



Division of Environmental & Industrial Hygiene

Graduate Student Handbook 2022-2023

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Quick List of Important Departmental and Divisional Offices

Department Contacts

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Graduate Studies Director Mary Beth Genter, Ph.D.	(513) 558-6266	144
Graduate Studies Program Office	(513) 558-5704	112

Division Faculty

Program Directors

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Environmental & Industrial Hygiene Division Director Kermit Davis, Ph.D., CPE, Professor	(513) 558-2809	423
Director of the Graduate Program in Environmental & Industrial Hygiene Kermit Davis, Ph.D., CPE, Professor	(513) 558-2809	423
Director of the Biomonitoring Certificate Program John Reichard, Ph.D., Associate Research Professor	(513) 558-7946	162

Other Division Faculty

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Jun Wang, Ph.D, CIH Assistant Professor	(513) 558-4301	331
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Lynne Haber, Ph.D., Adjunct Associate Professor	(513) 558-7631	272

Emeritus Division Faculty

Scott Clark, Ph.D., CIH, Professor Emeritus
Carol Rice, Ph.D., CIH, Professor Emeritus
Glenn Talaska, Ph.D., CIH, Professor Emeritus
Sergey Grinshpun, Ph.D., Professor Emeritus
Tiina Reponen, Ph.D., Professor Emeritus

What are my responsibilities as a student?

Overview: Faculty Expectations of EIH Graduate Students

Demonstrate professional attitude and enthusiasm when dealing with every aspect of your learning and research work. Remember that, as a graduate student, you are expected to make a considerable effort to find relevant information on your own, in addition to the materials provided by your instructor in the classroom or mentor in the lab. Show continuous improvement in your ability to work with various types of information, including but not limited to the information provided directly by your faculty. To complete the program successfully, students should learn to teach themselves (certainly, with assistance and mentorship from faculty and TAs).

Respect your instructor and your classmates. Come to class on time; do not talk to your peers when your instructor or your fellow students make presentations; silence your cell phone during class time and do not take calls, check messages or do other work on your laptop or text message during class. If you are on call for potential emergency, let your instructor know that you are required to leave your phone on (using the vibrate mode) and that you may have to leave the room to take a call. ***If required, masks should be worn into the building and during classes as specified by the University of Cincinnati and College of Medicine.***

Use proper referencing in all your reports and research papers. Always use a primary source when referring to a specific fact, regulation, or scientific finding. Primary means an original source and not just an article that refers to the primary source. Examples of cited literature include peer-reviewed articles in scientific journals, monographs and textbooks, as well as governmental documents (e.g., Federal Register). Proceedings publications may also be used as references. Some open access Internet sources, such as Wikipedia, may provide useful information, but should not be used as a proper scientific reference.

Be an engaged and effective team player and continue to improve your ability to work with others even as challenges present, especially for a successful career in occupational and environmental hygiene.

Engage in learning about research conducted by faculty members. You may discover an interesting topic for a project or research and you will better understand resources that can be critical as you seek information to solve real world problems after graduation.

Participate in national and regional professional groups, conferences and local learning experiences. Travel support for these activities, when available, is a privilege resulting from NIOSH funding and the efforts of faculty to budget those dollars to support student learning experiences. In addition to course work, demonstrate to others what you have learned and accomplished by presenting your research findings at a professional meeting and/or publishing your paper(s) in a peer-reviewed journal(s). This is desirable for MS students and definitely expected from PhD students.

Set your objectives and your schedule as a graduate student to maximize your knowledge, skills and abilities at graduation.

Observation from a student: Remember, you asked to attend the University. It is up to you to take advantage of the University personnel to learn whatever you and the faculty feel is important in your educational process. You must begin to learn on your own.

More Specifics...

In addition to the above broad expectations, all students are expected to:

- Attend and participate in all classes
- Attend and participate in special seminars and events sponsored by the Division/Department
- Complete annual student assignment (see list in student room)
- Maintain acceptable grades—knowing the rules is your responsibility
- Demonstrate professional responsibility
- Demonstrate satisfactory progress towards a degree
- Follow through, once a commitment is made
- Demonstrate the highest standards of ethical conduct

Overview of the Division of Environmental and Industrial Hygiene (EIH)

The Division's website: <http://med.uc.edu/eh/divisions/ih>

Student Resources: <http://med.uc.edu/eh/divisions/ih/student-resources>

M.S. academic study is available in two programs: Industrial Hygiene (IH) and Occupational Ergonomics (OE). Two certificate programs provide opportunity for Industrial Hygiene students to obtain specialized training; these are Hazardous Substances (HSAT) and Biomonitoring. The M.S. course of study in Industrial Hygiene is accredited by the Related Commission of the Accreditation Board for Engineering and Technology, Inc. (RAC/ABET). <http://www.abet.org/>

Ph.D. programs are available in Industrial Hygiene, Occupational Ergonomics and Biomonitoring.

The EIH division faculty maintain nationally and internationally recognized research programs in the broad areas of anticipation, recognition, evaluation and control of workplace and environmental exposures. Specific research programs are devoted to the techniques for sampling chemical hazards, liquid, particulate and biological aerosols, relationships between exposures and internal markers of effect, relationship between exposure and such chronic diseases as silicosis and lung cancer, occupational ergonomics, biomechanics, safety, relationship between workplace physical/chemical risk factors and workers' neuromuscular performance, historic and current exposure assessment, characterization of lead exposures, environmental intervention studies, and effect of neurotoxic chemicals on neurobehavioral performance. M.S. and Ph.D. students all conduct independent research which advances their particular field of interest.

Funding: Some graduate study is supported by the National Institute for Occupational Safety and Health (NIOSH) Education and Research Center (ERC) training grant and by University and other sources as funds are available (e.g., faculty research grants).

Master's Degree Program

Admission to MS Program

The student applies for admission to the program through the Graduate School (<http://grad.uc.edu/admissions.html>). The application is evaluated by the Director of the Training Program and the faculty of the Training Program.

The prospective student should have a strong undergraduate science background, which includes study in **three** of the following: college level biology, mathematics, chemistry, engineering, and physics, with an overall GPA of 3.0/4.0.

All applicants will complete an online interview by Dr. Davis (program director) and will be reviewed by a panel of students and faculty. The faculty will develop a structured interview that will cover specific areas known to be good predictors of graduate performance: resilience, persistence, native intelligence, problem-solving, communication skills, numeracy, and writing. A rubric will be developed for scoring of each applicant.

Students whose native language is other than English (*visit the graduate school for exemption*, <https://grad.uc.edu/fac-staff/handbook/graduate-admission/international-admission/english.html>) must demonstrate proficiency in English. The University accepts any of the following: IELTS score (6.5 overall band score is Grad School minimum); Duolingo English Test score (105 is Grad School minimum); PTE (47 is Grad School minimum); TOEFL (80 is Grad School minimum for the internet-based test, iBT).

The complete application is considered when deciding the acceptance of an applicant into one of the academic programs.

Advisor and Course of Study

The Director of the graduate program in Environmental and Industrial Hygiene (Dr. Davis) is the initial advisor for students in IH, OE, HSAT, and BIOM (see course requirements in the tracking forms – link in Graduation Section below). Upon entering the program, you will be required to read and sign the MS expectation form and return it to the graduate studies office.

The course of study for the Master's degree is planned in consultation with the advisor and thesis committee. For each MS program, a listing of required courses and recommended electives is available. The student's program is subject to approval by the program faculty and must show a reasonable degree of concentration on interrelated subjects. At the end of each semester, the student is to meet with the advisor to review and finalize the selection of courses for the next semester, including entry in tracking sheet on the UC intranet (advisor has password and access). At the start of the semester, the student should meet or have a communication with advisor about the previous semester's grades and progress with tracking sheet being initialed by advisor.

By the end of the first year of study, the student personally interviews with every faculty member in the Training Program concerning research interests/projects. As each interview is completed, the student obtains the faculty member's signature on a Student Interview Form (https://med.uc.edu/docs/default-source/environmental-health-docs/division-of-environmental-industrial-hygiene/student-resources/eih-division-forms/eih-faculty-interview-form_12-1-2020.pdf?sfvrsn=fe5b9d2d_6). The completed form goes to student's file. Based on the faculty discussion, and in consultation with one or more faculty members, a student selects a possible research topic. The faculty member agreeing to mentor the student through the research becomes the Advisor (student and Director of Graduate Program and the new advisor sign a 'change of advisor form', as needed).

Students are expected to attend appropriate seminars for purposes of availing themselves of these unique educational opportunities; these may be division, department or ERC-wide offerings (check the required seminars in the course tracking form). Professional Development, Written or Verbal Communication and Teaching Practicum are also required.

Credit Hours

To graduate with a Master's Degree from the Division, students must complete a minimum of 30 graduate credit hours (including thesis hours). In addition to the successful completion of course work, a thesis based upon laboratory or field research is required. Students must complete a minimum of one credit hour of MS Thesis Research, which they are eligible to register for after the Statement of Intent has been approved by the Thesis Committee (see below). Other research hours can be completed.

