

Department of Environmental
Health Sciences

School of Public Health
University at Albany

Graduate Program of Study

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Department of Environmental Health Sciences - Administrative Directory

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DEPARTMENT OF ENVIRONMENTAL HEALTH SCIENCES

School of Public Health, University at Albany

The Department of Environmental Health Sciences offers M.S. and Ph.D. programs with a concentration in Environmental Chemistry, Toxicology, or Environmental Health. Applicants to either the M.S. or Ph.D. program are expected to hold a baccalaureate degree with a combined total of at least 42 credits in biology, chemistry, and mathematics. On a case-by-case basis, consideration will be given to students with other undergraduate backgrounds. Consultation with the department is recommended prior to submitting an application. Applicants are required to submit official scores of the Graduate Record Examination aptitude test; the advanced test in chemistry, physics, or biology is recommended. A minimum score of 600 on the paper-based TOEFL (250 on the computerized test; 100 on the internet based test) is required of all international students. Applicants must specify whether they plan to study Environmental Chemistry, Toxicology, or Environmental Health.

Students entering the Department of Environmental Health Sciences may elect to concentrate in one of the following areas of research:

Environmental Chemistry

The Environmental Chemistry concentration emphasizes significant environmental and public health problems. The concentration's unique position within New York State's Department of Health provides its students and faculty with first-class, modern instrumentation and facilities as well as an abundance of research problems of fundamental and practical interest. Research specializations include analytical chemistry, atmospheric chemistry, transport and transformations of halogenated compounds including PCB's, dioxins, pesticides, perfluorinated chemicals, brominated compounds, and pharmaceuticals, and nuclear chemistry. Additionally, students may choose to utilize the tools of chemistry and physics in collaborative projects with, for example, scientists in such disciplines as microbiology, toxicology, biochemistry or epidemiology. The goal of the program is to train students to become competent and productive researchers in their chosen specialty so that they may assume leadership positions in academia, government or industry.

Toxicology

Programs in the Toxicology concentration are designed to prepare students for technical, professional, and supervisory positions and careers in academic institutions, public agencies, and industry. The curriculum emphasizes the application of classical biological, physical and medical sciences to help solve public health problems associated with toxic chemicals. Research specializations are available in microbiology, neurotoxicology, in vitro toxicology, biochemical toxicology, molecular toxicology, chemical carcinogenesis, and immunotoxicology. The program is flexible and will

reflect the individual needs of the student. Emphasis will be placed on developing the research tools to enable each student to become a productive researcher in toxicology.

Environmental Health

The environmental health concentration offers graduate education which provides a readily accessible bridge between the disciplines of biology, microbiology, chemistry, physics, and the behavioral sciences and range of problems and issues in the prevention and control of environmental-provoked disease. Emphasis is on the development and use of factual bases to define the health effects of exposure of individuals or populations to hazardous materials and situations, environmentally caused diseases, integrating the results of risk assessment with engineering, social, economic and political concerns to reach a decision.

In the first year, all students take a set of core courses in environmental health, epidemiology, toxicology, environmental chemistry, and statistics. During the first semester students also complete two laboratory or field rotations. These rotations allow the student to become familiar with the research interests of the faculty and aid in the selection of an advisor for the Ph.D. dissertation or M.S. thesis work.

The course of study of each student is planned with a faculty advisor who takes into account the student's previous academic background, area of specialization, and professional objectives. Students should refer to the Program of Study worksheets included in this booklet to identify curriculum appropriate to their area of concentration.

In addition to courses offered in the Department of Environmental Health Sciences, students may take classes offered in other departments at the University at Albany. Students also have the option of cross registering for classes at Albany Medical College, Rensselaer Polytechnic Institute and other local colleges. For information on the cross registration process, visit http://www.albany.edu/gradstudies/resfac_crossregistration.shtml.

ACADEMIC STANDARDS

All students are expected to remain in good academic standing during the course of their study, i.e. to maintain at least a B average and obtain a grade of satisfactory (S) in all course requirements for the graduate degree. A student whose record falls below these standards will either be placed on probation or academically dismissed. A student on probation for more than one semester may have his/her University stipend and/or tuition scholarship withdrawn. A student whose record falls much below these standards at any time or whose performance otherwise indicates a lack of ability or effort needed to succeed in the graduate program will be denied permission for further study.

