

**Environmental Science and Technology  
Graduate Student Handbook  
2018-2019**

**(Revised 3/26/19)**

## I. LETTER OF WELCOME

To Our Newest Graduate Students,

Welcome to the Department of Environmental Science and Technology at the University of Maryland.

This interdisciplinary Department has only been around for a few years, but has already made a big impact at the University. We are already recognized as one of the top graduate programs at the University. We are fortunate to have amazing faculty who are also seen as very caring and approachable by our students. Our staff is very helpful and friendly. We are pleased to welcome you to this unique Department and that you selected our program for your graduate studies.

Our Graduate Student Handbook and our Orientation Session is meant to assist you in your transition into our program. Although the handbook contains a great deal of useful information, please do not hesitate to ask your fellow graduate students or any of the faculty or staff about any questions that you may have. This handbook is a living document which will be continuously updated so that you have the correct information to guide you through our program. Please let us know if you have suggestions on how to improve it, or what information needs to be in the handbook that isn't currently there.

We are very happy that you will be here for the next few years of your studies and welcome you to our very unique Department. We hope that we will be helpful in developing your skills and in your future success as you establish yourself in your career.



William Bowerman, Ph.D.  
Professor and Chair

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## ENST OVERVIEW

The department of Environmental Science and Technology at the University of Maryland offers Doctoral (Ph.D.) and Master of Science (M.S.) degrees in Environmental Science and Technology with concentrations in Ecological Technology Design, Ecosystem Health and Natural Resource Management, Soil and Watershed Sciences, and Wetland Science.

The mission of the Department of Environmental Science and Technology is to promote understanding and conscientious management of natural, agricultural, and urban ecosystems by:

1. Examining human impacts on ecosystem structure, function, and services.
2. Investigating the effects of environmental conditions on human health.
3. Understanding the interactions among air, water, soil, living organisms, and people.
4. Designing and implementing technology for enhanced environmental quality.
5. Promoting a sustainable future and enhanced environmental quality through the study and management of our natural resources.

We aspire to build the human capital and knowledge base needed to meet these mission goals through excellence in scientific discovery, education, and outreach programs.

The Environmental Science and Technology graduate program is guided by a strong faculty recognized both nationally and internationally for their research, teaching excellence, and commitment to providing a high quality experience of education and mentoring for our graduate students. Graduates of our M.S. program go on to work for state and federal agencies, private companies, non-profits, or continue their education by pursuing a Ph.D. Students who graduate from the Ph.D. program have become faculty members at leading research universities, and are highly competitive for other positions outside of academia.

The faculty of the Environmental Science and Technology department firmly believe that graduate education at both the M.S. and Ph.D. level requires a commitment to research. Graduate students in the department will pursue a research project under the tutelage of their advisor and advisory committee. Research projects cover diverse topics ranging from green building design, advancing techniques in biofuel production, furthering understanding of biogeochemistry in wetlands, ecotoxicology, and developing new methods in sustainable agriculture. Prospective students are encouraged to identify one or more potential faculty advisors with whom they share areas of research interest.

The University of Maryland is ideally located between Beltsville, MD and Washington, D.C., and is thus located near the headquarters and principal laboratories of several federal agencies including the U.S. Department of Agriculture., the National Oceanic and Atmospheric Administration, the U.S. Geological Survey, the National Academy of Sciences, the National Institutes of Health, the U.S. Department of Energy, the Smithsonian Institution, the National Park Service, and the Environmental Protection Agency. Scientists from a number of these agencies have collaborated with Departmental faculty on various projects, hold adjunct appointments in the Department, have taught special courses at the University of Maryland, and participate on graduate student committees. Cooperation with these agencies provides opportunities for consultation and collaboration with leading scientists and financial support of graduate studies.

Along with strong local ties and collaboration, the Department also prides itself on both developing and sustaining international collaborations and research in over 30 countries including Belize, Haiti, China, Russia, Sweden, Brazil, Kenya, and South Africa.

Whether you are considering, or committing to Environmental Science and Technology, we're happy you found us! In this handbook we hope you will find the resources you need to assist in your exploration, or pursuit of a graduate degree with us.

Welcome!