Students transferring to the EIH MS program from a MS program in another institution may transfer up to one-third of the credits required for the degree at the University of Cincinnati for courses that have not been applied to another degree. The transferable credits for each student are determined by the Advisor and academic committee. The final 66% of the required 30 (minimum) credits must be completed while in residence at UC. In no case may the final 66% of UC program requirements be satisfied by transfer from another institution.

Courses may be waived with the approval of the course instructor (***See Course Waiver Form under Student Resources on the Division's website***). An additional elective course or research credit must be taken for the same or greater number of credits as the waived course.

Minimum Academic Performance

Full-time MS students generally register for 15 to 18 graduate credits per semester. Students receiving a University Graduate Scholarship (UGS) or ERC funding must be registered for a minimum of 12 graduate credit hours for each semester of financial support. A student registered for at least one graduate credit maintains graduate student status throughout the entire academic year, fall through summer.

In order to obtain a Master's Degree, a student must maintain a B average [3.0] or better. In addition, at least 2/3 of the minimum graduate credits necessary for the degree must be at a level of B or higher. Students cannot graduate with any I or NG grades. All required classes have to be completed with a B- or higher.

Students should keep the Advisor and the Graduate Studies Office informed of degree-completion intentions. Each student's grades are reviewed by faculty at the end of each semester, and the results communicated to the student by the advisor, with a copy to the student's file. Notification of failure to maintain grades at the levels stated above will result in loss of funding for the next semester. Students who do not maintain the 3.0 grade point average are placed on academic probation and run the risk of losing funding from the ERC and/or the University. Students on probation are expected to develop a plan to improve their studies with input from their advisor. Students on probation for more than 1 semester may be asked to leave the program if there is no improvement.

Other Responsibilities

In addition, students are expected to provide service to the program-related functions. Each student is assigned a list of duties in the beginning of each academic year by the Director of the graduate program (Dr. Davis). Examples include: helping in student orientation or in the Pilot Project Symposium, and maintenance of the teaching equipment laboratory. Students are required to complete course evaluations at the end of each semester; releasing grades is contingent upon completion of the evaluations.

In order for the Environmental and Industrial Hygiene academic program to maintain credibility with government and industry personnel and the local community, it is necessary to maintain confidentiality of information obtained through courses, research and other projects. A breach in confidentiality has negative impacts on the faculty, the university and students. Therefore, when applicable, each student is required to sign a confidentiality agreement as a part of course work or research projects (see an example through the link in Graduation section below). Before graduation, each student has to certify that they have reviewed and signed a Confidentiality Compliance Certification.

Refer to the MS student expectation document for details of expectation for funding will be provided at orientation, signed and saved in the graduate studies office.

Language Requirement

All students who do not have English as a first language must take the Oral English Proficiency Test (OEPT) administered by the University ***by the end of their first academic semester***. In case of failure, the student may take the examination again after an academic semester has elapsed, for a total of two (2) attempts per year. Students who do not speak English as their first language may not serve as teaching assistants until they have passed the OEPT. In any case, the student will not be awarded a degree until the examination is passed. The Division policy on language holds that all students speak English when communicating with faculty, staff and other students. The overwhelming majority of scientific literature is communicated in English, so it is to the individual's benefit to become well-equipped to convey scientific studies by speaking and writing in the English language.

Candidacy

Students are not required to submit formal applications for Master's candidacy. However, to maintain status as a graduate student and thus be eligible for a graduate degree, students must register for one (1) credit each academic year (in addition, students are required to register for at least one (1) credit during each semester that they wish to use University Resources (excluding summer semester)). A student becomes a candidate for the Master's degree upon matriculation in the Master's program to which they have been admitted. A student must be a candidate for at least one semester before granted a degree.

Time Limitations

Students will need to register for at least 1 credit hour per academic year to maintain active status. A student pursuing a program leading to a Master's degree must complete all requirements no later than five (5) years from the date of matriculation in that degree program. Under extenuating circumstances, students may petition the University Dean, through their department and college, for extension of the time limit. Petitions must be submitted on the approved form available on-line at: www.grad.uc.edu. Students who have not been enrolled in classes for more than three years are not eligible for reinstatement and must reapply for admission to the University.

In addition to University re-enrollment criteria, EIH adopted the following policy (6/23/04). Aside from the fees and requirements of the University and the Department of Environmental and Public Health Sciences, a student requesting reinstatement into the EIH Master's Program must also:

1. Be a student in good standing according to the program requirements at the time of last enrollment.
2. Take any courses that are **currently required** in the program that have not already taken. This means that the student must review the current requirements and either take or document that they have taken all of the required courses. Courses may be waived according to the guidelines of the current program. The prospective student should provide this information as part of their application.
3. Demonstrate interest and competence in the field by documenting work experience.
4. Document a consistent professional involvement in the field by attendance at local, statewide, national and international meetings and symposia, attendance in continuing education courses.
5. Make an application that will include a timeline for the completion of course requirements

The student must file an application that includes the above information. The decision to re-admit the student will be made by the faculty of the Division of EIH.

Statement of Intent

This should be a brief (not to exceed three single-spaced pages excluding references and time table) description of the proposed Thesis. The following headings need to be used when writing the statement.

- a) Background
- b) Objectives
- c) Hypothesis
- d) Specific aims
- e) Methods
- f) Significance/Relevance to Environmental Health
- g) Time Table for Completion
- h) Note concerning Institutional Review Board (IRB) and Institutional Animal Care & Use Committee (IACUC) approval, and
- i) References

The statement should indicate that the work will demonstrate the student's powers of critical evaluation. *The student and advisor are to suggest names of those willing to serve as members of the Thesis Advisory Committee and submit the Thesis Committee Request Form to the Graduate Studies Office. **The Statement of Intent must be approved by the thesis committee prior to starting the thesis and registering for Thesis Research Hours.***

All human research projects must be submitted to and approved by the University of Cincinnati Institutional Review Board (IRB). Projects originating in and/or involving other institutions (e.g., Children's Hospital) must also have approval of that IRB. Other permissions may apply (e.g., animal care, radiation safety). See section 3 below for further guidance on UC Medical IRB review of graduate student activities that involve Human Subjects Research.

Thesis

The Master's Thesis is intended to demonstrate the student's ability to communicate and evaluate critically. The Thesis needs to be the result of independent research. Information concerning the Thesis form and mechanics of preparing the final draft and abstract can be located on-line at www.grad.uc.edu.

Thesis Advisory Committee:

As soon as possible after completing majority of the course work, each student should submit a Statement of Intent (SOI) to the Thesis Committee. The Thesis Advisory Committee must meet the requirements of the Graduate School, composed of at least two full-time faculty members with professorial rank, at least one of whom is a member of the All-University Graduate Faculty. Typically, the academic advisor is the Chair of the Thesis Advisory Committee. The advisor may act as chair, convener, and voting member of the Thesis Advisory Committee. The final judgment on acceptability of the Thesis will be made by this Committee, by a unanimous vote if there are only two members, or else with no more than one dissenting vote.

The Statement of Intent for Master's Thesis should be submitted for the Thesis Committee approval early in the Thesis projects timetable. Each student should meet with their advisor to create a timetable of completion. Master of Science Statements of Intent can be submitted before all qualification requirements are met.

Thesis Research

- 1) Thesis research may be part of the ongoing work of the Advisor's laboratory but must be separately identifiable. The Thesis research should reflect advisor guidance but mainly be the independent work of the student.
- 2) It is the responsibility of the student and the faculty advisor to see that a Thesis Committee is formed and that the research plan is finalized. The Thesis Committee must confirm that the student's work is not, to a large extent, carried out by technical assistants or other personnel.
- 3) A Thesis may be written in the form of a publishable research paper, conforming to the publication guidelines of the student's journal of choice (e.g., Journal of Environmental and Occupational Hygiene, Annals of Occupational Hygiene, etc.). This option is strongly recommended, but must be approved by the student's Thesis Advisor and Thesis Committee. The research must be conducted while the student is enrolled in the program and the student must be the first author of the manuscript. The manuscript should not be submitted for publication until approval by the Thesis Committee. The student must place an embargo on the Thesis prior to submission of his or her manuscript for publication (see section 5 for further instructions). Alternatively, a larger description of the work may be produced, and a manuscript drawn from the thesis.
- 4) In agreement with the function of the Thesis Committee, as specified by the rules of the University of Cincinnati Graduate School, any decisions about the quantity and quality of the work done are the responsibility of the Thesis Committee.
- 5) After the student leaves the University, the Thesis research results may be used as the basis for continuing investigations by the student and/or by the laboratory in which the Thesis research was done. The student and the laboratory are entitled to retain copies of the data and analyses for their use. Upon leaving the university at the completion of the thesis, the student needs to agree to give all study related data and delete all data files from their computer unless otherwise agreed with the advisor.

