

# GEOGRAPHY AND ENVIRONMENTAL ENGINEERING, MASTER OF ARTS

## Program Requirements

The M.A. degree is open to students with undergraduate degrees in social sciences or the humanities. It requires:

- a minimum of 30 graduate credits including no more than 1 credit of seminar, 1 credit of intersession course work or 1.5 credits from CLE (with advisor approval), and 6 credits of independent research counting toward the 30 credits.
- at least 50% of the required 30 credits must come from courses within the department.
- students are permitted to apply up to two classes with a grade of "C" (C-, C, or C+) toward their degree.
- up to 4 courses from Advanced Academic Programs or Engineering for Professionals may be taken and counted to receive a master's degree as long as there is sufficient rigor and prior approval as deemed by the advisor. Students must have written consent from advisor (an email will suffice) prior to signing up for the course.

WSE and BSPH use different credit systems for their courses. A public health course that is listed as 3 credits in the Catalogue is worth less than 3 credits after the Registrar converts that course to the WSE course credit scale. The conversion factor is usually (2/3). I.e., BSPH courses taken by WSE students are converted to two-thirds of the value listed in the Catalogue.

M.A. students have the option to complete an independent research project, submitted as a formal essay. Students can focus on one of the department's areas of interest, study, research or construct their own program that complements and expands their undergraduate experience; three semesters are typically required to complete the degree. Each program of study is planned by the student in consultation with department faculty and must be approved by the faculty advisor.

## Master's Quarterly Meeting

MA students formally meet as a group four times during the academic year. These meetings aim to build community, provide professional development, and share information about administrative, course, or other programmatic issues. Those meeting dates are:

Thursday, October 9th, 2025 12:00 - 1:30 pm

Thursday, November 13th, 2025 12:00 - 1:30 pm

Thursday, February 12th, 2026 12:00 - 1:30 pm

Thursday, April 9th, 2026 12:00 - 1:30 pm

## Independent Research Project Option

The MA provides an opportunity to do independent research, in addition to the 30 credits of coursework. The work must represent an original hypothesis-driven investigation on a topic of interest to the student and agreed upon by a research advisor. Students are responsible for identifying a faculty member who matches their research

interest and is willing to advise a research project. It is recommended that students talk with their academic advisor about a research project as early as possible, and students interested in research must identify a research advisor no later than the beginning of the second semester. We also recommend that students who are interested in research commit to at least two semesters to the project; it can be difficult to both learn the requisite skills and complete an entire project within a single semester. *Students can count up to 6 credits of research (EN.570.803 or 570.800) toward their master's degree requirements. Beyond this, an additional 6 credits of EN.570.803 or 570.800 should be taken if the independent research option is selected.* Students may also drop to part-time status during their last semester of the program and take advantage of lower part-time tuition rates while conducting research.

Once a research advisor agrees to advise the student, the proposal writing begins. The research proposal may be based on an NSF proposal format. It should include an in-depth review of the literature (~2 pages), specific aims or objectives (about 1 page), the research strategy (3 pages), and references. The proposal should be approved by the advisor before research begins.

Following successful completion of the research project, the student should draft either a thesis, a manuscript, or a brief memo based on that work. If a thesis is the chosen format, it should adhere to University guidelines, which can be found on the Johns Hopkins Sheridan Libraries website. Example sections include: Abstract, Background, Methods, Publishable Paper, Conclusions, Appendix (Raw Analysis Results). Students who choose the thesis option should submit an electronic copy of the thesis to the department's academic coordinator and can submit the thesis to the Sheridan Libraries for archiving. If a manuscript format is chosen, document quality must be suitable for publication in a peer-reviewed scientific journal. The last option is to write a short memo at the end of the research project briefly summarizing the research results. The memo should be roughly five pages in length and include figures, bullet points, or narrative text to succinctly and briefly summarize the research results.

Students will present their research during a session organized by the Department in May. Presentations should be ten minutes in length, followed by five minutes of questions and answers from faculty and students. The academic team will work with students to schedule the presentations.

