



Guide for new MS students in Public Health With a specialization in **ENVIRONMENTAL HEALTH SCIENCES**

The Master of Science (MS) degree is intended for students whose interests in environmental health are academically oriented rather than directed toward professional practice. It is a natural entry point for students who are interested in pursuing a Ph.D. degree or a career in research. Because of this orientation, the emphasis in the MS program is on building a strong foundation in a particular specialty field, along with the research methods important in that field. To reflect this research and academic orientation, the MS ordinarily requires the preparation of a thesis, though it is available under a non-thesis option at the discretion of the division of specialization. There is no practice placement requirement for the MS.

Students admitted to the MS program are assigned faculty advisors who will provide guidance throughout the program. This document serves as a resource to be used by the student and the advisor in developing the MS program with a specialization in Environmental Health Sciences (EHS). For additional information about requirements, students are directed to the College of Public Health (CPH) *Student Handbook* (available online at <http://cph.osu.edu/academics/handbooks.cfm/>) and to the *Graduate School Handbook* (available online at <http://www.gradsch.ohio-state.edu/>).

PROGRAM OF STUDY

Although the focus of the MS program of study is in EHS, students are required to show approved coverage in epidemiology and biostatistics. The program consists of a minimum of 60 credit hours. The overall distribution of course work is as follows:

1. Approved courses in areas of knowledge basic to public health (epidemiology and biostatistics are included in the required courses for EHS)
2. Required courses for the specialization (44-45 credit hours)
3. Approved electives (3-12 credit hours)
4. Thesis (4-12 credit hours)

Required Courses

Environmental Health Sciences

PUBH-EHS 731	Principles of Environmental Health	4 hrs
PUBH-EHS 732	Basic Concepts in Toxicology	4 hrs
PUBH-EHS 830	Principles of Occupational Health	4 hrs
PUBH-EHS 831	Principles of Risk Assessment	4 hrs

Epidemiology

PUBH-EPI 711	Epidemiology I	4 hrs
PUBH-EPI 713	Epidemiology in Environmental Hlth	4 hrs

Biostatistics

PUBH-BIO 701	Design & Analysis of Std in Hlth Sci I	4 hrs
PUBH-BIO 702	Design & Analysis of Std in Hlth Sci II	4 hrs

Select two:

PUBH-EHS 832	Principles of Exposure Assessment	4 hrs
PUBH-EHS 735	Intro to Water & Human Health Risk	4 hrs
PUBH-EHS 835	Molecular Techniques for EHS	5 hrs

Select one:

PUBH-BIO 703	Problem-Oriented Apprch to Biostats	4 hrs
PUBH-BIO 606	Applied Logistic Regression	4 hrs

Electives in EHS

PUBH-EHS 733	Toxicology of Chemical Agents	4 hrs
PUBH-EHS 736	Environmental Law & Policy	4 hrs
PUBH-EHS 741	PH History, Policy and Practice	4 hrs
PUBH-EHS 835	Molecular Techniques for EHS	5 hrs
PUB LTH 850	Global Hlth & Environ Microbiology	4 hrs

Other Recommended Electives

AGSYSMGT 550	Pollution Control & Waste Utilization	
BIOCHEM 511	Intro to Biological Chemistry	
CRP 712	Theory of City & Regional Planning	
ENTOMOL762	Environmental Toxicology & Chemistry	
HSMP 800	Health Care Organization I	
MICRBIOL 509	Basic & Practical Microbiology	
MICRBIOL 522	Immunobiology	
MICRBIOL 701	Cellular and Molecular Immunology	
ENR 531	Environmental & Nat Resources Economics	
ENR 615	Environment, Risk, & Decision-Making	
PATH 640	Fundamentals of Oncology	
PUBH-BIO 606	Applied Logistic Regression	
PUBH-HBP 720	Preventing Disease & Promoting Health	
STATS 645	Applied Regression	
VPM 796.04	Zoonotic Diseases	
VPM 722	Food-Borne Diseases, Food Animal Production Systems, & Food Safety	
VPM 723	Biosecurity and Environmental Health	

Additional electives may be selected with approval of the faculty advisor. One course may not double count for both elective and required course.

Thesis

PUB HLTH 799	Research/Thesis	4-12 hrs
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THESIS

The thesis is an integral part of the MS degree, allowing the student the opportunity to investigate a topic of personal interest and importance to the field and to integrate and synthesize from the knowledge and skills presented in the program. There is also a non-thesis option; however, this option requires approval by petition. For additional information, see Section 7.3 of the CPH

Student Handbook.