Policy for External Thesis Research for Master's Program

Thesis research outside the department requires careful coordination between the department and the collaborating institution. There are circumstances where it is in the interest of the student, the department, and an outside laboratory of academic stature, such as elsewhere in the University, or at a Federal Agency, to permit pursuit of graduate Thesis research outside the department. The requirements of external Thesis research are:

- 1) A departmental faculty advisor who has expertise in the field of Thesis research;
- 2) Appointment of the external supervisor to the Thesis Committee;
- 3) An explicit understanding that, as in the case for Thesis research carried out within the department, every effort will be made to ensure that the Thesis research, when initiated, will be supported to its conclusion;
- 4) Adherence to the same rules and governance procedures used for Thesis research within the department. These include the clear understanding that the results are available for publication as a Thesis and in the open literature,

and it is the responsibility of the Thesis Advisory Committee to make final decisions about the direction and extent of work. Attention is also drawn to the requirement that the Thesis Advisory Committee meet at least twice each year;

Guidance on UC Medical IRB Review of Graduate Student Activities that involve Human Subjects Research in the Department of Environmental Health.

- 1) The UC IRB must review and approve all theses or dissertation projects conducted to meet the requirements of a graduate degree that involve human subjects research.
- 2) The UC IRB may accept CCHMC as the IRB of record for UC student projects that involve human subjects research. In addition, UC has a MOU with CCHMC and CCHMC is listed on the UC FWA.

IRB Review and Approval Requirements of Student Projects that Involve Human Subjects

Location of Research	IRB Approval Status	Required Action
UC or CCHMC	UC IRB Approved	Submit modification request to UC IRB to add student to the study as a sub-investigator.
CCHMC	Exempt	Complete and submit the “Determining Whether a Proposed Activity is Human Research According to DHHS or FDA Regulatory Definitions” form available at http://researchcompliance.uc.edu/irb to seek exemption from UC’s IRB.
CCHMC	CCHMC IRB Approved	Contact a CCHMC IRB staff member to request a “reliance review” from UC IRB. UC IRB will review the materials submitted to CCHMC and notify the student via email of its determination.
CCHMC	CCHMC IRB approved and accepted by the UC IRB as the IRB of record	Submit modification request to CCHMC IRB to add student to the study as a sub-investigator. Copy UC IRB on request. Does not require UC IRB approval.
UC	none	Student must submit the project to UC IRB for review with their faculty advisor as a Co-Principal Investigator.
CCHMC	none	When the student submits materials to CCHMC IRB, also request a “reliance review” from UC IRB. CCHMC will be the IRB of record, but UC IRB will also notify the student via email of its determination.

Embargo of Thesis

You can request an embargo be placed on your thesis for two years initially, with the option of extending the embargo a third year. An embargo is simply a hold on publishing your thesis in OhioLINK. If you plan to submit your thesis in part or whole for publication it is vital that you embargo your work for a period of time. Some journals still consider a thesis that is published on the internet a “publication.” ***In order to avoid the fact or appearance of a “duplicate” publication it is important to embargo your document.*** You request an embargo electronically when you upload your thesis for final approval by your chairperson. As a further protection, you should acknowledge in any submitted manuscripts based upon your graduate research that the work was completed in partial fulfillment of the requirements for the MS in Environmental and Occupational Hygiene. See your advisor if you have any questions regarding the embargo of your work.

Submitting Your Thesis

The University of Cincinnati Electronic Thesis or Dissertation (ETD) website has all the details you’ll need to submit your final thesis: <http://grad.uc.edu/student-life/etd/formatting.html>. In short, you will need to submit your full thesis in PDF form to OhioLINK following the directions on the ETD website, along with a scanned PDF of your fully signed Committee Approval form.

If you publish part or your entire thesis, you should add the following acknowledgement to your publication: “This work was completed in partial fulfillment of the Master of Science degree in Environmental and Occupational Hygiene in the

Department of Environmental Health, Division of Environmental and Industrial Hygiene, University of Cincinnati College of Medicine.” If the student received ERC funding (stipend or PRP award), the following has to be included: (Student’s name) was supported by the National Institute for Occupational Safety and Health through the University of Cincinnati Education and Research Center (No. T42OH008432).

(Student’s name) was supported by the National Institute for Occupational Safety and Health through the University of Cincinnati Education and Research Center (No. T32OH008432).

Graduation

Any student intending to receive a graduate degree is responsible for completing the “On-line Graduation Application” at: www.grad.uc.edu and ensuring that the procedures are carried out and the indicated forms are submitted electronically to the Graduate School.

- ✓ **Cap and Gown** - may be purchased or rented at the University Bookstore.
- ✓ **I and NG Grades** - Notification of removal of all **I** and **NG** grades must be submitted prior to the student’s graduation. (See “IV. Grades and Grading Practices” section)
- ✓ **Credit Hours** - Completion of the required semester credit hours for the degree.
- ✓ **Departmental Requirements** – Students must complete all departmental requirements for the degree. Any graduate student who expects to receive a degree at any of the three (3) University commencements must make a formal application for the degree.
- ✓ In addition to fulfilling all university and departmental graduation requirements, the student in the Environmental and Industrial Hygiene program needs to do the following as a part of their graduation application:
 - Complete the **ABET Exit Interview**: <http://eh.uc.edu/assets/uploads/2014/12/ABET-Exit-Survey-Template.pdf>
 - Complete the **Confidentiality Compliance Certification** to certify that they have not violated any confidentiality agreements that they signed as a part of course work or research projects or are retaining data without the knowledge of the advisor:

EIH Student Resources: <http://med.uc.edu/eh/divisions/ih/student-resources>

Required Courses for a Master’s Degree in Industrial Hygiene:

https://med.uc.edu/docs/default-source/environmental-health-docs/division-of-environmental-industrial-hygiene/student-resources/eih-tracking-sheets/ih-ms-tracking-form-7-19-22.pdf?sfvrsn=852f93c4_6

Required Courses for a Master’s Degree in Occupational Ergonomics:

https://med.uc.edu/docs/default-source/environmental-health-docs/division-of-environmental-industrial-hygiene/student-resources/eih-tracking-sheets/oe-ms-tracking-form-7_19_22.pdf?sfvrsn=75a2d863_6

Required Courses for a Master’s certificate Degree in Biomonitoring:

https://med.uc.edu/docs/default-source/environmental-health-docs/division-of-environmental-industrial-hygiene/student-resources/eih-tracking-sheets/biom-ms-tracking-form-7_19_22.pdf?sfvrsn=bdd675b5_6

Required Courses for a Certification in Hazardous Substances can be found at the bottom of the IH tracking form.

Master's Degree Graduation Checklist

- 1. English Proficiency requirement met for international students (OEPT must be taken by the end of your first academic year). Letter attesting to satisfactorily completed OEPT submitted by examiner to program director and Graduate Studies Office (GSO).
- 2. Course work required for M.S. Degree completed satisfactorily, and all grades from previous terms have been confirmed (no outstanding "I" or "NG" grades). Academic status confirmed with GSO or program office.
- 3. If applicable, all necessary IRB approvals have been obtained (see page 11).
- 4. Statement of Intent and proposed Master's Thesis committee members submitted to Thesis Committee for approval. (Submittal of the Statement of Intent can be made before all course work has been completed.)
- 5. Once your Statement of Intent is approved, you should meet regularly with your Committee members to discuss progress, questions, and keep on a timeline for completion.
- 6. Thesis written. You should give the draft to your Thesis committee members **at least one month** before the deadline (www.grad.uc.edu) to give them ample time to review and send back comments. Committee members have approved it and signed the Committee Approval form found at www.grad.uc.edu.
- 7. Complete "On-Line Graduation Application" at: www.grad.uc.edu. Graduation paperwork filed with GSO and University Officials (see official dates in GSO). Also, make sure to check out the Graduation Deadlines at <http://gradapps.uc.edu/graduationdeadlines/graduation-deadlines.aspx>.
- 8. Thesis uploaded submitted electronically following the instructions found at <http://grad.uc.edu/student-life/etd/formatting.html>. Current information regarding Thesis and electronic submission can be obtained at: <http://grad.uc.edu/student-life/etd.html>.
- 9. Complete ABET Exit Interview and Confidentiality Compliance Certification

Doctor of Philosophy Degree Program

Admission from Outside the Department

The student applies for admission to the program through the Graduate School (<http://grad.uc.edu/admissions.html>). The application is evaluated by the Director of the Training Program and the faculty of the Training Program.

The prospective student should have a strong undergraduate science background, which includes study in **four** of the following: college level biology, mathematics, chemistry, engineering, and physics, with an overall GPA of 3.0/4.0.

All applicants will complete an online interview Dr. Davis (program director) and will be reviewed by a panel of students and faculty. The faculty will develop a structured interview that will cover specific areas known to be good predictors of graduate performance: resilience, persistence, native intelligence, problem-solving, communication skills, numeracy, and writing. A rubric will be developed for scoring of each applicant.