**ENST WEBSITE in GRAD CATALOG:** <http://apps.gradschool.umd.edu/catalog/programs/enst.htm>

## KEY DEPARTMENTAL CONTACTS

### Mailing Address:

Department of Environmental Science and Technology  
1426 Animal Sciences Building  
University of Maryland  
College Park, MD 20742

301-405-1198 (phone)  
301-314-9023 (fax)

[www.enst.umd.edu](http://www.enst.umd.edu)

**Chair:** Dr. William Bowerman ([wbowerma@umd.edu](mailto:wbowerma@umd.edu))

**Director of Graduate Studies:** Dr. Martin Rabenhorst ([mrabenho@umd.edu](mailto:mrabenho@umd.edu))

**Assistant Director to Academic Programs:** Shannon Pederson ([shannonp@umd.edu](mailto:shannonp@umd.edu))

**Academic Programs Support:** Tina Scites ([tscites@umd.edu](mailto:tscites@umd.edu))

**IT Support:** Alexei Bondar ([abondar@umd.edu](mailto:abondar@umd.edu))

**Project Development Center:** Gary Seibel ([gseibel@umd.edu](mailto:gseibel@umd.edu))

**Administrative Support:** Tina Scites ([tscites@umd.edu](mailto:tscites@umd.edu))

**Director of Administrative Services:** Bob Carter ([rcarter8@umd.edu](mailto:rcarter8@umd.edu))

**ENST Faculty/Staff List:** <http://enst.umd.edu/People/>

**UMD Faculty Outside of ENST:** <http://directory.umd.edu/search>

\*\*For enquiries about the ENST Graduate Program, please use the Academic Program Enquiries form:  
<http://enst.umd.edu/about/contact-us/academic-program-enquiries-0> \*\*

## Departmental Roles

### Faculty

The faculty of the ENST department are the main resource for students as they progress toward their degree. Faculty are responsible for teaching courses, conducting research, and mentoring graduate students, among many other responsibilities.

Students are encouraged to get to know the ENST faculty during their time in the program. Some faculty can be approached simply by dropping by their office, while with others it may be necessary to email and schedule an appointment. All of the faculty are interested in the progress of students, but may have different schedules and personal styles of interaction. To learn more about the faculty in the ENST department and their particular interests, view the faculty list on the department website:

<http://enst.umd.edu/people/faculty>

### Advisor

Advisors are members of the ENST Faculty. The role of the student's advisor is one of the most critical aspects of an advanced degree. It is the role of the advisor to mentor their students, help foster the development of scholarly inquiry, exploration and understanding, and to guide them through the process of completing an advanced degree. Advisors are responsible for working with their students to develop course schedules, guide their research, and supervise progress toward degree completion.

Each student in the ENST program is assigned an advisor, and should meet with them at least once a semester. If a student wishes to change their advisor at any point, they should discuss this with their advisor, or the Director of Graduate Studies, depending on the circumstances.

### Director of Graduate Studies (DGS)

The Director of Graduate Studies has overall authority and responsibility of the ENST Graduate Program, and is responsible for final authorization of all communications and forms sent to the graduate school. The current DGS for ENST is Dr. Martin Rabenhorst (<http://enst.umd.edu/people/faculty/martin-rabenhorst>).

### Master's Thesis Committees

All ENST students in the MS program are required to select and assemble a Thesis Committee that will work with the advisor to periodically review the student's progression toward the degree. The Thesis Committee must approve the student's Research Proposal and Plan of Study, and also administers the Master's Thesis Examination. The Committee will include a minimum of three members of the Graduate Faculty, at least two of whom will be Full Members<sup>1</sup>. The Chair of the Committee normally will be the student's advisor, who will be a Full or Adjunct Member of the Graduate Faculty, or who has been granted an exception to the policy by the Dean of the Graduate School. Taken from:

[http://apps.gradschool.umd.edu/catalog/masters\\_degree\\_policies.htm#8](http://apps.gradschool.umd.edu/catalog/masters_degree_policies.htm#8)

### Doctoral Dissertation Committees

The Doctoral Dissertation Committee functions similarly to the Master's Thesis Committee, with some differences. The Committee must include a minimum of five<sup>2</sup> members of the Graduate Faculty, at least

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<sup>1</sup> Normally 2 or more of the committee members will be ENST Faculty members.