ACADEMIC INTEGRITY

Academic dishonesty (e.g. plagiarism, cheating on examinations, falsification of data, etc) is unacceptable and will not be tolerated. Any student who violates the standards of academic integrity will automatically be placed on disciplinary probation for at least one semester. For violations associated with a course, the student may be required to retake the course at his/her own expense. Depending on the severity of the violation, the student's stipend and /or tuition support may also be revoked, or the student dismissed from the program. A report describing the violation and recommended sanctions imposed will be placed in the student's file, and a copy of the form will be distributed to the student's mentor and thesis committee members, the Dean of the School of Public Health, and the Office of Graduate Studies.

University policy states the following:

“If a faculty member informs the student that he or she will receive a failing grade in the course or other academic exercise as a result of academic dishonesty, the student receiving such penalty will not be permitted to withdraw from the course unless the grievance process or Office of Conflict Resolution and Civic Responsibility rules in favor of the student. Students who feel they have been erroneously penalized for an academic integrity infraction or who think that a penalty is inappropriate may grieve these issues through procedures developed for each college, school, program, or department of the University. Copies of the procedures are maintained in the School and College Deans' Offices or on their respective websites. A copy of the disposition of any grievance arising in matters of academic dishonesty will be attached to the Violation of Academic Integrity Report filed in the Office of the Vice Provost for Undergraduate Education or the Dean of Graduate Studies.”

Detailed information on the University's definitions and policies regarding academic dishonesty can be found in *Community Rights and Responsibilities*, a University at Albany publication, found online at <http://www.albany.edu/judicial/conduct.shtml>.

CODE OF CONDUCT

The Department of Environmental Health Sciences expects that all students will understand and adhere to the University at Albany Code of Conduct as detailed in the *Community Rights and Responsibilities* handbook. The *Community Rights and Responsibilities* handbook states the following:

“As a student at the University at Albany, you are expected to conduct yourself in a manner consistent with the codes outlined in the *Community Rights and Responsibilities*. It is important to understand that the freedom that is afforded to you as a member of this community comes with an associated responsibility. This handbook is provided as a reference for you to read and understand the standards that are upheld at this University. Mutual respect of all individuals within this University and the local community is strongly emphasized and all students will be held accountable for violation of these codes”
(<http://www.albany.edu/judicial/docs/CRR%202009%20-%20FINAL.pdf>).

ADVISEMENT

Each student will be assigned a temporary faculty advisor upon entering the program. In most cases the advisor, who will be the track coordinator, will meet with the student whenever necessary to advise on course selection, advanced standing, course waivers, examination waivers, and selection of thesis/dissertation advisors. The Graduate Academic Advisement form must be completed and signed by the student and the advisor. Any changes (including courses dropped or added after the start of the semester), can be made ONLY with the written approval of your advisor, by completing a new advisement form. This form will become a part of the student’s file.

Requests for advanced standing, and course and examination waivers should be submitted by the student to the Graduate Academic Committee and Department Chair for approval, prior to submission to the Office of Graduate Studies at the University.

Students matriculated in the Department of Environmental Health Sciences are not permitted to be concurrently matriculated in any other academic department.

SCHOOL OF PUBLIC HEALTH POSTER DAY REQUIREMENT

Participation in the annual School of Public Health Student Poster Day is required of all students in their second year of study and beyond. Students who fail to present in the Student Poster Day will receive a grade of Unsatisfactory on thesis or dissertation research for the spring semester.

PROGRAM LEADING TO THE MASTER OF SCIENCE (M.S.) DEGREE

The M.S. program is designed to develop advanced skills, critical thinking, and a sound understanding of the fundamentals in the disciplines of Environmental Chemistry, Toxicology, or Environmental Health. The program prepares students for careers in the environmental health sciences working in the public or private sectors. A minimum of 36 graduate credits is required to complete the program. .