Students whose native language is other than English (*visit the graduate school for exemption*, <https://grad.uc.edu/fac-staff/handbook/graduate-admission/international-admission/english.html>) must demonstrate proficiency. Currently, the University accepts any of the following: IELTS score (6.5 overall band score is Grad School minimum); Duolingo English Test score (105 is Grad School minimum); PTE (47 is Grad School minimum); TOEFL (80 is Grad School minimum for the internet-based test, iBT).

The complete application is considered when deciding the acceptance of an applicant into one of the academic programs.

Admission from Within the Department

The student applies for admission by submitting application for the PhD program that includes UC transcripts and personal statement. The application is evaluated as above.

Initial Academic Advisor

The Director of the Environmental and Industrial Hygiene program (Dr. Davis) will be the initial advisor for all students. Upon entering the program, you will be required to read and sign the PhD expectation form and return it to the graduate studies office.

The course of study to be pursued for the Doctoral degree will be arranged with each student by their advisor following the guidelines specific to the program. Course work in other departments may be scheduled according to the needs of the individual student. In all cases, the aim of the Doctoral program will be a reasonable concentration and a breadth of study, designed to develop competence in research, scholarship, teaching, and professional performance in general. At the end of each semester, the student is to meet with the advisor to review and finalize the selection of courses for the next semester, including entry in tracking sheet on the UC intranet (advisor has password and access). At the start of the semester, the student should meet or have a communication with advisor about the previous semester's grades and progress with tracking sheet being initialed by advisor.

Research Advisor

By the end of the first year of study, the PhD student personally interviews with every faculty member in the Training Program concerning research interests/projects. As each interview is completed, the student obtains the faculty member's signature on a student interview form (https://med.uc.edu/docs/default-source/environmental-health-docs/division-of-environmental-industrial-hygiene/student-resources/eih-division-forms/eih-faculty-interview-form_12-1-2020.pdf?sfvrsn=fe5b9d2d_6) which is available from the Student resource page (<https://med.uc.edu/depart/eh/divisions/ih/student-resources>). The completed form goes to student's file. Based on the faculty discussion, and in consultation with one or more faculty members, a student selects a possible research topic. The faculty member agreeing to mentor the student will become the Research Advisor. The research advisor may be the initial advisor chairing the Academic Advisory Committee or a different faculty member, if another individual more closely matches the student's research interests. If a change is desired, a 'change of advisor' form is completed by the Academic Advisor, Research Advisor and student. Whenever the student's Ph.D. focus is identified, it is best that the principle advising be done by a faculty member with similar research interests (see additional requirements about committee formation below).

Once the PhD student selects an advisor, the two will need to complete the UC-ERC Individual Development Plan that will identify the strengths and weaknesses of the student and develop a plan to improve the weaknesses. The student and advisor will also sign the College of Medicine Research Student-Mentor Agreement and provide signed copy to graduate studies office.

Credit Hours

To graduate with a Doctor of Philosophy Degree from the Division, students must complete a **minimum of 90 graduate credit hours**. The last 30 credits, exclusive of research credits, must be completed at the University of Cincinnati or under its direction. ***Students must register for at least 7 PhD Dissertation research credits (ENV-9091), but they cannot do so before passing the Qualifying Exam.*** Students matriculating without a confirmed master's degree must complete 90 credit hours, 61-62 credits must come from didactic course work, 7 must be dissertation research credits (ENV-9091) and the remaining 21-22 credits are to be filled with elective course work. Students matriculating with a confirmed master's degree must complete a minimum of 68 credit hours, 61 must come from didactic course work and 7 from research credits (ENV-9091). In no case, however, will a degree be granted solely on the basis of accumulation of the required number of credits. The Division will recommend students for a degree only after they have developed the necessary intellectual abilities and have fulfilled all requirements of the Department and the Division.

Doctoral degrees are conferred on the basis of sustained study and high scholarly attainment in a special field of learning. In no case will the degree be granted for less than 3 years of full-time graduate study or its equivalent, of which the last year must be in residence in the University of Cincinnati or under the University's direction.

The student takes the required courses for the Industrial Hygiene, Occupational Ergonomics or Biomonitoring program (see tracking forms for course requirements—links are in Graduation Section below).

If a student has taken courses as an unmatriculated student at the University of Cincinnati, a total of 12 credit hours may be applied toward the 90-credit requirement, with the approval of the student's advisor. A total of 30 graduate credit hours from another institution may be applied to the degree requirement, with the approval of the student's advisor.

Courses may be waived with the approval of the course instructor (*See Course Waiver Form under Student Resources on the Division's website*). An additional elective course or research credit must be taken for the same or greater number of credits as the waived course. A maximum of 20 credit hours of waived classes can be substituted by research credits.

PhD students are required to take 18 graduate credits of formal courses in a supporting program. These courses serve to develop expertise as the groundwork for a student's research efforts. The courses taken are subject to approval of the student's Academic Advisory Committee. More than 18 credits are often taken. ***One of the following two courses has to be included among the 18 credits: Experimental Design or Design and Management of Field Studies.***

As expected, students will attend appropriate seminars for purposes of availing themselves of these unique educational opportunities; these may be division, department or ERC-wide offerings (check the required seminars on the course tracking form). Seminar credits are counted as course credits but do not count towards the required 18 graduate credits of formal courses for the supporting program. The same applies for the Professional Development, Written or verbal Communication and Teaching Practicum required courses.

Student who have attempted 174 graduate credits, regardless of discipline or student status, are not eligible to receive a University stipend or tuition. (<https://grad.uc.edu/fac-staff/handbook/financial-support/174-rule.html>)

Student Duties

In addition, students are to provide service to program-related functions as expected. Each student is assigned a list of duties in the beginning of each academic year by the Director of the graduate program. Examples include: helping in student orientation or in the Pilot Project Symposium and maintenance of the teaching equipment laboratory. Students are required to complete course evaluations at the end of each semester; releasing grades is contingent upon completion of the evaluations.

In order for the Environmental and Industrial Hygiene academic program to maintain credibility with government and industry personnel and the local community, it is necessary to maintain confidentiality of information obtained through courses, research and other projects. A breach in confidentiality has negative impacts on the faculty, the university and students. Therefore, when applicable, each student is required to sign a confidentially agreement as a part of course work

or research projects (see an example though the link on page 12). Before graduation, each student has to certify that they have reviewed and signed a Confidentiality Compliance Certification.

Refer to the PhD student expectation document for details of expectation for funding which is provided to every student at orientation, signed and saved in the graduate studies office.

Minimum Academic Performance

Full-time Ph.D. students will be registered for at least 12 graduate credits per semester. Students receiving a UGS or ERC funding must be registered for 12 graduate credit hours for each semester for which they are receiving support. Advanced PhD students, who have completed all required credits and are still working as full-time trainees in finalizing their dissertation, can register for one credit hour per semester and still receive the ERC stipend. However, they will not receive tuition support from the University. If a student is registered for at least one (1) graduate credit, he or she will maintain graduate student status throughout the entire academic year, fall through summer.

All students are required to maintain an overall B average (3.0) and to obtain grades of A or B in all required courses. In addition, at least 2/3 of the minimum graduate credits necessary for the degree must be at a level of B or higher. Students cannot graduate with any I or NG grades. For all required courses, a grade of B or higher must be obtained.

Students should keep the Advisor and the Graduate Studies Office informed of degree-completion intentions. Each student's grades are reviewed by faculty at the end of each semester, and the results communicated to the student by the advisor, with a copy to the student's file. Students who do not maintain the 3.0 grade point average are placed on academic probation and run the risk of losing funding from the ERC and/or the University. Students on probation for more than 1 semester may be asked to leave the program if there is no improvement.

A written assessment of performance for each Doctoral student is required at the end of a student's first year; an annual review or some other formal evaluation of progress is required throughout a student's program. The Division of Research and Advanced Studies will conduct a required exit survey on the Doctoral experience of all graduating Doctoral students. The results will be shared with the Doctoral programs (Graduate Faculty).

Residency

Prior to admission to doctoral candidacy, all doctoral students shall complete a residency requirement by enrolling in 10 graduate credit hours (12 if funded by a Graduate Assistantship or ERC) per term in each of two semesters (including summer) during a single academic year.

Language Requirement

All individuals who do not have English as their first language must take the Oral English Proficiency Test (OEPT) administered by the University as soon as possible after the beginning of their studies, but not later than at the end of their first academic year. Students who do not speak English as their first language may not serve as teaching assistants until they have passed the OEPT. In case of failure, the student may repeat the examination several times, if necessary; but in any case may not apply for the Qualifying Examination until the language examination has been passed.

The Division policy on language holds that all students speak English when communicating with faculty, staff and other students. The overwhelming majority of scientific literature is communicated in English, so it is to the individual's benefit to become well-equipped to convey scientific studies by speaking and writing in the English language.

