Environmental and Occupational Health PH.D.

Degree: Doctor of Philosophy in Public Health
USF Department code: DEA
Program (Major/College): PPH PH
Concentrations: Environmental and Occupational Health (EOH); Environmental Health (EVH); Industrial Hygiene (IHY); Occupational Health (OHP); Toxicology & Risk Assessment (TXY)
COPH Department: Environmental & Occupational Health

Ph.D. in Public Health Programs from the Department of Environmental and Occupational Health

The Department of Environmental and Occupational Health’s Ph.D. program is designed to develop specialists in specific areas of environmental and occupational health (environmental and occupational health, environmental health, toxicology and risk assessment, industrial hygiene, occupational health). Graduates of the doctoral program will be qualified to conduct fundamental and applied research in identification, evaluation and prevention of environmental and occupational health problems. The Department offers a distinguished teaching and research program which provides a sound basis for doctoral study. Please review individual faculty web pages for an overview of faculty research interests.

Student Background

Students seeking entrance into the Doctoral Program in the Department of Environmental and Occupational Health must have a clear career focus. They should have educational training of sufficient breadth, a record of excellent achievement, and an indication of potential (typically GPA of 3.0 and GRE 1100). Ideally the student should present a background of sufficient depth that he or she can function as a mature and self-directed professional in the area of public health. In addition to USF Graduate Studies and College Doctoral Admission Requirements, Departmental Requirements are described below:

Education: Student should have a master's degree or higher, in public health or a related discipline, such as: health sciences, biological sciences, physical sciences or engineering. Prior research experience is desirable. Students with a bachelor's degree with excellent academic background and research experience may be considered. Students who do not have a prior degree in Public Health must take Epidemiology, Biostatistics and one other core as prerequisites to their doctoral coursework.

Faculty Sponsorship and Financial Resources: The match between student and faculty is considered to be as important as the background of the student. There must be a faculty member willing to take the responsibility to provide guidance and supervision for the student before a student can be admitted. In addition, there must be financial resources available to support the student's doctoral research. Because of this, not all students who meet the basic criteria for admission may be admitted.

Student Competencies

In addition to the overall Doctor of Philosophy degree competencies, a graduate from the Environmental and Occupational Health Doctoral program will be able to perform the competencies of their concentration.

Concentration in Environmental and Occupational Health

Graduates with a concentration in Environmental and Occupational Health will be able to:

1. Demonstrate general knowledge of public health in the context of environmental factors, occupational exposures, and related health outcomes including personal risk factors;
2. Demonstrate knowledge of the history of environmental and occupational health;
3. Interpret literature regarding environmental and occupational health and understand the limitations and strengths of the research presented;
4. Conduct discipline-specific literature reviews to assess current issues and develop research questions;
5. Demonstrate special knowledge in a specific area of interest in occupational health;
6. Articulate research needs for new methods and improvement of existing methods;
7. Formulate substantive research questions in occupational health;
8. Design and execute a feasible research plan to address specific gaps in the state of knowledge in occupational health;
9. Understand study design and data structure, and be able to interpret results;
10. Conduct research responsibly with an understanding of scientific integrity with respect to data collection, analysis, interpretation, and reporting;
11. Perform all research ethically with respect for the protection of human participants;
12. Communicate effectively with other scientists and the public;
13. Collaborate with researchers in other disciplines;
14. Prepare manuscripts presenting the results of research;
15. Present research at professional conferences and seminars;
16. Engage in lifelong learning regarding occupational health;
17. Provide leadership in occupational and public health improvement at the local, state, national and international levels;
18. Convey broad knowledge of environmental and occupational health in an educational setting.