M.S. Program of Study and Research (36 credits, minimum)

1. **Core courses - 16 Credits ***
EHS 520 Principles of Environmental Chemistry (3 credits)
EHS 530 Principles of Toxicology (3credits)
EHS 590 Introduction to Environmental Health (3 credits)
EHS 675 Responsible Conduct of Scientific Research (1 credit)
EHS 780 Current Literature in Environmental Health (1 credit)
EPI 501 Principles and Methods of Epidemiology I (3 credits)
STA 572 Introductory Applied Statistics (2 credits) OR
STA 552 Principles of Statistical Inference 1 (3 credits)
2. EHS 690 Laboratory Rotations (3 credits) – may be completed either fall or spring semester, dependent upon didactic courses selected.
3. EHS 790 Seminar (0 credit) – students must enroll every semester
4. Additional courses as approved by advisor
5. BMS 510 Communication in Science (1 credit) **
6. EHS 699 Thesis Research (14 credits minimum)
7. Satisfactory completion of the Major Field Examination
8. Satisfactory public seminar on and defense of master's thesis of laboratory, field or library research.
9. Candidates must maintain a minimum of a **B average** ***

* *All students are expected to complete the core curriculum in the first year of study. Students may not waive a core course unless approved by the Graduate Academic Committee.*

** *BMS 510 is designed to promote effective scientific writing and data presentation skills. The course focuses on writing journal articles, presenting posters and giving oral presentations based on graduate*

research. MS students are strongly encouraged to take this course, which can be used toward supporting coursework credit.

******* *If a student gets a grade of C+ or lower in a required course, he/she must retake the course.*

Thesis

Masters students must complete a written thesis based on laboratory, field, or library research. The thesis has no page limitation and must present specific aims, background and significance, experimental designs and methods section, results section, discussion, conclusion, and references. The thesis is reviewed by the Masters Thesis committee, who will determine if the student understands the work done, interprets the results objectively, and can communicate the science effectively.

Thesis Committee

The thesis committee will be selected by the student in consultation with the research mentor, and will comprise the mentor and two additional faculty members, and will be approved by the Graduate Academic Committee. Thesis committee selection should be completed by the end of the second semester of study.

Major Field Examination

Masters degree students are required to take the Major Field Examination. This exam will be administered by the thesis committee, and will be in the student's area of proposed research. The examination consists of an oral defense of a written research proposal prepared by the student. The proposal should outline the background and conduct of proposed thesis research, and include an abstract, specific aims, background and significance, preliminary data (if any), experimental designs and methods, and a bibliography. The research proposal will be judged on standard criteria, including, but not limited to, the student's grasp of the field, significance of the proposed work, and feasibility of the experimental approach. The exam will be taken no later than the semester prior to the defense of thesis, and may be retaken once.

Seminar and Defense of Thesis

Masters degree students are required to present a public seminar based on thesis research and defend his/her work in a closed meeting of the thesis committee.

Masters Degree – Sample Program of Study

Courses	Grade	Credits	Semester offered/ Complete
EHS 590: Introduction to Environmental Health		3	Fall – Year 1
EPI 501: Principles and Methods of Epidemiology		3	Fall – Year 1
EHS 690: Laboratory Rotations		3	Fall or Spring – Year 1
BMS 510: Communication in Science		1	Fall – Year 1
EHS 780: Current Literature in Environmental Sciences		1	Fall – Year 1
EHS 790 (Seminar)		0	Every Semester
EHS 520: Principles of Environmental Chemistry		3	Spring – Year 1
EHS 530: Principles of Toxicology		3	Spring – Year 1
STA 572: Introductory Statistics		2	Spring – Year 1
EHS 675: Responsible Conduct of Scientific Research		1	Fall or Spring
Elective (3 credits)			
Transfer credits			
Total course credits (22 min)			
MS Thesis Research Credits (14 required)			

** MS students are strongly encouraged to take BMS 510, which can be used toward elective coursework credit*

Mentor Approval Form: Date: _____

Major Field Exam: Date: _____ Passed [] Failed []

PROGRAM LEADING TO THE DOCTOR OF PHILOSOPHY (Ph.D.) DEGREE

The doctoral program in Environmental Health Sciences is designed to prepare students for scholarly and professional positions and careers in academic, government, and industry. The program emphasizes the application of biological, physical, and medical sciences to the solution of environmental and public-health problems. The objective of doctoral study is to develop each student's ability to conduct original, advanced research as an independent scientist. In keeping with this goal, each student is expected to guide his or her own research project, under the supervision of a faculty member, with a high level of effort and accomplishment, and thereby gain the capacity to be self-teaching and the ability to design and conduct research on important issues in the student's chosen field. The program typically entails four or more years of full-time study and research beyond the baccalaureate.