Qualifying Examinations

Before a Doctoral student becomes a candidate for a Doctoral degree, they are required to take an examination for candidacy, i.e., the Qualifying Examination. The purpose of the examination as a whole is that of determining the candidate's potential for Ph.D. work; its major purpose is not the preparation of a statement of intent for the candidate's dissertation research.

Prior to Qualifying Exam, the student must have completed essentially all required course work in their respective program and maintained a grade point average of B (3.0) or better in all Doctoral course work. When the student is ready to take the qualifying examination, the student and advisor should submit the request to the Division Director for appointment of a Qualifying Examination Committee, through the Graduate Studies Office (GSO) with a cover memorandum from student & advisor. If the student selects the traditional format, this request must also be accompanied by the student's three mini research proposals which will serve as the vehicle for his or her examination (see below).

The purpose of the doctoral qualifying examination is to determine if the student has adequate knowledge and understanding of the industrial hygiene discipline to successfully perform dissertation research. It is the responsibility of every student to be thoroughly familiar with the procedures outlined below. The advancement to doctoral candidacy is a serious process that represents an important milestone in a student's academic career.

Guidelines for the Traditional Qualifying Examination

The Qualifying Exam consists of both a written and an oral portion. The written portion starts with three pre-proposals, short research proposals. The key steps are shown below:

- 1) ***Student discusses with Academic Advising Committee the broad overview of three ideas that could be developed into research projects***
- 2) Each proposal, not exceeding three single-spaced typewritten pages in length (excluding references), should present at least one clearly stated hypothesis, logically developed concepts and recognized priorities, and show evidence of creative thinking. The experimental design and the data collection and analysis techniques to test the hypothesis should be outlined. Full development of details is not necessary for a preliminary proposal. Accuracy of wording and clarity of presentation are particularly important in these short documents. Key references should be given to demonstrate command of the topic. ***This is an examination; therefore the development of the proposals is done by the student, without input from the Academic Advising Committee.***
- 3) ***When the three proposals are completed***, the student and the advisor prepare a list of prospective members who are willing to serve on the Examining Committee. This list is a suggestion to the Division Director. The Division Director reviews the proposals and the suggested committee for breadth. Follow-up questions may be asked of the Advisor/student; when satisfied, the Division Director appoints an appropriate Examining Committee.
- 4) ***The proposals are shared with the Examining Committee***
- 5) ***An examination is scheduled*** during which the three proposals are evaluated as an examination of the breadth of knowledge of the student and therefore must focus on three entirely different areas and not be closely related protocols designed to test the same or similar hypotheses or use the same methods to test three different hypotheses. Each proposal should explore a topic in sufficient depth to show that the critical questions raised are relevant and worthy of detailed investigation to add new information to the discipline.
- 6) If successfully completed, the ***Examining Committee will select one mini-proposal***, or a new topic for expansion to a full research proposal.
- 7) ***This full proposal is presented orally*** and the student is examined on topics related to the proposal, and any other topics at the choosing of the Examining Committee.

Qualifying Examination Committee

The Qualifying Exam Committee consists of at least three (preferably 5) members of the University faculty, one of whom must be from within the faculty of the Training Program and one of whom must be drawn from outside the Department of Environmental and Public Health Sciences. The Chairperson sits as a non-voting member of the committee. This individual is responsible for the overall administration of the examination which includes:

- (1) convening the Examining Committee;
- (2) ensuring that the guidelines are followed

Guidelines for the Alternate Qualifying Examination

The student may also choose to a secondary option for the qualifying examination where there are two parts: 1) take home questions that will include 4 to 5 questions that are developed by the EIH faculty and 2) full proposal which when appropriate should focus on dissertation research. The take home questions will cover a wide variety of core topics relevant to the candidate's expertise that will challenge them about scientific content, application, and theory. The aim of the take home exam is to determine the competency as an expert and researcher. The full proposal is similar to the detailed expanded proposal with oral defense.

No guideline stated in this document is meant to conflict with University guidelines stated in the University of Cincinnati Graduate (check student resource page for latest student handbook: <http://med.uc.edu/eh/divisions/ih/student-resources>)

Form of the Qualifying Examination for the Full Proposal

This is at the discretion of the Examining Committee with the approval of the Division Director. Historically, it has consisted of the selection of one of the proposed research projects which the student develops into a full-fledged research proposal under the format of a NIH or NSF grant application. The Qualifying Examination Committee will choose carefully a proposal for further development by a student, remembering that the research proposal, in this case, is merely a technique, a vehicle, for structuring the examination in a way which will permit faculty to assess the student's knowledge and creativity in their chosen field. The extended proposal can be selected to be focused on the dissertation research of the trainee. To accomplish this, a proposal must incorporate some breadth of bibliographic and theoretical background, a hypothesis, and an appropriate experimental design. On the other hand, practical limitations such as budget, staff, immediate feasibility, etc., should not be a primary concern. When determining an appropriate topic for the examination, the faculty of the Department of Environmental and Public Health Sciences has interpreted "environmental health" in the broadest sense:

Environmental Health includes: air pollution, aerosols, water pollution, solid waste, diet and nutrition (including growth of people at various stages of life), infectious agents, and genetics and molecular factors in disease. This concept includes the various uses of toxicology in these fields. Occupational topics are also considered within the realm of environmental health, as well as many genetic topics (especially in toxicology), pesticides and fertilizers, risk assessment and risk analysis, social factors that impact on the environment, and ergonomics (including injuries). Additional topics include: financial considerations (especially important in Risk Analysis), clinical studies, and population, agricultural, and transportation issues.

In preparing a proposal, the student may not ask for help from faculty for other than purely factual information. Once the full written proposal has been accepted by the Examining Committee, the student submits to an oral examination. A formal announcement to the Department faculty has to be posted and distributed at least 14 days prior to the exam. Students who have already passed their qualifying exams may be permitted to attend with the permission of the candidate and the Chair of the Qualifying Examination Committee. The oral examination consists of a presentation of the proposal followed by a period of questions. The questions need not be confined to the proposal and serve to test the overall state of the examinee's knowledge and ability to formulate a research plan. Performance on the examination is decided on the basis of a simple majority of the voting members of the committee with the options being:

- (1) Pass
- (2) Conditional pass (passing is contingent upon further work on the part of the student, e.g., written report in a certain area, taking a specific course, etc.)
- (3) Fail - If student fails, they can request **one** retake.

Retaking Candidacy Examinations: A second examination for candidacy can be held after at least a semester has elapsed. In the Department of Environmental and Public Health Sciences, only one retake of the candidacy examination is permitted.

Should the student fail the second examination, a petition to the faculty through the Program Director must be made for continuation in the program.

Timeframe of Qualifying Examination Process

The qualifying examination is to be **completed within 6 months of the formation of the Examination Committee.**

Successful Completion of Qualifying Examination

With the successful completion of the Qualifying Examination, the student becomes a candidate for the Ph.D. degree.

Candidacy

Registration Requirements

Once the student has completed the required course work, the language requirements, and the Qualifying Examination, they are considered a candidate for the Ph.D. degree. After admission into candidacy for the Doctoral degree, registration and fee payment for at least one semester credit hour in the fall semester of each year is required for each student if their candidacy is not to lapse. In addition, students are required to register for at least one (1) credit during each semester that they wish to use University Resources, excluding summer.

Time Limitations

- a) The Doctoral degree will be granted for no less than the equivalent of three (3) years of full-time graduate study.
- b) All requirements for the doctoral degree must be completed within nine consecutive academic years of the date of matriculation into the program.
- c) No more than 12 hours of applicable graduate course work may be completed prior to admission as a graduate student in this Department.
- d) Normally, the Qualifying Examination is taken after two (2) years of full-time study. A period of at least seven (7) months must elapse between admission to Doctoral candidacy and receipt of the degree.
- e) Students who have not been enrolled in courses for more than three years are not eligible for reinstatement and must reapply for admission to the University.

Dissertation Advisor and Committee

When the student is ready to begin the Dissertation research, the student, through the advisor, should submit to the Division Director a list of faculty members considered as particularly appropriate for membership on the student's Dissertation Committee. The student must also submit the Dissertation Committee Request form to the Graduate Studies Office. Rules of the Graduate School require that at least the advisor or otherwise two other members of the committee be from the Graduate Faculty of the University. A dissertation committee must be composed of **a minimum of three full-time faculty members at UC with permanent professorial rank** (i.e., tenure-track full, assistant, and associate professors—not adjunct, educator or visiting). Research faculty may serve on the committee and chair. Other non-tenure track faculty categories may not chair dissertation committees but may, on a case by case basis approved by the Director of the Graduate School in advance, serve as additional committee members (beyond the 3 minimum) if the appointing unit demonstrates that their expertise is beneficial for the dissertation project.

