# OCCUPATIONAL AND PUBLIC HEALTH

**CURRICULUM**
First Offered Fall 2022

**Master of Science**

| DEGREE REQUIREMENTS | | Credits |
|---|---|---|
| Thesis | | (Milestone) |
| OH8001 | Research Methods and Study Design | 1 |
| OH8002 | Evidence-Based Prevention | 1 |
| OH8003 | Data Analysis for Research | 1 |
| OH8004 | Knowledge Synthesis | 1 |
| OH8005 | Seminar Series I | Pass/Fail |
| OH8006 | Seminar Series II | Pass/Fail |
| Two Electives | | 2 |

| ELECTIVES | | Credits |
|---|---|---|
| OH8210 | Epidemiology for Public Health | 1 |
| OH8211 | Hazard Assessment | 1 |
| OH8212 | Special Topics | 1 |
| OH8213 | Directed Studies | 1 |

## COURSE LISTING

**Thesis**
Students will conduct a research thesis relevant to occupational and public health under the supervision of a faculty member and supervisory committee. Students will identify and finalize their thesis topic by the end of their first semester, as part of the coursework requirements of the seminar series course (OH8005). Their thesis proposal must be finalized by the end of their second semester (full-time students) or fifth semester (part-time students). This is a Milestone.

**OH8001  Research Methods and Study Design**
This course will provide the methodological foundation for interdisciplinary research in occupational and public health. Students will learn to select appropriate study designs for their topic of interest. Both experimental and observational study designs will be discussed, with particular attention to minimizing biases and confounding in occupational and public health research. Reviewing the literature to develop a research question as well as rigorous designs for data collection instruments, including questionnaires, will be emphasized. Additional topics will involve critical appraisal and research ethics. 1 Credit.

**OH8002  Evidence-Based Prevention**
This course will introduce students to a range of occupational and public health problems, with particular emphasis on problems that intersect both domains. The course will explore ways in which scientific analysis and management concepts and approaches can be applied to developing effective and collaborative evidence-based prevention approaches. Academic and professional experts will present research and case studies on current and emerging topics. Students will develop and apply a collaborative and multidisciplinary approach to solving occupational or public health issues. 1 Credit.

**OH8003  Data Analysis for Research**
This course will build on standard undergraduate coursework in statistics to provide a foundation for advanced data analysis methods used in occupational and public health research. Topics will include ANOVA methods for complex experimental designs, multiple linear regression, logistic regression, and survival analysis. Students will be provided hands-on experiential learning using statistical software packages and publicly available occupational and public health datasets.  1 Credit.

**OH8004  Knowledge Synthesis**
This course will cover structured methods of comprehensively synthesizing and reviewing research evidence. Detailed guidance will be provided on the design and conduct of systematic reviews and meta-analysis in occupational and public health. Students will be required to identify an individual occupational or public health review topic of key relevance to their thesis. They will prepare a detailed systematic review protocol on this topic of publishable quality, which will describe the rationale, hypothesis, and planned methods of their review.  1 Credit.

**OH8005   Seminar Series I**
This course will provide students with foundational knowledge to develop a research question and thesis proposal. This includes critique of the literature, writing skills and presentation tips. Each student will present their research question and topic via oral and poster presentation.  Pass/Fail

**OH8006   Seminar Series II**
This course will provide students with an understanding of the oral defense process, knowledge dissemination and guidance with respect to career planning. Students will also learn about relevant professional and research groups, networking and how to increase their individual profile. Each student will present their thesis research via oral and poster presentation.  Pass/Fail

**OH8210   Epidemiology for Public Health**
This course will provide foundations of epidemiological methods to understand population and public health data and concepts. Students will use example data/scenarios from case-control, cohort, and cross-sectional studies to develop and test hypotheses. Methods unique to Specific (e.g. infectious/chronic disease epidemiology) and current topics will be explored. 1 Credit.

**OH8211   Hazard Assessment**
This course will explore the methods used in assessing occupational health and safety hazards. Approaches used to assess physical agent, chemical and biological hazards for research purposes will be explored.  1 Credit.

**OH8212   Special Topics**
This course examines selected topics of occupational and public health that are not covered by existing courses. The topic(s) will vary depending on the needs and interests of students and the instructor. The course description will be announced prior to scheduling of the course.   1 Credit.

**OH8213   Directed Studies**
This course allows individual directed study of subject areas not addressed in the current curriculum. A program of supervised, advanced study related to the student's area of concentration will be negotiated on an individual basis with a supervising faculty member.   1 Credit.


**Electives** from other YSGS graduate programs, particularly Spatial Analysis, Environmental Applied Science and Management, Nursing, and Mechanical and Industrial Engineering may be taken **with the approval of the supervisor and program**.

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