## Course Requirements

Code	Title	Credits
<i>Required Courses</i>		
<i>Environmental systems: Environmental engineering (one course)</i>		
EN.570.610	Engineering Microbiology	3
EN.570.644	Physical and Chemical Processes	3
EN.570.649	Water quality of rivers, lakes, and estuaries	3
<i>Human systems: Public health (one course)</i>		
PH.180.609	Principles of Environmental Health	4
PH.180.601	Environmental Health	5
<i>Social Interactions: Ethics, Culture, Governance, and Justice (one course)</i>		
EN.575.752	Environmental Decision-Making: Climate, Energy, Indigenous Populations, and Accessibility	3
PH.180.626	Environmental Justice and Public Health Practice	3
SA.500.105	Comparative Energy and Environmental Governance	4

*Data analysis/statistical methods: (one course)*

EN.570.695	Environmental Health and Engineering Systems Design	3
EN.570.616	Data Analytics in Environmental Health and Engineering	3
EN.570.697	Risk and Decision Analysis	3

*Science-policy integration (two courses):*

PH.180.611	The Global Environment, Climate Change, and Public Health	4
EN.575.759	Environmental Policy Analysis	3
EN.570.667	Sustainability Science and Policy: The Threat of Climate Change	3
EN.570.698 & EN.570.699	Pursuing Sustainability Policy and Pursuing Sustainability Policy: Knowledge to Action	3
EN.570.607	Energy Policy and Planning Models	3
PH.180.641	Climate Change and Public Health Problem Solving Seminar: Global Challenges and Solutions for Mitigation, Adaptation, and Sustainability	3
EN.575.736	Designing for Sustainability: Applying a Decision Framework	3
EN.575.737	Environmental Security with Applied Decision Analysis Tools	3

*Based on students' background and goals, choose from the following elective options or other appropriate courses approved by the advisor and program director to get to the 30 credits needed to graduate. At least half of the elective credits need to be from the social sciences, domains of practice (design, planning and policy), or humanities (denoted by an asterisk \*, or other practice-focused courses approved by the advisor and program director).*

## Elective Courses in Environmental and Health Engineering

EN.570.623	Environmental Impacts of Climate Change	3
EN.660.655	Reimagining The City to Resist Climate Change	3
EN.575.711	Climate Change and Global Environmental Sustainability	3
EN.575.714	Water Resources Management	3
EN.575.723	Environmental Sustainability and Next Generation Buildings	3
EN.575.731	Water Resources Planning	3
EN.575.733	Energy and the Environment	3
EN.575.734	Smart Growth Strategies for Sustainable Cities	3
EN.575.737	Environmental Security with Applied Decision Analysis Tools	3
EN.575.738	Transportation, Innovation, and Climate Change	3
EN.575.747	Environmental Project Management	3
EN.575.750	Environmental Policy Needs in Developing Countries	3
EN.575.753	Communication of Environmental Information and Stakeholder Engagement	3

## Elective Courses in Public Health

PH.180.620	Introduction to Food Systems and Public Health	4
PH.188.682	A Built Environment for A Healthy and Sustainable Future	3
PH.188.688	Global Sustainability & Health Seminar	1
PH.180.651	Energy, Environment, and Public Health	2

PH.185.600	One Health Tools to Promote and Evaluate Healthy and Sustainable Communities	3
PH.185.601	One Health Seminar	1
PH.180.625	Community-Driven Epidemiology and Environmental Justice	3
PH.180.655	Baltimore Food Systems: A Case Study of Urban Food Environments	4

## Elective Courses in Arts &amp; Sciences

AS.270.644	Physics of Climate Variability	3
AS.270.679	Atmospheric Science	3
AS.270.654	Environmental Data Analysis	3
AS.270.607	Urban Ecology	3
AS.420.610	Sustainable Business	3
AS.420.612	Sustainability Science: Concepts and Challenges	3
AS.420.644	Sustainable Cities	3

## Elective Courses in Advanced International Studies

SA.310.708	Sustainable Finance and Impact Investing	4
SA.500.102	Corporate Sustainability, Business & Human Rights	4
SA.500.128	Sustainable Development in the Era of Climate Disruption	4
SA.510.127	Sustainable Finance and Impact Investing	4
SA.999.165	ESG and Sustainability Analysis	

## Elective Courses from the Business School

BU.152.740	CityLab Catalyst: Business Innovation for Social Impact	2
BU.152.740	CityLab Catalyst: Business Innovation for Social Impact	2
BU.241.735	Infrastructure Development for Sustainable Cities	2
BU.241.770	Smart Growth, Infrastructure and Real Estate Development	2
BU.610.710	Sustainable Supply Chains	2

Students are expected to adhere to all university policies. These policies include those related to grade requirements, registration, academic progress, deadlines, satisfactory completion of exams, and academic integrity, non-academic conduct, and research ethics. Students who fail to follow or meet the established policies may be subject to dismissal. Below is a sample of critical policies for reference:

**Code Of Conduct**

The fundamental purpose of the Johns Hopkins University's (the "University" or "JHU") regulation of student conduct is to promote and to protect the health, safety, welfare, property, and rights of all members of the University community as well as to promote the orderly operation of the University and to safeguard its property and facilities. As members of the University community, students accept certain responsibilities which support the educational mission and create an environment in which all students are afforded the same opportunity to succeed academically.