Neither an emeritus professor nor a faculty member from another institution may serve as the chair of the committee. Emeriti professors may remain on the committee if they were members when the proposal was accepted. A faculty member originally on a student's committee who leaves UC to take an academic position elsewhere may also continue to serve on the student's committee if both the faculty member and the student agree to continue the relationship. If a faculty member or appropriate professional practitioner has special expertise in a dissertation topic, such a person may be added to the dissertation committee if he/she is nominated by the candidate and approved by both the chairperson of the dissertation committee, the director of graduate studies for the academic unit involved and the Director of the Graduate School. All such individuals serve as a full voting member of the dissertation committee without compensation from either the university or the candidate, and would serve in addition to the minimum number of three qualified full-time UC faculty. Due to the standing MOU, researchers at NIOSH can serve on dissertation committee including as chair.

Where special expertise on, or familiarity with, the Dissertation topic is available in the person of a former faculty member or appropriate external professional, such a person should be included in the basic Dissertation Committee if they are nominated by the candidate and approved by the graduate school. Such persons should be voting members of the Dissertation Committee and be appointed to the Committee along with the initial appointment of the other members. Such persons serve without compensation from either the University or the candidate.

At this time, the student also submits a copy of a proposed Dissertation topic (Preliminary Statement of Intent) with sufficient detail to help the Division Director approve the topic and approve the Dissertation Committee. The student should submit this Preliminary Statement of Intent through their advisor. The cover memorandum should also state the status of the student's progress (if any) relative to the time table in the Statement. ***The dissertation committee should meet at least twice a year, and these meetings should be documented with the Committee report form that is found in the Division's Student Resources tab on the Departmental website.***

Preliminary Statement of Intent

This should be a brief (not to exceed three single-spaced pages excluding references and time table) description of the proposed Dissertation. If the student selected the alternative qualifying exam, the full expanded dissertation proposal can be submitted in replace of the statement of intent. ***The statement of intent must be approved by the dissertation committee prior to collecting data.*** The names of the members of the dissertation committee need to be submitted and approved by the Degree Committee. The following headings need to be used when writing the statement.

- a) Background
- b) Objectives
- c) Hypothesis
- d) Specific aims
- e) Methods
- f) Significance/relevance to environmental health
- g) Time table for completion
- h) Note concerning Institutional Review Board (IRB) (refer to page 10) and Institutional Animal Care & Use Committee (IACUC) approval, and
- i) References

The statement should indicate that the work will demonstrate the student's powers of critical evaluation.

It is the responsibility of the student and the faculty advisor to see that a Dissertation Committee is formed and that the research plan is finalized within six months after passing the Qualifying Examination. The Dissertation Committee should assure itself that the student's work is not, to a large extent, carried out by technical assistants or other personnel.

All human research projects must be submitted to and approved by the University of Cincinnati Institutional Review Board (IRB). Projects originating in and/or involving other institutions (e.g., Children's Hospital) must also have approval of that IRB. Other permissions may apply (e.g., animal care, radiation safety).

The student must submit to the Dissertation Committee a final Statement of Intent within six months of the appointment of the Dissertation Committee. The preferred format will be a R01 format but the dissertation committee can designate an alternative format. In some cases, more frequent progress reports and presentations to the Dissertation Committee can be very helpful for the candidate. When the Dissertation is completed, a copy is submitted to each Committee member for critical evaluation. If it is considered to be satisfactory with respect to form and content by the Committee, a final, public Defense of Dissertation should be scheduled through the University's and Department's Graduate Studies Office. Before the defense, a final draft of the Dissertation must be in the hands of each member of the Dissertation Committee in acceptable form and public announcements must be posted at least two weeks before the scheduled Defense.

Dissertation Research

- 1) Dissertation research should be part of the ongoing research affiliated with the department but must be separately identifiable. The Dissertation research should reflect advisor guidance, but mainly be the independent work of the student. The Dissertation research advisor who may or may not be their academic faculty advisor must have expertise in the field of research.
- 2) It is the responsibility of the student and the academic faculty advisor to see that a Dissertation Committee is formed and that the research plan is finalized within six months after passing the Qualifying Examination. The Dissertation Committee should assure itself that the student's work is not, to a large extent, carried out by technical assistants or other personnel.
- 3) After approval of the original topic by the Dissertation Committee any major change from one Dissertation topic to another is not permitted without the approval of the Dissertation Committee.
- 4) In agreement with the function of the Dissertation Committee, as specified by the rules of the University of Cincinnati Graduate School, any decisions about the quantity and quality of the work done are the responsibility of the Dissertation Committee. As described in the PhD expectations, which will be, signed by student upon entry into the program, the expectation is that three manuscripts with one having student as first author.
- 5) After the departure of the student the dissertation research results may be used as the basis for continuing investigations by the student or by the laboratory in which the research was done. The student and the laboratory are entitled to retain copies of the data and analyses for use. Upon leaving the university at the completion of the thesis, the student needs to agree to give all study related data and delete all data files from their computer unless otherwise agreed with the advisor.

Policy for External Dissertation Research

Dissertation research outside the department requires careful coordination between the department and the collaborating institution. There are circumstances where it is in the interest of the student, the department, and an outside laboratory of academic stature, such as elsewhere in the University, or at a Federal Agency in Cincinnati, or other domestic or foreign institution to permit pursuit of graduate research outside the department. The policy outlined below represents

a restatement and elaboration on the previous policy on external dissertation work, adopted by faculty on 10/1/79. The requirements of external Dissertation research are:

- a) A departmental faculty advisor who has expertise in the field of research;
- b) Appointment of the external supervisor to the Dissertation Committee;
- c) An explicit understanding that, as in the case for research carried out within the department, every effort will be made to ensure that the research, when initiated, will be supported to its conclusion;
- d) Adherence to the same rules and governance procedures used for Dissertation research within the department. These include the clear understanding that the results are available for publication as a Dissertation and in the open literature, and it is the responsibility of the Dissertation Committee to make final decisions about the direction and extent of work. Attention is also drawn to the requirement that the Dissertation Advisory Committee meet at least twice each year;

Final Defense of Dissertation

When the Dissertation Committee judges that the research is complete, the student and research advisor arrange for a public defense of the dissertation through the Graduate School, by completing the online graduate application form. Deadlines to apply to graduate are announced each semester on the Graduate School's website. The student's final Defense of Dissertation will be open to the public and all members of the academic community and posted on bulletin boards at least two weeks before the defense. The application to graduate must be completed at least two weeks prior to the defense date.

The Dissertation Defense will consist of (1) an oral presentation of the work by the candidate, (2) a period of questioning of the candidate by the Dissertation Committee, and (3) a period of questions and comments by other members of the audience. The Research Advisor will serve as moderator for the oral defense. At the conclusion of the Defense, the Committee will withdraw, make a decision forthwith with regard to the acceptability of the Dissertation and its defense, and report to the candidate. If the decision is favorable, the approval form will be signed by the Committee members and transmitted to the Office of the Graduate Division. At least $\frac{3}{4}$ of the voting members of the Dissertation Committee must approve the Dissertation.

Publication of Dissertation

The University of Cincinnati Electronic Thesis or Dissertation (ETD) website has all the details you'll need to submit your final thesis: <http://grad.uc.edu/student-life/etd/formatting.html>. In short, you will need to submit your full thesis in PDF form to OhioLINK following the directions on the ETD website, along with a scanned PDF of your fully signed Committee Approval form. If you publish your Dissertation in a journal, you should acknowledge in any submitted manuscripts based upon your graduate research that the work was completed in partial fulfillment of the requirements for the PhD in industrial hygiene or occupational safety and ergonomics.

If you publish part or your entire Dissertation, you should add the following acknowledgement to your publication: "This work was completed in partial fulfillment of the Doctor of Philosophy degree in (Industrial Hygiene or Occupational Safety and Ergonomics) in the Department of Environmental Health, Division of Environmental and Industrial Hygiene, University of Cincinnati College of Medicine." Also acknowledge any grant support you received as you completed your project. If the student received ERC funding (stipend or PRP award), the following has to be included:

Academic Programs:

- ***(Student's name)*** was supported by the National Institute for Occupational Safety and Health through the University of Cincinnati Education and Research Center (No. T32OH008432).

TRT:

- This research study was supported by the National Institute for Occupational Safety and Health through the Targeted Research Training Program of the University of Cincinnati Education and Research Center Grant #T42OH008432.

PRP:

- This research study was supported by the National Institute for Occupational Safety and Health through the Pilot Research Project Training Program of the University of Cincinnati Education and Research Center Grant #T42OH008432.

Embargo of Dissertation

If you plan to submit your Dissertation in part or whole for publication it is vital that you embargo your work for a period of time after electronic submission to the Office of Graduate Studies. Some journals still consider a Dissertation that is published on the internet a “publication.” In order to avoid the fact or appearance of a “duplicate” publication it is important to embargo your document. You can embargo your work for a period of up to three years. You request an embargo electronically when you upload your thesis for final approval by your chairperson. You must also provide a reason for the embargo such as patent pending or publisher restrictions. See your advisor if you have any questions regarding the embargo of your work.