Ph.D. Program of Study and Research (66 credits, minimum)

1. Core courses - 19 Credits *

- EHS 520 Principles of Environmental Chemistry (3)
- EHS 530 Principles of Toxicology (3)
- EHS 590 Introduction to Environmental Health (3)
- EHS 675 Responsible Conduct of Scientific Research (1)
- EHS 690 Laboratory Rotations (3) **
- EHS 780 Current Literature in Environmental Health (1)
- EPI 501 Principles and Methods of Epidemiology I (3)
- STA 572 Introductory Applied Statistics (2) OR
STA 552 Principles of Statistical Inference 1 (3 credits)

** All students are expected to complete the core curriculum in the first year of study. Students may not waive a core course unless approved by the Graduate Academic Committee.*

*** EHS 690 may be completed either fall or spring semester, dependent upon didactic courses selected.*

2. EHS 790 Seminar (0) – students must enroll every semester

3. BMS 510 Communication in Science (1) – This course is designed to promote effective scientific writing and enhance skills in data presentation. The course focuses on writing journal-style articles, preparing and presenting posters and giving oral presentations based on graduate research. Students who have completed an English language thesis-based MS degree in a STEM field can waive this requirement. A copy of the thesis must be provided to the EHS Department Office to process the waiver. Students will also be given an opportunity to test out. If the course is waived or the student tests out, the course credits must be fulfilled with an elective course.

4. **Supporting courses** as approved by advisor (12 credits minimum)

5. **Doctoral research:** 35 credits minimum (*6 credits may be substituted for elective courses*). EHS 898 is taken by students not yet admitted into candidacy for the degree; EHS 899 is required of all students admitted into candidacy for the degree.

6. **Residency Requirement:** A minimum of one year in full-time residence study. The residency requirement for all doctoral students will be 7 credits minimum per semester. Per the University at Albany Graduate Bulletin, this requirement is designed to insure for each doctoral student a sustained period of intensive intellectual growth. For this purpose a student will enroll for the required number of credits taken in each of two sessions, not necessarily consecutive, both of which must be completed satisfactorily.

7. **Admission to candidacy:** Students must be admitted to candidacy by the end of their third year of study. A student is admitted to candidacy for the degree of Doctor of Philosophy upon meeting the following standards:

1. A minimum of a B average. *
2. Completion of course requirements, 31 credits minimum
3. Satisfactory completion of the Research Tool Requirement.
4. Satisfactory completion of both Parts of the Qualifying Exam.
5. Completion of University Residence Requirement.

** If a student gets a grade of C+ or lower in a required course, he/she must retake the course.*

8. **Satisfactory public seminar and defense** of an approved doctoral dissertation based on laboratory or field research.

Tuition Policy: Doctoral students are eligible to receive tuition scholarships for a period of four years. Students must be admitted into candidacy by the end of their third year of study, and are expected to complete the 66 credits required for the degree by the end of their fourth year of study. The Department of Environmental Health Sciences will provide tuition scholarships to eligible doctoral students for a **maximum** of 66 credits.

Doctoral students should adhere to the following timetable:

Dissertation Advisor - selected by beginning of 2nd semester of study
Preliminary Examination - completed at end of 2nd semester of study
Dissertation Committee - formed at beginning of 3rd semester of study
Qualifying Examination Part I - completed by beginning of 4th semester of study
Qualifying Examination Part II - completed at end of 5th semester of study
Research Tool Requirement - completed at end of 5th year of study
Admission to Candidacy - completed by end of 6th semester of study

Dissertation Advisor and Committee: By the beginning of the second semester of study, the Ph.D. Dissertation Advisor should be selected. After selecting a dissertation advisor, the student together with the advisor will select a **dissertation committee, which must be formed no later than the beginning of the third semester of study.** The Dissertation Committee is chaired (in the usual case) by the research mentor (a non-voting member except in the event of a tie) and is comprised of at least four other members - two faculty members from the student's track, one faculty member outside the program area and one member whose primary academic appointment is outside the EHS Department, and who may be from another institution. The composition of the Ph.D. Dissertation Committee will be reviewed by the Graduate Academic Committee and Department Chair for final approval.

Preliminary Examination: All students, regardless of previous experience or degrees, are required to take a Preliminary Examination. This exam is administered to first year students at the end of the second semester of study and to students with advanced standing at the end of the first semester of study. The purpose of this exam is to test the student's ability to critically analyze data and to effectively communicate their ideas. The exam will be oral and based on a paper selected by the examination committee that spans, to the extent possible, the disciplines represented in the core curriculum, which includes environmental health, toxicology, environmental chemistry, epidemiology, and statistics. Students will also be responsible for material covered in core courses and laboratory rotations.