Concentration in Environmental Health
Graduates with a concentration in **Environmental Health** will be able to:

1. Demonstrate general knowledge of public health in the context of environmental factors, occupational exposures, personal risk factors, and related health outcomes;
2. Demonstrate knowledge of the history of environmental health;
3. Interpret literature regarding environmental health and understand the limitations and strengths of the research presented;
4. Conduct discipline-specific literature reviews to assess current issues and develop research questions;
5. Demonstrate special knowledge in a specific area of interest in environmental health;
6. Articulate research needs for new methods and improvement of existing methods;
7. Formulate substantive research questions in environmental health;
8. Design and execute a feasible research plan to address gaps in the state of knowledge in environmental health;
9. Understand study design and data structure, and be able to interpret results;
10. Conduct research responsibly with an understanding of scientific integrity with respect to data collection, analysis, interpretation, and reporting;
11. Perform all research ethically with respect for the protection of human participants;
12. Communicate effectively with other scientists and the public;
13. Collaborate with researchers in other disciplines;
14. Prepare manuscripts presenting the results of research;
15. Present research at professional conferences and seminars;
16. Convey broad knowledge of environmental health in an educational setting.

**Concentration in Industrial Hygiene**

Graduates with a concentration in **Industrial Hygiene** will be able to:

1. Demonstrate general knowledge of public health in the context of environmental factors, occupational exposures, personal risk factors, and related health outcomes;
2. Demonstrate knowledge of the history of industrial hygiene and occupational health;
3. Interpret literature regarding industrial hygiene and occupational health and understand the limitations and strengths of the research presented;
4. Conduct discipline-specific literature reviews to assess current issues and develop research questions;
5. Demonstrate special knowledge in a specific area of interest in industrial hygiene and occupational health;
6. Articulate research needs for new methods and improvement of existing methods;
7. Formulate substantive research questions in industrial hygiene and occupational health;
8. Design and execute a feasible research plan to address gaps in the state of knowledge in industrial hygiene and occupational health;
9. Understand study design and data structure, and be able to interpret results;
10. Conduct research responsibly with an understanding of scientific integrity with respect to data collection, analysis, interpretation, and reporting;
11. Perform all research ethically with respect for the protection of human participants;
12. Communicate effectively with other scientists and the public;
13. Collaborate with researchers in other disciplines;
14. Prepare manuscripts presenting the results of research;
15. Present research at professional conferences and seminars;
16. Translate research results to practice/practical application;
17. Advocate for industrial hygiene and occupational health in public forums;
18. Be committed to engaging in lifelong learning in industrial hygiene and occupational health.

**Concentration in Occupational Health for Health Professionals**

Graduates with a concentration in **Occupational Health** will be able to:

1. Demonstrate general knowledge of public health in the context of environmental factors, occupational exposures, personal risk factors, and related health outcomes including personal risk factors;
2. Demonstrate knowledge of the history of environmental and occupational health;
3. Interpret literature regarding environmental and occupational health and understand the limitations and strengths of the research presented;
4. Conduct discipline-specific literature reviews to assess current issues and develop research questions;
5. Demonstrate special knowledge in a specific area of interest in occupational health;
6. Articulate research needs for new methods and improvement of existing methods;
7. Formulate substantive research questions in occupational health;
8. Design and execute a feasible research plan to address specific gaps in the state of knowledge in occupational health;
9. Understand study design and data structure, and be able to interpret results;
10. Conduct research responsibly with an understanding of scientific integrity with respect to data collection, analysis, interpretation, and reporting;
11. Perform all research ethically with respect for the protection of human participants;
12. Communicate effectively with other scientists and the public;
13. Collaborate with researchers in other disciplines;
14. Prepare manuscripts presenting the results of research;
15. Present research at professional conferences and seminars;
16. Engage in lifelong learning regarding occupational health;
17. Provide leadership in occupational and public health improvement at the local, state, national and international levels.