Graduation

Any student intending to receive a graduate degree is responsible for completing the “On-line Graduation Application” at: www.grad.uc.edu and ensuring that the procedures are carried out and the indicated forms are submitted electronically to the Graduate School.

- a) **Cap and Gown** - may be purchased or rented at the University Bookstore.
- b) **I and NG Grades** - Notification of removal of all **I** and **NG** grades must be submitted prior to the student’s graduation. (See “IV. Grades and Grading Practices” section)
- c) **Credit Hours** - Completion of the required semester credit hours for the degree.
- d) **Departmental Requirements** – Students must complete all departmental requirements for the degree. Any graduate student who expects to receive a degree at any of the three (3) University commencements must make a formal application for the degree.
- e) In addition to fulfilling all university and departmental graduation requirements, the student in the Environmental and Industrial Hygiene program needs to do the following as a part of their graduation application:
 - Complete the **ABET Exit Interview**: <http://eh.uc.edu/assets/uploads/2014/12/ABET-Exit-Survey-Template.pdf>
 - Complete the **Confidentiality Compliance Certification** to certify that they have not violated any confidentiality agreements that they signed as a part of course work or research projects or are retaining data without the knowledge of the advisor:

Required Courses for the PhD degree in Industrial Hygiene

https://med.uc.edu/docs/default-source/environmental-health-docs/division-of-environmental-industrial-hygiene/student-resources/eih-tracking-sheets/ih-phd-tracking-form-7-19-22.pdf?sfvrsn=a8dad1a8_6

Required Courses for the PhD degree in Occupational Ergonomics

https://med.uc.edu/docs/default-source/environmental-health-docs/division-of-environmental-industrial-hygiene/student-resources/eih-tracking-sheets/oe-phd-tracking-form-7-19-22.pdf?sfvrsn=6e6c76ef_6

Required Courses for the PhD degree in Biomonitoring

https://med.uc.edu/docs/default-source/environmental-health-docs/division-of-environmental-industrial-hygiene/student-resources/eih-tracking-sheets/biom-phd-tracking-form-7-19-22.pdf?sfvrsn=f8a50adf_10

Doctor of Philosophy Degree Checklist

- 1. Admission to a Ph.D. program (**step 7 should be completed in two years by full time students**).
- 2. Course work required for Ph.D. Degree completed satisfactorily.
- 3. Oral English Proficiency Test (OEPT) requirement met for international students (OEPT must be taken by the end of your first academic year). Letter attesting to satisfactorily completed OEPT submitted by examiner to program director, and Graduate Studies Office (GSO).
- 4. Qualifying Examination Committee (and three preliminary proposals in the Traditional format) approved by Division Director.
- 5. Qualifying Examination passed.
- 6. Form (obtain from GSO) attesting that Qualifying Exam was passed submitted by Examining Committee Chair to GSO.
- 7. Statement of Intent approved by Dissertation Committee. Interim: committee meetings with candidate (written yearly progress reports to GSO).
- 8. Dissertation written.
- 9. Successful defense of Dissertation and signed by Dissertation Committee members (and Residency requirement completed).
- 10. Complete "On-Line Graduation Application" at: www.grad.uc.edu. On the top bar, under "Current Students," select "Graduation." Graduation paperwork filed with GSO and University Officials. (See official dates in GSO.) Also, make sure to check out the Graduation Deadlines at <http://gradapps.uc.edu/graduationdeadlines/graduation-deadlines.aspx>
- 10. Electronic Dissertation and approval forms turned in to Office of the Graduate School (see official dates in GSO or online). Current information regarding Thesis and electronic submission can be obtained at: <http://grad.uc.edu/student-life/etd.html>.
- 11. Complete ABET Exit Interview and Confidentiality Compliance Certification

Academic Resources

How to Register for Classes

Catalyst www.catalyst.uc.edu is the UC Web site where you can register for classes, accept your aid award, pay your bill, check your grades, request a transcript, and more. Students can ask questions at One Stop Student Service Center.

One Stop is located on the second floor of the University Pavilion.
Phone: (513) 556-1000 Office hours: Monday - Thursday, 8-5 and Friday 9-5

Canopy & Canvas

<https://canopy.uc.edu/>

The University uses Canvas as the Learning Management System to provide student-centered online learning that will enhance the teaching and learning process. If you are not familiar with these tools, please consult the Canvas Student Resources page at <https://online.uc.edu/student-resources/>. This resource has a quickstart guide, and full catalog of student canvas guides.

Study Space

The Division of EIH has a student room located in Kettering 435 equipped with a scanner, a printer, seven computers, and plenty of desk space for student work. This student room is available to all Division students. Additional study space is located in the Health Sciences Library, located in the Medical Sciences Building/CARE building.

Academic Misconduct

Academic misconduct or dishonesty is defined in the University of Cincinnati, Student Code of Conduct and includes, but is not limited to, acts of cheating, plagiarism, falsification, and misappropriation of credit.

The Student Code of Conduct (www.uc.edu/conduct/Code_of_Conduct.html) defines behavior expected of all University of Cincinnati students. It is each student's responsibility to know and comply with the University's Student Code of Conduct. Disciplinary procedures are explained in a step-by-step manner, and the procedures for appeal of decisions are stated.

Professional Societies and Organizations

The following is a non-comprehensive list of scientific societies in EIH. Many societies hold annual meetings and offer student memberships at a fraction of the cost of a full-membership. Scientific meetings are an excellent forum to present your research, learn about the latest findings in your field, meet colleagues, or find a job. See information on Travel Awards to see if you are eligible for funding to attend a meeting. Also, if you are working on a research study your advisor may provide partial or full funding for you to attend a relevant scientific meeting. Look for information on their websites.

UC has a student chapter under the following professional societies:

- American Industrial Hygiene Association (AIHA) www.aiha.org
- American Association for Aerosol Research (AAAR) www.aaar.org
- American Society of Safety Engineers (ASSE) www.asse.org

Other relevant professional societies include:

- American Conference of Governmental Industrial Hygienists (ACGIH) <http://www.acgih.org/>
- International Society of Indoor Air Quality and Climate (ISIAQ) www.isiaq.org
- American Society for Microbiology (ASM) www.asm.org

- International Society for Exposure Science (ISES) <https://www.intlexposurescience.org>
www.iseaweb.org
- Human Factors and Ergonomics Society (HFES) www.hfes.org
- British Occupational Hygiene Society www.bohs.org
- International Commission for Occupational Health www.icohweb.org

Travel Awards

Travel awards may be given to full-time graduate students who are attending or presenting papers at conferences. Non-presenters will be eligible for an award if they can demonstrate that they must attend a conference, which is vital for their professional development. These students will be eligible for such an award once during their academic period at UC. Presenters will be eligible for an award once each academic year. Presenters at conferences will be given preference. Many conferences also offer competitive student travel awards.

Student presenters who travel less than a 400-mile radius of Cincinnati may be eligible for a maximum of \$125. Students who travel outside of a 400-mile radius of Cincinnati may be eligible for a maximum of \$400. For travel over 2,500 miles, students may be eligible for \$500. For more information and to receive a copy of the *Travel Award Guidelines for Individual Travelers*, contact the Graduate Student Governance Association, Room 625 Dabney (West Campus) at (513) 556-6101 or www.uc.edu/gsga/. (All awards are subject to availability of funds.)

Graduate Student Research Forum

The Annual College of Medicine Graduate Student Research Forum is another opportunity for students to gain experience in presenting research findings. The purpose of this annual event is to promote scientific communication among students and their research advisors in our various graduate divisions, as well as to inform the scientific community about current graduate student research activities at the College of Medicine. Every graduate student should consider presenting their research poster at this forum. Monetary awards are given to the students with the most outstanding poster presentations.

Libraries

University of Cincinnati Libraries offer access to an outstanding research library collection of 2.8 million volumes and a wide range of services to help students with their research needs. Students have access to the University of Cincinnati Libraries' online library catalog and information about resources and services through these main web portals: University Libraries (www.libraries.uc.edu) or the Health Sciences Library (<http://libraries.uc.edu/hsl/>). The libraries' web sites serve as local gateways to OhioLINK, which includes a statewide library catalog of over 38 million items from 83 other academic libraries across Ohio as well as over 4700 electronic journals.

Among the most important services provided by our staff are instruction in library research, assistance with the appropriate use of electronic resources, and help creating electronic Dissertations and Theses. Hours of libraries vary, so consult the website prior to visiting. The Health Sciences Library (HSL) is located on the E level of the Medical Sciences Building/CARE building. Contact information:

Circulation Desk: 513-558-0127
Reference: 513-558-5628

Technology Support: 513-558-4173

Directions:

The entrance to the library is in the Medical Sciences Building on the E level across from MSB E351 and between Kresge Auditorium and the bank of passenger elevators.