Allegations of sexual misconduct are covered by JHU's Sexual Misconduct Policy and Procedures (<https://oie.jhu.edu/sexual-misconduct/>) for faculty, staff, and students. The University encourages individuals to report incidents of sexual misconduct and provides a variety of avenues, both formal and informal, by which individuals can report complaints of sexual harassment. Allegations of sexual harassment by students are covered under the JHU program and under

the Student Conduct Code. (<https://studentaffairs.jhu.edu/policies-guidelines/student-code/>)

All members of the Johns Hopkins community are responsible for immediately informing Engineering Student Affairs (<https://engineering.jhu.edu/studentaffairs/>) of any suspected violations of the non-academic Code of Conduct; and to immediately inform the WSE Office of Graduate Education and Lifelong Learning of any suspected academic/research integrity violations. ([christinekavanagh@jhu.edu](mailto:christinekavanagh@jhu.edu)) Specific policy links can be located here. (<https://homewoodgrad.jhu.edu/academics/policies/>) The faculty and students at the Whiting School of Engineering have the joint responsibility for maintaining academic integrity and guaranteeing the high standard of conduct of this institution.

Students enrolled in the Whiting School of Engineering assume an obligation to conduct themselves appropriately to The Johns Hopkins University's mission as an institution of higher education. A student is obligated to refrain from acts which he or she knows, or under the circumstances has reason to know, impair the academic integrity of the University. Allegations of violations of academic and research integrity by WSE students are covered under the policies and procedures contained in the General Academic Misconduct Policy and the General Misconduct Policy ([https://provost.jhu.edu/wp-content/uploads/2018/08/Homewood-WSE\\_KSAS\\_-WSE-EP\\_KSAS-AAP-Graduate-Academic-Misconduct-Policy-2018SU.pdf](https://provost.jhu.edu/wp-content/uploads/2018/08/Homewood-WSE_KSAS_-WSE-EP_KSAS-AAP-Graduate-Academic-Misconduct-Policy-2018SU.pdf)).

#### Personal Relationships

The Johns Hopkins University is committed to the personal, academic, and professional well-being and development of its students, trainees, faculty, staff, postdoctoral fellows, clinical residents, and all other members of the University community. The University seeks to maintain an atmosphere of mutual respect, collegiality, fairness, and trust. The Personal Relationships Policy (<https://policies.jhu.edu/doc/fetch.cfm/HVZArki5/>) implements the University's commitment to maintaining the integrity of its educational and working environment. This policy focuses on the conflict of interest that may exist when individuals simultaneously engage in both personal and professional relationships in which one individual has the potential to exert substantial academic or professional influence over the other.

#### **Grade Requirements**

EHE WSE master's students can use up to two C's (C-, C, or C+) toward their degree program requirements. A course graded D+ or lower can not be used toward graduation requirements. A student not meeting academic minimum requirements may be placed on academic probation.

#### **Leave of Absence Policy Statement**

The Johns Hopkins University ("University" or "JHU") is committed to maintaining a welcoming, inclusive, and caring environment for all students. The University grants or requires a leave of absence under appropriate circumstances to support students' necessary time away for medical, service, hardship, or academic reasons. The Office of the Provost provides leadership and support to University officials acting under this Student Leave of Absence Policy's (the "Policy") procedures and related divisional procedures, including consulting with and providing guidance to deans and their designees, registrars, and others to support consistent and fair application of this Policy across the University.

The University complies with the Americans with Disabilities Act ("ADA") and Section 504 of the Rehabilitation Act of 1973 which afford protection from discrimination for otherwise qualified students with disabilities. The

University will engage in an interactive, individualized process with each Covered Student to determine if there are any adjustments that can be made in accordance with the ADA and Section 504.

#### **Full Policy**

The full policy (<https://policies.jhu.edu/doc/fetch.cfm/TBIXLPii/>) can be found in the JHU Policy and Document Library.

#### **How to File for Permission to Take a Leave of Absence**

Graduate Students in WSE must schedule a consultation with the Office of Engineering Student Support and Advocacy (<https://engineering.jhu.edu/studentaffairs/navigatingnonacademicissues/>) prior to submitting their LOA application. International students must contact OIS before filing for LOA. Additional information regarding the process for Graduate Students requesting a LOA can be found on the WSE (<https://engineering.jhu.edu/studentaffairs/navigatingnonacademicissues/leavesofabsence/>) webpages.