The Preliminary Examination committee will consist of members from the Environmental Health, Toxicology and Environmental Chemistry concentrations. The committee will provide their recommendation (Pass/Fail) to the Graduate Academic Committee after all students have completed the exam. If appropriate, the committee will recommend a Retake of the exam, and will provide conditions that must be satisfied to pass the exam.

The GAC will review each student's overall progress through the first year as well as the Preliminary Exam result, and will make one of the following recommendations to the Department Chair:

1. The student should be permitted to continue in the Ph.D. program;
2. The student should be required to retake the examination. In this case, the student will be informed that there can be only one re-examination, and that this must occur within three months of the initial examination; or
3. The student should be dismissed from further study in the PhD program and given the option of completing the MS degree.
4. The student should be dismissed from further study in the Department.

The Department Chair will convey to the student, in writing, the exam result, the GAC recommendation regarding his or her continuation in the Ph.D. program, and, if indicated,

the policy for retaking the exam.

A second failure on the Preliminary Exam will result in dismissal of the student from the Ph.D. program. Students who have failed the Preliminary Exam but are offered the option of completing the MS degree by the Department Chair may apply for admission to the Ph.D. program after completing the MS degree.

Qualifying Examination, Part 1: Each student who has passed the preliminary examination will be examined by the student's Dissertation Committee **by the beginning of the fourth semester of study**. This examination will be in the major area of the anticipated research specialization. Each committee member will provide one written question to the student, with all questions being provided at the same time. The student will have one week to write a response to all questions. Each written response should be double-spaced typed pages. The student may use all of the resources of the library in formulating responses to the questions, but should not obtain help from other faculty members or students. The student will, shortly after submission of the answers, complete an oral examination, administered by the Dissertation Committee. The committee will assign a Pass/Fail grade to the student. A student who fails may be reexamined within one semester with the scope of the examination being determined by the committee. A student who fails to pass on the second try will be required to take an M.S. degree or leave the department. Part 1 of the Qualifying Examination must be passed before proceeding to Part 2.

Qualifying Examination, Part 2: This examination must be completed by the end of the fifth semester of study. The examination consists of an oral defense of a written research proposal prepared by the student. The proposal and the oral defense will be evaluated by the Dissertation Committee (Pass/Fail). The exam will test the student's depth of knowledge in his/her chosen area of specialization as well as his/her ability to write and defend a research proposal. This examination is to be on a topic intended to serve as the basis for the student's Ph.D. dissertation research.

The research proposal should be a detailed document outlining the background and conduct of the proposed dissertation research, which should be designed to answer a significant question in Environmental Health Sciences. The student will write the proposal in the format of a NIH research grant application, following the page limitations currently in effect (and excluding budgetary sections). The proposal should include an Abstract, Specific Aims, Background and Significance, Preliminary Data if any have been obtained (*preliminary data are not required*), Experimental Designs and Methods, and a Bibliography. The student may consult with anyone in the course of preparing the proposal, but the written document must represent the student's own work. The mentor may aid in the development of specific aims and construction of a topical outline for the dissertation proposal. The mentor also may direct the student to relevant literature and may edit an initial draft. However, the mentor should not act as co-author. The research proposal will be judged on standard criteria, including, but not limited to, the student's grasp of the field, significance of the proposed work, originality and depth of thoughts

and the feasibility of the experimental approach. The proposal must be submitted to the committee at least **one month** prior to an oral presentation of the proposal to the Dissertation Committee.

At the oral defense, the student will answer questions on the proposal and on related topics; the questions will focus on (but are not restricted to) the student's program area. The exam will be administered by the student's Ph.D. Dissertation Committee, chaired by the dissertation advisor. The student must pass the exam by a majority vote of the Committee. The data and results of the exam will be communicated by the Dissertation Committee Chair to the Department Chair. If the student does not satisfactorily complete this part of the exam, the Dissertation Committee will make appropriate recommendations, which may include modifying the proposal and re-taking the exam, completing remedial course work, or dismissal from the program. If the recommendation is to retake the exam, it must be completed within three months.