**Concentration in Toxicology & Risk Assessment**

Graduates with a concentration in **Toxicology and Risk Assessment** will be able to:
1. Demonstrate general knowledge of public health in the context of environmental factors, occupational exposures, personal risk factors, and related health outcomes;
2. Demonstrate knowledge of the history of environmental and occupational health;
3. Interpret literature regarding environmental and occupational health and understand the limitations and strengths of the research presented;
4. Conduct discipline-specific literature reviews to assess current issues and develop research questions;
5. Demonstrate special knowledge in a specific area of interest in environmental and occupational health;
6. Articulate research needs for new methods and improvement of existing methods;
7. Formulate substantive research questions;
8. Design and execute a feasible research plan to address gaps in the state of knowledge in environmental and occupational health;
9. Develop and apply experimental design skills, and laboratory and field methodologies to test a research hypothesis;
10. Understand study design and data structure, and be able to interpret results;
11. Conduct research responsibly with an understanding of scientific integrity with respect to data collection, analysis, interpretation, and reporting;
12. Perform all research ethically with respect for the protection of human participants;
13. Communicate effectively with other scientists and the public;
14. Collaborate with researchers in other disciplines;
15. Prepare manuscripts presenting the results of research;
16. Present research at professional conferences and seminars;
17. Teach at a university level and work as a productive member of a research team and collaborate in writing research proposals to obtain extramural funding to support research projects;
18. Provide leadership in toxicology and risk assessment at the local, state, national and international levels.

**Degree Details**

**Admission Process and Acceptance**

Students applying for the Ph.D. in Public Health must follow the admission process detailed on the COPH Application Procedures web page. Applicants to the Environmental & Occupational Health doctoral program must meet the following minimum criteria in order to be considered for admission. However, the meeting of these criteria, per se, shall not be the only basis for admission.

1. GRE test preferred scores and grade point average for the Doctor of Philosophy degree. Exceptional students with a bachelor’s degree may be considered.
2. In order to be considered for admission to the Ph.D. programs in the Department of Environmental and Occupational Health, applicants must be prepared to register as a full-time student for at least one academic year. Students are expected to participate in the intellectual life of the department through interaction via seminars, interdisciplinary conferences and other activities. This expectation is of all doctoral students regardless of their status as full or part-time students.
3. See Degree Admission Criteria for the Ph.D. for the full set of criteria for consideration.

A list of required application documentation can be found on the Doctor of Philosophy web page under required application documentation. For the Environmental & Occupational Health doctoral program:

- In addition to the required two outside letters of recommendation submitted by individuals qualified to judge the applicant, the applicant must include one letter of recommendation from a departmental faculty member (all submitted through SOPHAS).
- The SOPHAS Personal Statement should describe why the applicant wishes to obtain the Ph.D. degree in public health and must be less than 1000 words in length.

**Review by the Department Admissions Committee**

1. Determination of student eligibility
2. Determination of availability of resources (faculty advisors, research support)
3. Applicants who are passed through these first two steps will be interviewed. This provides the students an opportunity to learn about prospective advisor(s) and to meet with the Department Admission Committee.
4. Letter of Support and agreement to serve as advisor written by an eligible departmental faculty member and placed in the applicants file (serves as third letter of recommendation and obligates faculty member to provide or ensure financial support of student’s doctoral research).
5. Student is notified of acceptance or rejection and availability of advisors for the student. If more than one faculty member has volunteered to be the advisor, the student may schedule an additional meeting if needed to arrive at a final decision.

The final decision is based on:

1. Qualification experience and References
2. Direction and areas of interest
3. Available faculty
4. Available resources

Upon acceptance to the Doctoral Program: Each student shall sign a letter of understanding regarding the five stages in the doctoral degree process:

1. Successful completion of a written plan of study which was approved by their doctoral committee (generally by the end of student's second full semester of study);
2. Successful performance on the qualifying written and oral examination leading to doctoral candidacy;
3. Preparation and formal defense of a dissertation proposal;
4. Conduct of dissertation research activities and preparation of dissertation documents;
5. Successful defense of dissertation; and
Successful completion of teaching proficiency as outlined by the doctoral committee.