**Note that PhD students wishing to file for a leave from their work (non-academic/degree-related) appointments should consult the PhD Union Collective Bargaining Agreement** (<https://provost.jhu.edu/wp-content/uploads/2024/06/TRU-UE-Local-197-Johns-Hopkins-University-Contract-2024-2027-SIGNED.pdf>) **for more information on types of leaves available.**

If it becomes necessary to take a break from studies, students should contact their advisor and academic program manager to determine if a formal leave of absence (LOA) is necessary. Any request for change of status must be discussed with the program or track director(s) and academic program manager and approved by the department and school. For more information, please see:

#### **Parental Accommodations**

Please see the university page on parental accommodations (<https://homewoodgrad.jhu.edu/student-services/family-resources-for-students-and-postdoctoral-fellows/#%3A~%3Atext%3DConsistent%20with%20grant%20funding%20policies%2Cthe%20accommodation%20new%20child%20accommodations>) for full-time graduate students and post-doctoral fellows.

#### **Travel RESOURCES**

Students should check the university's (<https://travel.ssc.jhu.edu/>) Travel Resources page. (<https://travel.ssc.jhu.edu/>)

Students are not obligated to travel internationally, and each student has the right to decline to travel abroad. If the student is supported by a research project that requires such travel and the student chooses not to travel, the student may be removed from that project following discussions with the principal investigator and the EHE program or track directors.

Graduate students who decide to travel abroad must demonstrate that they understand and voluntarily accept the risks inherent in international travel. To do so, students must first obtain the appropriate departmental approvals for the trip through their advisor and program manager. Students should also evaluate options for registering travel and obtaining pre-travel immunizations through the school or health care system. All JHU affiliates (notably in this section- students) traveling outside the US to conduct JHU university work/academic activity/on university payroll must receive prior vetting, guidance, and approval from JHU export control, the university's tax and global HR offices, as well as the dean's office, so they understand any restrictions/concerns/adjustments to appointments and/or payroll/allowed activities in advance. Students

should contact their academic staff and advisor for more information and the request process.

**Immunizations**

Students traveling outside the US are strongly encouraged to contact their health care provider or the Johns Hopkins International Travel clinic in advance of the travel to learn about recommended immunizations and other matters to guard their health. Located on the East Baltimore campus, you can reach the International Travel Clinic by telephone at 410-955-8931. Students should double check their insurance coverage prior to securing vaccinations/examinations/prophylactics to understand coverage and potential costs.

**Stay Informed**

Students are encouraged to vigilantly monitor consular and press reports regarding the country (or countries) where they plan to travel. Students may also check the consular reports of countries friendly to the U.S. (e.g., Australia, Canada, United Kingdom) as well as reports from other international agencies (e.g., United Nations). Students should participate in the security briefings offered by other organizations with whom they may be working.

**Maintain Communication**

When traveling in an area where regular communication is difficult, students are encouraged to talk to their advisor and/or the academic program manager.

**State Department Registration**

For students who are likely to stay for a prolonged period in a high- risk area of the world, registration at the U.S.US embassy or consulate is essential.

**International Students**

OIS may be contacted at 410-955-3371. International students must contact the Office of International Services (OIS) well in advance of any travel to avoid compliance issues with their visa status.

**Healix International**

Johns Hopkins has implemented a comprehensive travel assistance program supported by Healix International. For more information visit the International Travel for the University website.

**Academic Grievance Policy: Students and Postdoctoral Fellows Policy Statement**

Johns Hopkins University seeks to provide a supportive educational, training, and professional environment. The University provides several avenues of redress for students and postdoctoral fellows who believe they have been adversely affected in their professional or educational activities as a result of an arbitrary or capricious act, or failure to act, or a violation of a University, division, school, or center procedure or regulation by their supervisor, department chair, center director, or other administrator or administrative body. The University encourages individuals involved in such disputes to resolve the matter informally. This Policy is only to be used to resolve serious matters which meet the definition of a “grievable” matter and cannot be resolved through informal discussions or processes, and is only to be applied after reasonable efforts have been made to settle the dispute informally.

Review the full policy ([https://policies.jhu.edu/?event=render&mid=764&pid=32463&fid=policy\\_32463.pdf&\\_=.71799221851](https://policies.jhu.edu/?event=render&mid=764&pid=32463&fid=policy_32463.pdf&_=.71799221851)) the JHU Policy and Document Library.