If you drive:

Enter the Medical Center Campus by traveling north on Eden Avenue. Just past Goodman Avenue, turn left into the Eden Avenue Garage. Park and go to the 5th floor of the garage. An elevator is located on the east side of the parking garage. The pedestrian bridge is on the 5th floor beside the elevator. Walk across the pedestrian bridge into the Academic Health Center complex.

Continue along the hall until you reach the end. Turn left and enter the Medical Sciences Building through the double doors. You are on G level. Continue on G until you reach the bank of passenger elevators on the left. Take the elevator down one floor to the E level.

The entrance to the Health Sciences Library will be just beyond the bank of elevators. Walk toward the seating area and the entrance will be on the right.

If you take the campus shuttle:

Exit the shuttle in front of the Eden Garage on Eden Avenue. Cross the street and climb the stairs to the entrance of the Center for Academic Research Excellence (CARE) building. Go through the double doors into the atrium that is between the CARE building and the Medical Sciences Building (MSB). On the left you see the HSL computer lab through the glass wall and on the right you'll see seating plus a glass "hut". Walk between the two and the entrance to the library will be on the left before you reach the bank of red brick passenger elevators on the right.

If you get dropped off in the circular drive on Albert Sabin Way:

Enter the Medical Sciences Building (MSB) and continue along the hall until you see the MSB E351 on the left and the red brick passenger elevator bank on the right. Just before the elevators, turn right and the entrance to the Health Sciences Library will be on the right just beyond the elevator bank.

Computer Account and Printing Services

The University provides all students computer accounts free of charge. The Bearcat Online system is a client-server system that allows you to exchange electronic mail (e-mail) with other computer users on campus and around the World, and access the diverse resources of the Internet. You may access your Bearcat Online account from your home, office or a campus computer lab. To request an account, go www.ucit.uc.edu.

Computer Printing Procedures and Charges: Students may purchase printing by activating their UC ID badge as a Bearcat Campus Card and adding value to it using a personal credit card via the Bearcat Campus Card web site, or by visiting the East Campus Bookstore and adding value to card with cash, credit card, or check, or by using a Value Transfer Station on the West Campus, or calling the Bearcat Campus Card office at (513) 556-2000.

Wireless LANS at UC: The current wireless LAN environment at UC is 802.11b and 802.11g compliant. For complete information regarding wireless data communications, please visit www.ucit.uc.edu.

Statistical Software Resources

- Institute of Statistics and Decision Sciences, Duke University. List of free and commercial statistical software. www.isds.duke.edu/comp/software/
- SAS. Information for statistical software. www.sas.com
- Stata Corporation. Links to other statistical software providers: www.stata.com/links/
- StatLib, a system for distributing statistical software, datasets, and information by electronic mail, FTP and WWW. <http://lib.stat.cmu.edu/>

University Bookstores

The University of Cincinnati Bookstore is your source for all of your textbook, apparel, and supply needs. They have the largest selection of used textbooks in the community. Students need to shop early as the used books, which retail at 25% less than the new retail price, sell quickly. If you have any questions, contact them at (513) 556-1400 or www.uc.edu/bookstore.

The bookstore also offers a **10% discount** to graduate assistants who present their ID badges.

For Textbooks: <http://www.bkstr.com/CategoryDisplay/10001-9604-13705-1?demoKey=d>

Read the latest "What's In Store" tabloid for information on current and upcoming promotional specials, like the 3-for-3 Payoff. Every time the Bearcats make a 3-pointer during a home basketball game, you save another 3% the next day on UC Insignia and Souvenirs! Maximum discount is 24%. Want to receive the "What's In Store" through your e-mail? Subscribe online at www.uc.edu/bookstore and you will receive a link to the monthly specials and the opportunity for discounts and coupons, exclusively for members of the UC Bookstores e-List.

University Health Insurance

The mission of University Health Services is to provide superb health care and health education in a compassionate and caring environment, to assist the University in providing a safe environment for students and employees, and to provide wellness in a Just Community.

All students are required to be covered by health insurance, either the Student Insurance Program or another policy, which must be at least as comprehensive as the University policy. Full-time, co-op, and part-time students taking six or more credit hours are all eligible for coverage and will be automatically charged unless they have previously waived coverage during the current academic year. Graduate students enrolled in less than six (6) credit hours may purchase coverage with: 1) an Insurance Action Form; 2) written certification of matriculation from your academic department; and 3) payment.

Contact for U.C. Student Health Insurance Office for the latest in health care information: www.med.uc.edu/uhs/

Mental Health Services

The UHS Mental Health Clinic provides professional, confidential mental health services for UC students with Student Health Insurance. Students can find a list of services provided on the website: http://www.uc.edu/uhs/mental_health.html.

Services include counseling for situational stress, anxiety, depression, relationship issues, grief and loss, sexual abuse, bipolar disorders, and personality disorders. They also perform psychological assessments.

For UC students with Student Health Insurance, the cost is \$17 per visit for counseling, but students should obtain an appointment referral from University Health Services first (East Campus phone number: (513) 584-4457)).

ID Badges / Keys

Students are required to wear photo ID badges. Access Control is responsible for the physical security of the University, as well as providing photo identification for all employees and students.

Access Control provides the following services:

- Control and service for the over 50,000+ locks in use at the University.
- Issuance of keys to students, faculty, and staff.
- Production of photo ID badges for all University employees and students.
- Control access to areas using a card access system. This system allows access via the University photo ID card.

A member of the DEPHS Business Office (Room 130) orders keys upon authorization of the student's advisor. Keys are similarly picked up at Four Edwards (East Campus). For both key and badge pickup, park in the Edwards Garage (free 30-minute parking) or take the CCM shuttle. Note that keys that are ordered but not picked up are subject to a \$20.00 fee, as are lost keys or keys not returned upon leaving DEH

Organizations

There are many organizations that may interest you. A complete listing of organizations and people to contact can be acquired at the University's home page www.uc.edu.

The Organization of Health Sciences Graduate Students (OHSGS) serves graduate students in the Colleges of Medicine, Pharmacy, and Allied Health at the University of Cincinnati. OHSGS is a part of the GSGA (Graduate Student Governance Association). Formerly known as Student Organizations and Activities, it is an important resource for UC students who want to be involved while attending the University. Staffed with full-time professionals and student paraprofessionals who are available throughout the year, the office provides leadership and direction for the more than 250 student organizations, as well as a full range of activities and cultural programs for students at the University. OHSGS activities and services are free to all graduate students, and any student is encouraged to get involved. Their web site is www.uc.edu/gsga.

The OHSGS Office is in the Medical Sciences Bldg. Room G552. The phone number is (513) 558-5723. There are currently no office hours available. Please visit their web page at www.med.uc.edu/hsga.

Parking

All students are eligible to purchase a parking decal. To park on campus, one must display a Parking Services issued decal or use a parking garage and pay the hourly rate. Decals are issued on a semester or academic year basis and are most easily purchased through the Parking Services' web site during priority registration prior to the start of each semester. The priority registration dates coincide with those for priority class registration. Internet access for priority registration is available in the parking Offices and in some computer labs on campus. Contact the Parking Office at (513) 556-2283; 4 Edwards, or visit www.uc.edu/parking for further information.

Shuttle Bus

The University of Cincinnati offers a shuttle bus service that transports students, staff, and faculty across campus. Buses run every 7-10 minutes Monday through Friday year-round (except holidays). The nearest stop to Kettering is behind Eden Garage. For information on shuttle routes and bus stops, visit their website at

<https://www.uc.edu/about/admin-finance/facilities-management/departments/transportation-services/shuttle-services.html> or call (513) 556-4424.

Sports and Exercise

UC Recreational Sports Office has fitness centers in the Shoemaker Center and MSB building on the medical campus.

Dining near the Medical Center

Cincinnati offers many fine dining adventures, but few are within walking distance from the Kettering Building. If you're seeking to dine between classes, the nearest facilities are the Medical Sciences Building cafeteria, Children's Hospital Medical Center cafeteria, University Hospital's cafeteria, or the Veteran's Hospital cafeteria. Chipotle and Jimmy John's are on the corner of MLK Drive and Highland Ave. Another venue is the University Hall cafeteria, which offers an inexpensive dining experience.

Campus Security

(www.uc.edu/pubsafety/)

The Department of Public Safety is comprised of four distinct, but interrelated units – University Police, Emergency Preparedness, Parking Services, and Support Services.

HOW TO CONTACT THE POLICE

- Police Headquarters: 3 Edwards Center 51 West Corry Street Cincinnati, Ohio 45221-0215
- Primary phone numbers are: Emergencies 911
- To contact UC Police 911 from a non-university phone or cell phone dial (513) 556-3911 or Email: ucpd@uc.edu
- Non-Emergencies (513) 556-1111, (513) 558-1111
- Office (513) 556-4900