<sup>2</sup> Normally 3 or more (but a minimum of 2) of the committee members will be ENST Faculty members.



three of whom must be Full Members. The Chair of the Committee normally will be the student's advisor, who will be a Full Member of the Graduate Faculty, or who has been granted an exception to the policy by the Dean of the Graduate School. Each Committee will have appointed to it a representative of the Dean of the Graduate School (who will be a full member of the graduate faculty and must not be a member of the ENST department). The Dean's Representative may be one of the five voting members. Alternatively, the Dean's Representative may not be a voting member of the Committee. Whether the Dean's Representative votes or not is a decision made by the student, primary advisor and the Dean's Representative before the Dean's Representative is nominated for approval by the Dean of The Graduate School. In addition, the Dean will ensure that there are five voting members on the Committee. Therefore, Committees that have a non-voting Dean's Representative must have at least six members (five voting members and the non-voting Dean's Representative.) Taken from: [http://apps.gradschool.umd.edu/catalog/doctoral\\_degree\\_policies.htm#4](http://apps.gradschool.umd.edu/catalog/doctoral_degree_policies.htm#4)

#### Academic Programs personnel

Academic Programs personnel are available for all levels of support. Whether you have policy, protocol, or personal issues related to your graduate degree, they are here to provide support, answers, and resources. Examples include issues such as course approval stamps, exceptions to policy requests, and unusual circumstances such as a leave of absence, or grievance.

## **ADMISSIONS**

### **Admission Requirements: Master's Program**

To be considered for admission to the M.S. degree program in Environmental Science and Technology, an applicant must:

- 1) Have earned a B.S. degree in a related field.
- 2) Have achieved an undergraduate cumulative GPA of 3.0 or higher.
- 3) Have completed courses to fulfill the Basic Science Requirement.

To meet the basic science requirement, a student must have completed a minimum of one semester of Calculus and a total of at least 20 credits in some combination of Chemistry, Physics, Biology or Mathematics (beyond Calculus I).

Although courses in other areas of Science and Engineering may be helpful, they do not count toward the basic science requirement. If otherwise competitive students are within three credits of meeting the basic science requirement, they may in some cases be admitted on a provisional basis.

- 4) Have achieved competitive scores on the Graduate Record Exam (GRE) General Test. From year to year, the average GRE scores of students accepted into the ENST graduate program have typically been around the 70<sup>th</sup> percentile.

### **Admissions Requirements: Doctoral Program**

To be considered for admission to the Ph.D. degree program in Environmental Science and Technology an applicant must:

- 1) Have earned an M.S. Degree in a closely related field. In special cases, exceptional students may be admitted to a Ph.D. program without first completing an M.S. degree provided these students have:
  - An exceptional academic record and test scores
  - Demonstrated significant research experience during their B.S. program (such as completion of a research based honors thesis).
- 2) Meet all admission requirements for the M.S. degree (i.e. Basic Science Requirement, GRE, etc).

### **University Requirements**

The Graduate School at the University of Maryland will also review your application, and have their own criteria for admission: [http://apps.gradschool.umd.edu/catalog/admissions\\_policies.htm](http://apps.gradschool.umd.edu/catalog/admissions_policies.htm)

## Application

General information regarding the application process can be found on the Graduate School Admissions Page: <http://gradschool.umd.edu/admissions>

The University of Maryland Graduate School accepts applications through the Online Graduate Application. Applicants are required to submit:

- Transcripts from all previous institutions
- GRE scores
- A personal statement of research interests
- Contact information for three references.

*Prospective students are strongly encouraged to contact graduate faculty within their area of interest.*

International students are also required to submit:

- International academic credentials, including transcripts in the original language, along with an English translation that must be signed by a professional translator (<http://globalmaryland.umd.edu/offices/international-students-scholar-services/translation-services> )
- Evidence of English proficiency (TOEFL)
- Financial certification
- Visa documentation
- Academic department approval

More information for international applicants can be found here:

<http://globalmaryland.umd.edu/offices/international-students-scholar-services/graduate-admissions>

## TOEFL/IELTS requirement

In cases with students for whom English is not their primary language, the University requires verification of English proficiency in the form of either the Test of English as a Foreign Language (TOEFL), or International English Language Testing System (IELTS). Minimum score requirements and other information can be viewed online here:

<http://www.admissions.umd.edu/requirements/EnglishLanguageProficiency.php> For those students who meet all other admission requirements except English proficiency, you may be conditionally admitted and required to enroll with the Maryland English Institute: <http://marylandenglishinstitute.com/wkdir/>.