Doctoral Committee

Doctoral Committee; Chair, Members through qualifying Examination; then Dissertation Committee

Upon a student's admission, the department chairperson will appoint the faculty sponsor as advisor. The student and Faculty advisor shall meet prior to the beginning of the first semester to identify courses taken during the first semester of study. By the end of the first semester, the doctoral committee must be formed. The Doctoral Committee will advise and approve the student's course of study and will also administer and grade the written and oral qualifying examinations.

The Doctoral Committee will consist of at least four members including the adviser, three of whom must come from the Department of Environmental and Occupational Health. After passing the qualifying examination, the Dissertation Committee will be formed. The Doctoral Committee may continue to serve as Dissertation Committee. The Dissertation Committee will approve the student's plan of research, supervise the research, read and approve the dissertation, and conduct the dissertation defense. The Dissertation Committee will consist of at least four members including the advisor, three of whom must come from the academic area in which the major work for the degree will be done, with at least one member from outside the Department of Environmental and Occupational Health. All the members must be credentialed by USF Graduate Studies.

Doctoral Plan of Study

Note: You may choose a plan of study that corresponds to the academic year of your admission or any year thereafter. Please see the guidelines below.

Plan of Study by Year: 2015/16 and previous years

USF Guidelines on Choosing a Plan of Study

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No link could be created for 'COPHHB: Academic Policies and Regulations'.

A minimum of 90 semester hours beyond the bachelor's degree are required. During the first year of study, the student and the Doctoral committee will agree upon a planned program of courses suitable to the student's research interest and which will provide the student the required competencies in the area of specialization. This Plan of Study and any subsequent revisions must be approved by the doctoral advisory committee and must be filed with the College’s Academic and Student Affairs Office promptly. Applicants must register as full time students (a minimum of 9 credits per semester of substantive course work) for at least two consecutive semesters during their program. Courses offered by other colleges may be used when appropriate.

The student's plan of study will include the following components:

Prerequisites: The doctoral committee or the department may require prerequisites. A student who has a master's degree may be required to take those public health courses which have not been included in previous master's study. These courses are not included in the minimum number of hours a student needs to complete the Ph.D. and are expected to be completed early in the course of study. Doctoral student will be required to take a more advanced biostatistics course than PHC 6050.

Tools of Research: Before a student becomes eligible to take the doctoral comprehensive qualifying examination, two of the "Tools of Research" selected and approved by the student's Doctoral Committee must be completed. Courses taken to fulfill "Tools of Research" requirements may not be credited toward the 90 SH requirement for the Ph.D. degree. The "Tools of Research" requirement is interpreted broadly to allow the inclusion of a wide range of skills competencies relevant to the candidate's area of study. Suggested topics include foreign language, advanced courses in Computer Science, (Bio) Statistics, special practical training complimentary to the student's area of research and other appropriate courses. The Doctoral Committee will state clearly what is required, how it will be met, in what way it is appropriate for the student's course of study, as well as how proficiency/competency will be evaluated.

Seminars: Doctoral students will be expected to participate in the department's Interdisciplinary Conferences and shall present at least twice during their course of study. All doctoral students take a minimum of three semesters (one credit per semester) of a college wide Advanced Interdisciplinary Seminar in Public Health (PHC 7931).

Required Course Work: The courses and number of credit hours required are defined by the doctoral committee and may include course work from another department or college. There must be a minimum of 13 credits beyond at the 7000 level. Generally, the doctoral degree requires a minimum of 90 credits beyond the bachelor's degree. "Tools of Research" are not included in this 90 credit requirement. The doctoral committee shall delineate in the plan of study the number of credits accepted from previous master(s) degree which will not exceed a maximum of 30.