Research Tool Requirement: The research tool requirement must be completed, at the latest, by the end of the third year of study. The research tool will comprise the preparation of a poster describing aspects of the student's research program. The format of the poster will follow the requirements of the School of Public Health's poster day or those of relevant scientific society meetings. The poster will be presented to the student's dissertation committee at the time of the Qualifying Examination Part II and will be accompanied by a brief oral discussion by the student of the poster's content. The dissertation committee will grade the research tool based on the presentation of the data, the content of the poster, and the clarity of the oral presentation, as S/U.

Dissertation research and role of the Ph.D. dissertation committee: The student's Dissertation Committee will meet regularly with the student throughout the course of his/her dissertation research to evaluate progress and advise. It is the responsibility of the Dissertation Committee Chair to ensure that the student schedule these periodic reviews once yearly, at a minimum. A Doctoral Student Annual Review form, including a brief progress report summarizing each periodic review, must be submitted by the Committee Chair to the Department Chair shortly after the meeting. These reports will become part of the student's academic file.

Dissertation defense and submission of written dissertation: The Dissertation Committee also is responsible for evaluating and accepting the final written dissertation and conducting the student's oral dissertation defense. The completed thesis must be submitted to the Dissertation Committee at least **one month** before the oral defense. **A shorter interval is permissible only if all committee members agree.** It is the student's responsibility to arrange a date for the defense that is acceptable to the committee members, and to adhere to the one month interval. In the event that revisions to the dissertation are required, the committee will have two weeks in which to review the revisions. Acceptance of the dissertation will be by majority vote of the Dissertation Committee and is subject to the approval of the University.

It is the student's responsibility to ensure that the final document submitted to the University is prepared according to department and University guidelines (visit <http://www.albany.edu/gradstudies/degreecomp/> for information on University guidelines for submission of the dissertation).

Students should note the following deadlines for submission of the final dissertation document to the Office of Graduate Studies:

December 1 – Fall Graduation
May 1 – Spring Graduation
August 1 – Summer Graduation

In order to meet these deadlines, the dissertation defense and oral presentation should be scheduled at least two (2) weeks prior to the submission date specified above. The student must notify the EHS Department Office **at least three weeks before** the scheduled oral defense by submitting the Thesis/Dissertation Seminar and Defense Scheduling Form and providing the date, time, location, and title of presentation.

Following successful completion of the defense, the Dissertation Transmittal form must be signed by the dissertation committee and submitted to the EHS Department Office. The Department will then complete the Recommendation for Conferral of Degree and submit both forms directly to the Office of Graduate Studies, verifying that all requirements for successful completion of the doctoral degree have been fulfilled.

EHS 690: LABORATORY ROTATIONS

The aims of the laboratory rotations are:

1. To allow the student to interact with scientists of varied disciplines.
2. To introduce the student to analytical, field and laboratory techniques and principles.
3. To give both the students and the faculty an opportunity to interact intellectually.
4. To aid the student in selecting a mentor for graduate research.

All students must participate in the rotations. Students may not repeat a rotation with the same mentor. Exceptions to this plan are subject to approval of the Department Chair. The student is expected to dedicate at least 12 hours per week to each rotation.

Rotation Schedule: Ph.D. and research M.S. students will complete two rotations for a total of three credits. Each rotation in the semester will last 7 weeks. The grading system is S/U. An unsatisfactory grade in any rotation will result in a U for that semester. Please note that a satisfactory grade in the two rotations must be attained to fulfill the rotation requirement. A Rotations Coordinator will help match students with appropriate Faculty Research Mentors.

The rotation schedule is designed to obtain the maximum analytical, field, and laboratory experience within the framework of courses and additional graduate responsibilities.

Student Obligations: A student may choose to work in the laboratory (field, laboratory, or office environment, or some combination thereof) of any faculty member within the Department of Environmental Health Sciences. The student may not spend the entire rotation time exclusively in an office setting. An office-based rotation must be spent learning skills directly applicable to carrying out scientific research. Some examples of acceptable office-based rotation activities are: statistical analysis of databases, computer modeling of data, and mapping using a geographic information system (GIS). Special permission may be given to a student who wishes to do a rotation with a faculty member in one of the school's other departments.

At the end of each rotation, the students are required to write a **formal** report describing their project. This report should be given to the Coordinator for review. The Coordinator will work with the Mentor to establish and submit a grade. Note that the final version of the report should be submitted to the Department Office no more than one week after the end of each rotation. The student is responsible for submitting this report, and failure to do so will result in an "Incomplete" grade.

