

MSPH	MS	MSEE	MPH - Concentration in Environment, Climate and Health	BSPH in Environmental Health Sciences	PhD
COMP #1: Gain experience in practice in the fields of environmental sciences, engineering or health practice (practicum, ENVR 981)	COMP #1: Demonstrate a depth of knowledge in one area within environmental sciences and engineering (9 credits of specialized courses)	COMP #1: Define problems, needs, and objectives for which environmental engineering is relevant (ENVR989 or 992.03)	COMP #1: Weigh the scientific basis of hazard identification, exposure and health risk assessment to support management of environment, climate and health (ENVR430, ENVR500, and ENVR 775)	COMP #1: Define major issues in environmental health, sciences & engineering. ENVR 230 (Spring)	COMP #1: Identify key knowledge gap(s), integrate knowledge, and design sound research strategy to fill gap(s) in knowledge in a specific area within environmental sciences and engineering (ENVR 703)
COMP #2: Explain and analyze the mechanisms of environmental contaminants leading to adverse effects on human organ systems (ENVR430 or ENVR630)	COMP #2: Explain the results of original research (ENVR601)	COMP #2: Evaluate problems quantitatively using measurements or models (statistical, empirical, and/or mechanistic) of engineered systems or impacted natural environments (ENVR989 or 992.03)	COMP #2: Evaluate the causal relationships linking sources of environmental contaminants through processes that affect movement, transformations, exposure pathways, effects and vulnerabilities and use these relationships to inform actions for public health and health equity. (ENVR 430 and 500)	COMP #2: Provide quantitative answers to complex environmental questions and describe the potential underlying uncertainties. ENVR 205 (Fall)	COMP #2: Develop the ability to critically evaluate environmental sciences and engineering research (ENVR 704a,b)
COMP #3: Engage with interdisciplinary contemporary research across the fields of environmental health and sciences (ENVR400)	COMP #3: Review and synthesize a body of research literature (ENVR601)	COMP #3: Develop and design appropriate solutions which use technologies, facilities, monitoring, controls, or policies to solve environmental engineering problems (ENVR989 or 992.03)	COMP #3: Describe, and critically evaluate the rational for and approaches used to measure and model properties of environmental/ human systems. (ENVR430 and 500)	COMP #3: Describe linkages between sources of environmental contaminants, ambient concentrations, human exposures and possible solutions. ENVR 403 (Spring)	COMP #3: Demonstrate depth of knowledge in a specific area within environmental sciences and engineering to support success in research (>15 credits of specialized courses approved by dissertation committee)
COMP #4: Identify and evaluate the relationships between environmental processes, exposure and/or risk assessment (ENVR500 or ENVR765)	COMP #4: Demonstrate broad exposure to contemporary issues in environmental sciences, environmental health and environmental engineering (ENVR400)	COMP #4: Evaluate the success of environmental engineering designs and assess the uncertainty involved in environmental systems (ENVR989 or 992.03)	COMP #4: Evaluate effective actions or interventions that improve environmental health outcomes, and be able to compare and assess programs, policies, engineering solutions and/or other approaches to achieve these outcomes (ENVR580)	COMP #4: Describe the mechanistic basis for environmentally-induced disease and methods for prevention. ENVR 430 (Fall)	COMP #4: Develop skills to successfully execute a research design within the discipline of environmental sciences and engineering (met by taking 2 skills courses or 2 workshops or trainings leading to certification in 2 skills; approved by dissertation committee)
COMP #5: Develop skills and knowledge needed to conduct research within one area of environmental sciences and engineering (6 credits of specialized courses)	COMP #5: Demonstrate proficiency in one research skill (course or hands on training with signature, e.g., lab training computer modeling)	COMP #5: Obtain a broad exposure to contemporary issues in environmental sciences, environmental health, and environmental engineering (ENVR400)	COMP #5: Examine and critique the ethical and legal dimensions of environment, climate and health-related actions on individuals and communities (ENVR580)	COMP #5: Demonstrate written and oral communication skills in environmental health, sciences and engineering within a public health context. Culminating experience: ENVR 593, ENVR695, ENVR 691H + ENVR 692H, or ENVR 698 (Spring).	COMP #5: Develop the ability to present/communicate environmental sciences and engineering research results formally to a broad audience (ENVR 400)