Download the PH.D. Plan of Study Form

<table>
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<tr>
<th>Course Work</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Core Courses</td>
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<td>Course Description</td>
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<td>Advanced Biostatistics Course</td>
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<td>Required courses for concentration area or equivalent</td>
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<td>Elective Courses</td>
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<td>Dissertation (minimum)</td>
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<td>Evidence of teaching proficiency</td>
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<td>Tools of research (2 areas)</td>
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<td><strong>Minimum Credits</strong>: Additional coursework beyond 90 credits may be required of the student as specified in the plan of study</td>
<td>90</td>
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**Qualifying Examination, Candidacy, and Dissertation Requirements**

**Qualifying Examination**

The comprehensive qualifying examination is a means of:

1. Having students demonstrate their mastery of knowledge and skills relevant to the discipline of study;
2. Diagnosing knowledge deficiencies; and/or
3. Fulfilling external requirements (i.e., mandate from College or University).

The qualifying examination is administered by the Doctoral Committee when the student has met the following minimum conditions:

1. Successful completion of all or most formal coursework, including the research tools; and,
2. Agreement between the doctoral student and the Doctoral Committee that the student is prepared for the qualifying examination process.

The content of the qualifying examination will be drawn from two broad areas:

1. The broad field of Public Health with emphasis on Environmental and Occupational Health; and
2. Understanding and knowledge in the major field of interest.

The comprehensive qualifying examination will have an oral component in addition to the written portion of the examination. The student must successfully complete the written portion of the qualifying examination prior to undertaking the oral portion of the exam. A student who is unsuccessful in the first attempt of the written portion will be given one opportunity to retest the written portion of the examination. A second failure of the written examination or of the oral examination will result in the student's dismissal from the doctoral program.

**Admission to Candidacy**: Students may not be admitted to candidacy until after a Doctoral Committee has been appointed and the Committee has certified that the student has successfully completed the qualifying examination and demonstrated the qualifications necessary to successfully complete the requirements of the degree. Following approval of Admission to Candidacy form, the Dissertation committee is formed and the student may enroll in Dissertation credits.

**The Proposal, Dissertation, and Oral Defense**

**The Proposal**: The student, in consultation with the doctoral dissertation committee, will agree upon a dissertation subject and develop a proposal, consisting of at least the following chapter:

1. Statements of the problem;
2. Review of Pertinent Literature; and

The proposal shall be presented in a formal meeting including at least the Dissertation Committee. Before the proposal is presented, committee members shall sign a form indicating that they have read the proposal and approve it for presentation. However, this is not necessarily an endorsement of the proposal as a research plan.

**Dissertation**: Original research, dealing with a clearly identified contemporary problem in the selected discipline resulting in a direct contribution to the science, should constitute the key element of the dissertation. The formulation of a scientifically sound hypothesis, coupled with appropriate planning and execution of well designed experiments, followed by analysis of data leading to a solution of the problem is expected.
Defense of Dissertation: Scheduling of the final oral examination (defense of dissertation) should be by mutual agreement of the student and the dissertation committee, and in conformance with the scheduling requirements of Graduate Studies. The dissertation defense will include a presentation of the results of the Dissertation Research which is open to interested faculty, students, and guests. The Chair of the examination committee shall be a distinguished scholar who is not a member of the dissertation committee, and is from outside the Department of Environmental and Occupational Health in accordance with College of Public Health Policy. The Dissertation Defense (examination) Committee Chair acts as a representative of the Graduate school to ensure that the Defense is both thorough and fair.

Teaching and Assistantships

Teaching: All Ph.D. candidates are required to teach as part of their training. The teaching experiences should include, but not be limited to:

1. Presentation of seminars;
2. Assisting with class preparation;
3. Giving classroom lectures or presentations;
4. Presentation of research findings at local and/or national meetings

Students entering the doctoral program with significant teaching experience at the University level may have all or part of this requirement waived or substituted by their committee.

Assistantships: The Department has a limited number of assistantships for Ph.D. students. Students should apply to the EOH Department’s Student Affairs and Admissions Committee.

Responsibilities of Students

Students are expected to be familiar with the Graduate Catalog, Department and College Academic and Student Affairs and pertinent documents and forms that guide doctoral studies. The student is responsible for ensuring appropriate forms are submitted on time.

Restriction on Release of Publication

See Graduate Studies for details