 450  
  Environmental Resources (3)
- PHIL 261  
  Philosophy of the Environment (3)
- PUAF 300  
  Introduction to Sustainability (3)
- SOCY 305  
  Scarcity and Modern Society -or-
- SOCY 406  
  Globalization (3)
- SPHL 400**  
  Introduction to Global Health -or-
- SPHL 401**  
  History of Public Health (3)
- URSP 250  
  The Sustainable City: Exploring Opportunities & Challenges (3)

**Restricted. Permission required. Meets at Shady Grove Campus.**