Details regarding the thesis, including format, typing, deadlines, etc., are found on the Graduate School's web site. In general, a thesis requires:

- identification of a topic area and an advisor in EHS willing to guide the preparation of the thesis;
- formation of an examining committee, composed of at least two members of the CPH Graduate Faculty, including the advisor;
- where appropriate, selection of a third member of the examining committee, who may be from outside the CPH;
- written and oral presentation of the thesis prospectus to the examining committee for approval (see Appendix I of the *CPH Student Handbook*);
- completion of the thesis described in the approved prospectus;
- satisfactory defense of the thesis before the examining committee, and
- deposit of an approved (advisor-signed) copy of the full thesis and abstract in the program office and electronic submission to the Graduate School.

The student has primary responsibility for topic selection and formation of the Master's Examination Committee. The proposed topic must be approved by the faculty advisor and the committee is selected by consultation between the student and advisor.

The thesis prospectus sets out the plans and methods of the proposed thesis research. The prospectus should not be longer than three pages (12 point, double-spaced). It ordinarily includes 1) a discussion of the background of the problem and an introductory survey of the relevant literature; 2) a statement of the scope of the proposed work, including how the study adds to the stock of knowledge; 3) a statement of the hypotheses or objectives of the study; and 4) a discussion of the data to be collected and the methods to be used in their analysis.

RESEARCH WITH HUMAN SUBJECTS

Students should work closely with their faculty advisors to complete the necessary materials to secure approval for research with human subjects. Guidance, forms, and directions are available through the Office of Responsible Research Practices: <http://orpp.osu.edu/irb/>. All persons involved in human subjects research at OSU must complete the Collaborative IRB Training Initiative (CITI) web-based course on human subjects available at <http://orpp.osu.edu/irb/training/citi.cfm>. The Office of Responsible Research Practices also offers regular training for student researchers. Additional information is available on the Web at <http://orpp.osu.edu/irb/training/>.

RESEARCH WITH ANIMALS

Forms and directions to secure approval for research with animals also are available through the Office of Responsible Research Practices. Approval involves completion of the Animal Usage Orientation Course (either classroom or online) and the Occupational Health and Safety Training Course (online only). Information regarding these courses is available on Web at <http://orpp.osu.edu/iacuc/>.

ACADEMIC STANDARDS

To remain in good academic standing, graduate students must maintain a minimum 3.0 overall GPA. In addition, a B- or higher must be earned in all required specialization courses and no course in which a grade of C- or below is earned may count towards the degree. For more details, see Section 11.2 of the *CPH Student Handbook*.

TIME LIMIT

The MS degree must be completed within 5 years from the date of matriculation. The responsibility for academic progress and fulfillment of the time limit rule rests with the student. Students who fail to complete the program in five years must re-apply to the program by written petition to the Graduate Studies Committee. Approval may be contingent upon completion of additional course work. No further registration will be permitted in the absence of an approved petition. For additional information, see Section 7.5 of the *CPH Student Handbook*.

GRADUATE NON-DEGREE & TRANSFER CREDIT

The transfer of credit depends on where it was earned. For OSU graduate non-degree credits, a maximum of 10 credit hours may be transferred into the degree-granting program with approval of the faculty advisor. For transfer credit from another institution, a maximum of 12 quarter hours (20% of the total credit hours required for the degree) may be transferred into the program with approval of the faculty advisor. For additional information, see Section 10.3 of the *CPH Student Handbook*.

GRADUATION

Students must be enrolled for a minimum of three graduate credit hours during the quarter in which they wish to graduate. An "Application to Graduate" form (available on the Graduate School's Web site) must be completed by the student, signed by the advisor, and returned to the Office of Academic Programs (OAP) for processing. The deadline for submitting the signed form to OAP is the first Friday of the quarter of graduation. The deadline to submit the signed Master Exam Report Form is the 8th week of the quarter; therefore, students generally must complete their culminating projects by the 6th or 7th week of the quarter. At the end of the quarter, students are asked to complete an Exit Survey, as explained in Section 13.14 of the *CPH Student Handbook*.

OFFICE OF ACADEMIC PROGRAMS

Counselors are available in the Office of Academic Programs, M006 Starling-Loving Hall (614-293-3907) to provide assistance with College or University policies and procedures. Questions regarding the student's program should be directed to the faculty advisor.