## Admission Deadlines

Fall Semester:

- Domestic Admission – December 18
- International Admission – December 18

Spring Semester:

- Domestic Admission – September 25
- International Admission – September 25

You will likely hear back regarding your admission status in Mid to Late February for Fall applicants, and November for Spring applicants.

## Acceptance

### What To Do After You Have Been Accepted

If you are accepted into the ENST program, you will receive a letter from the Graduate School, and must notify them of your acceptance (or declination) not later than the first day of classes of the semester for which you are accepted (however, the sooner this is communicated the better). You should also immediately contact the ENST Department ([enstACprograms@umd.edu](mailto:enstACprograms@umd.edu)) for registration information.

### Assignment of an Academic Advisor

Admission to the ENST graduate program is dependent on the availability of at least one faculty member in the proposed major area of study who is willing to assume the responsibility of advising the student. The assignment of an Advisor is generally made by the Director of Graduate Studies in consultation with the Department's Graduate Committee, the prospective Advisor, and the graduate student. Much of the success of a graduate education depends on the close and effective relationship between students and their Advisors. As soon as possible after the student arrives, they should contact their Advisor to begin discussions regarding the plan of study and research.

### Meetings between Students and Advisors

It is expected that regular interactions will occur between graduate students and their academic advisors, but the frequency and nature of the meetings will vary from case to case. Sometimes, informal exchanges will suffice, while in other circumstances, more formal meetings will be needed. At a minimum, at least one meeting will be held each semester, to review and evaluate the progress of the student toward their coursework and research goals. These meetings can be initiated by either the student or the advisor.

### Formation of the Student's Advisory Committee

Advisors are responsible for appointing an Advisory Committee, typically in consultation with the student. This Advisory Committee will assist the student with the development of a plan of study, and with the planning and organization of thesis or dissertation research. The Advisory Committee should be formed as soon as reasonably possible, but no later than the end of the second semester after the student's entry into the Department's graduate program. This committee will ordinarily be nominated to serve as the student's Examining Committee, so it should be appointed with attention [to Graduate School requirements for the composition of an Examining Committee](#).

The function of the Advisory Committee is to provide guidance to the student in all aspects of the graduate program. It is important to establish a strong working relationship with the Advisory Committee, and the student is encouraged to make good use of the collective expertise of this group of faculty. The Advisory Committee will meet with the student at a minimum of once each year to discuss the student's progress both academically and with respect to research.

#### Developing a Plan of Study

The student's plan of study should be drafted through consultation between the student and Advisor with input from the Advisory Committee. The ENST Plan of Study form is to be completed no later than the end of the second semester of study. It is to be approved and signed by the Advisor and all members of the Advisory Committee before filing with the Director of Graduate Studies and Graduate Coordinator.

#### Developing a Research Proposal

A written Research Proposal is to be developed by the student with the assistance of the Advisor and the Advisory Committee. Copies of the proposal should be sent to committee members at least one week prior to a meeting of the committee, called to review and discuss the proposal.

Comments, criticisms and suggestions by the committee should be considered for the development of a revised final proposal. The review of the research proposal is among the most important functions of the committee and is arguably its best opportunity to provide criticism and to ensure research rigor. Committee expectations for the student's research proposal should be commensurate to the degree objective of the student (ie. proposals are expected to be more comprehensive for students in PhD vs MS programs). All committee members must demonstrate their approval of the proposal by signing the ENST form for this purpose; this signature may occur at the end of the proposal review meeting or following review of the revised proposal.

For MS students, the revised proposal should be submitted to the ENST Office of Graduate Studies by the end of the second semester of study. For PhD students, the revised proposal should be submitted by the end of the second year of study and prior to being advanced to Candidacy, although there may be advantages to the student of completing this earlier.

At a minimum, the Research Proposal should include a clear statement of research objectives, a literature review, and a description of the experimental approach. A cover sheet signed by the student's Advisor and members of the Advisory Committee indicating their approval of the Research Proposal must be attached when the proposal is submitted to the ENST DGS or Grad Coordinator.

All research at the University must be conducted in accordance with federal guidelines and University policy regarding the use of human subjects, animal subjects, radioactive materials, genetically engineered organisms, biological materials, select agent toxins, highly toxic gases, scientific diving, boats, and chemicals.