**What is a Grievable Matter**

- A “grievable” matter is a complaint that a Grievant has been directly and adversely affected in his/ her education, training, or professional activities as a result of an arbitrary and capricious act, or failure to act, or a violation of University or School policy or procedure by the University, School, or anyone acting officially on behalf of the University or School, other than the matters exempted below.
- A matter is considered grievable under this policy only if the nature of the complaint is not covered by any other established University or Division policy or procedure.

A student who has a concern about an academic decision or act of a faculty, staff member, or student of the Department of Environmental Health and Engineering, should follow the steps outlined below:

**First, Attempt to Resolve Informally Through Local Channels**

1. The student should first approach the person or parties (e.g., academic advisor, related office, etc.) directly involved as soon as possible to discuss questions or concerns. If they are not comfortable with this, they may elect to contact the program for assistance first. Additionally the WSE Office of Engineering Student Support and Advocacy (<https://engineering.jhu.edu/studentaffairs/navigatingnonacademicissues/>) can offer non-clinical, non-academic support and options. For PhD Students, they may elect to reach out to the university’s PhD and postdoctoral ombuds office (<https://ombuds.jhu.edu/>).
2. If the issue or concern is not resolved at the first level the student is encouraged to contact the program for assistance. A written request for problem resolution is requested at this stage. This request should include specific details about the problem, documentation if appropriate, and a suggestion for resolution.
3. If no resolution can be found in prior steps, the matter will be referred to the Arbitration sub-Committee within the EPC, who will address the problem as they deem necessary, and make a recommendation to the Department Chair.

**If an Informal Resolution is Not Possible, Consider Filing a Formal Academic Grievance**

If the matter is not resolved by the Department or requires review and/or decision at the School or University level, a student may refer to the university’s academic grievance policy above for next steps.

**Transfer Credits**

Standard WSE policy and limitations on MS transfer credits apply (<https://engineering.jhu.edu/graduate-studies/academic-policies-procedures-graduate/>). In addition, use of each transfer course toward satisfaction of a specific degree requirement must be approved in writing by the student’s advisor.

**Health And Well-Being**

Johns Hopkins University is committed to helping you thrive personally and professionally and providing an environment that supports your health and well-being. We encourage you to seek support from the following JHU resources, particularly if you are experiencing anxiety, stress, depression, or other concerns related to your health and well-being.

The Office of Graduate Education and Lifelong Learning (GELL) serves the master’s, doctoral, and postdoctoral communities of WSE and provides the support, resources, and information students need to succeed at the Whiting School.

To make an appointment to discuss a personal or academic challenge, please reach out to the Office of Engineering Student Support and Advocacy (<https://engineering.jhu.edu/studentaffairs/navigatingnonacademicissues/>), an office within GELL. Additional resources are available through the university Mental Health Services (<https://wellbeing.jhu.edu/MentalHealthServices/>). PhD students may choose to reach out to the university's PhD and Postdoctoral Fellows ombuds office (<https://ombuds.jhu.edu/>) as well for support.

If you are feeling overwhelmed and stress is impacting your mental health, you may contact Mental and Health Services for safe and confidential services. Students have a wide variety of services available, including workshops, group therapy, medication management, psychiatric assessment, and 24/7 crisis intervention services. All counseling services are offered free of charge to students. Please contact the university mental health services at 410-516-8278. To reach an after-hours on-call counselor, call 410-516-8278 and press "1".

WSE students can seek medical attention and health care services through the Student Health and Wellness Center (<https://wellbeing.jhu.edu/PrimaryCare/>). Services include acute and chronic illness care, alcohol and other drug problem assessments, allergy injections, international travel consults and immunizations, physical exams, and routine immunizations. Please contact the center at 410-516-8270.

### **Career Development Resources**

The JHU Life Design Lab (LDL) (<https://imagine.jhu.edu/channels/life-design-lab/>) provides professional development and career services to master's students. LDL offers workshops, events, content, and drop-in office hours to help students through education, access to opportunities, and experiences to intentionally design your life on-campus and beyond.

### **Disability Services**

Graduate students and learners with disabilities are served either by Homewood Student Disability Services (<https://studentaffairs.jhu.edu/disabilities/>) or the WSE Student Disability Coordinator. Visit the Disability Services (<https://engineering.jhu.edu/studentaffairs/academic-resources-and-policies/disability-services/>) page to find more information and how to request accommodations.