Doctoral Program of Study – Sample Environmental Chemistry Concentration

Courses	Grade	Credits	Semester offered/ Complete
EHS 590: Introduction to Environmental Health		3	Fall – Year 1
EPI 501: Principles and Methods of Epidemiology		3	Fall – Year 1
EHS 690: Laboratory Rotations		3	Fall – Year 1
BMS 510: Communication in Science		1	Fall – Year 1
EHS 780: Current Literature in Environmental Sciences		1	Fall – Year 1
EHS 790 (Seminar)		0	Every Semester
EHS 520: Principles of Environmental Chemistry		3	Spring – Year 1
EHS 530: Principles of Toxicology		3	Spring – Year 1
STA 572: Introductory Statistics		2	Spring – Year 1
EHS 675: Responsible Conduct of Scientific Research		1	Fall or Spring
Concentration Requirements			
EHS 525: Environmental Chemical Analysis		3	
EHS 540: Principles of Radiation Sciences or approved substitute		3	
Electives (6 credits)			
Transfer credits			
Total course credits (31 min)			
PhD Research Credits (35 required)			
Research Tool – Poster Presentation		0	

Mentor Approval Form: Date: _____

Preliminary Exam: Date: _____ Passed [] Failed []

QE I (end of 3rd semester): Date: _____ Passed [] Failed []

QE II (end of 5th semester): Date: _____ Passed [] Failed []

Research Tool: Date: _____ Passed [] Failed []

Doctoral Program of Study – Sample Toxicology Concentration

Courses	Grade	Credits	Semester offered/ Complete
EHS 590: Introduction to Environmental Health		3	Fall – Year 1
EPI 501: Principles and Methods of Epidemiology		3	Fall – Year 1
EHS 690: Laboratory Rotations		3	Fall – Year 1
BMS 510: Communication in Science		1	Fall – Year 1
EHS 780: Current Literature in Environmental Sciences		1	Fall – Year 1
EHS 790 (Seminar)		0	Every Semester
EHS 520: Principles of Environmental Chemistry		3	Spring – Year 1
EHS 530: Principles of Toxicology		3	Spring – Year 1
STA 572: Introductory Statistics		2	Spring – Year 1
EHS 675: Responsible Conduct of Scientific Research		1	Fall or Spring
On of the following courses is required (3-4 credits)			
BMS 502: Macromolecular Structure and Function		4	Fall
CHM 540a: Biochemistry I		3	Fall
CHM 540b: Biochemistry II		3	Spring
Electives (8 – 9 credits)			
Transfer credits			
Total course credits (31 min)			
PhD Research Credits (35 required)			
Research Tool – Poster Presentation		0	

Mentor Approval Form: Date: _____

Preliminary Exam: Date: _____ Passed []Failed []

QE I (end of 3rd semester): Date: _____ Passed []Failed []

QE II (end of 5th semester): Date: _____ Passed []Failed []

Research Tool: Date: _____ Passed []Failed []

Doctoral Program of Study – Sample Environmental Health Concentration

Courses	Grade	Credits	Semester offered/ Complete
EHS 590: Introduction to Environmental Health		3	Fall – Year 1
EPI 501: Principles and Methods of Epidemiology		3	Fall – Year 1
STA 552: Principles of Statistical Inference I		3	Fall – Year 1
BMS 510: Communication in Science		1	Fall – Year 1
EHS 780: Current Literature in Environmental Sciences		1	Fall – Year 1
EHS 790 (Seminar)		0	Every Semester
EHS 520: Principles of Environmental Chemistry		3	Spring – Year 1
EHS 530: Principles of Toxicology		3	Spring – Year 1
EHS 690: Rotations		3	Spring – Year 1
EHS 675: Responsible Conduct of Scientific Research		1	Fall or Spring
Electives (12 credits)			
Transfer credits			
Total course credits (31 min)			
PhD Research Credits (35 required)			
Research Tool – Poster Presentation		0	

Mentor Approval Form: Date: _____

Preliminary Exam: Date: _____ Passed []Failed []

QE I (end of 3rd semester): Date: _____ Passed []Failed []

QE II (end of 5th semester): Date: _____ Passed []Failed []

Research Tool: Date: _____ Passed []Failed []