## **OVERVIEW OF ACADEMIC PROGRAM SPECIALIZATIONS**

### **Soil and Watershed Sciences**

The specialization in Soil and Watershed Sciences graduate program prepares students to address challenging environmental issues that involve the soil resource at field, landscape and watershed scales. Soils are the most complex and ecologically significant biogeochemical systems on Earth. Soil processes and the soil resource are critical to all terrestrial ecosystems from prairies to the Alaskan tundra, to wetlands, to our cities, to forests to biofuel farms. Soil Science is at the center of the study of what the National Science Foundation terms the Critical Zone - the confluence of atmosphere, lithosphere, hydrosphere and biosphere near the surface of the Earth.

### **Ecological Technology Design**

The specialization in Ecological Technology Design prepares students to integrate natural systems with the built environment to solve environmental problems while achieving economic, ecological and social sustainability. The science and application of using natural systems, processes and organisms to address environmental issues has evolved during the last few decades to a mature level whereby there are strong employment opportunities for graduates that are educated jointly in ecology and technology.

### **Wetland Science**

The specialization in Wetland Science addresses the keen awareness among the Environmental community that wetlands represent a critical and understudied component of many larger ecosystems. Hydrophytic vegetation, hydric soils and wetland hydrology all contribute to make wetlands the significant and highly complex ecosystems that they are. In addition to the more obvious recreational and aesthetic contributions of wetlands, they provide fish and wildlife habitat, protect and enhance water quality through biogeochemical processes, increase flood protection through flood water storage mechanisms, and afford protection against shoreline erosion. Wetlands have rapidly gained public attention over the last two decades as they have been brought into the limelight by state and federal regulations and through the attention given such large scale environmental issues as hurricane Katrina.

### **Ecosystem Health & Natural Resource Management**

The specialization in Ecosystem Health and Natural Resource Management (EHNRM) examines the complex interactions between ecosystem functioning, ecological health, and sustainability from a primarily ecological context. This program recognizes the shared need within Environmental Science and Human Health communities for an improved understanding of how environmental factors and ecosystem functions affect ecological communities. Integrity of these communities is critical to the continued availability of natural resources and ecosystem services on which we depend. Comprehension of how human activities affect ecosystem functioning allows development of effective “knowledge-based” policy and management tools to mitigate environmental decline and promote sustainable growth and development.

# **DEGREE REQUIREMENTS & ACADEMIC STANDARDS**

## **Academic Integrity and Responsible Conduct of Research**

ENST students are responsible for understanding what plagiarism and scientific misconduct are, and how to avoid them. Definitions of both, as defined by the University of Maryland, can be viewed here:

<http://www.president.umd.edu/policies/docs/III-100A.pdf> (Academic Integrity)

[http://www.umresearch.umd.edu/RCR/research\\_misconduct.html](http://www.umresearch.umd.edu/RCR/research_misconduct.html) (Scientific Misconduct)

The University of Maryland has adopted an Honor Pledge, of which more information can be viewed here: <http://www.shc.umd.edu/shc/HonorPledgeInformation.aspx>

Both of these topics are covered intensively in ENST602, which is suggested to be taken during your first semester in the program.

## **University Degree Requirements**

### Graduate School

The ENST Program operates as part of the University of Maryland, and therefore must adhere to all of the policies as described by the Graduate School. The official graduate catalog for the University of Maryland can be viewed online here: <http://www.gradschool.umd.edu/catalog/>

### Master's Program

- At least 30 semester hours beyond the B.S. degree.
- At least 6 hours of thesis research credit (ENST799).
- At least 24 hours of coursework. At least 12 must be in the major area, and a minimum of 12 must be earned at the 600 level or above.
- A thesis must be submitted for the Master of Science degrees in ENST.

More information on University MS requirements available here:

[http://apps.gradschool.umd.edu/catalog/masters\\_degree\\_policies.htm](http://apps.gradschool.umd.edu/catalog/masters_degree_policies.htm)

### Doctoral Program

- 12 credits of dissertation research (ENST899). A dissertation based on original research.
- The number of research and other credit hours required in the program varies with the program in question.
- All PhD students must be advanced to candidacy within 5 years of admission to the program, and at least 6 months before the degree will be conferred.

More information on University PhD requirements available here:

[http://apps.gradschool.umd.edu/catalog/doctoral\\_degree\\_policies.htm](http://apps.gradschool.umd.edu/catalog/doctoral_degree_policies.htm)

## ENST Departmental Requirements

### Master's Program

- ENST602: Research Principles and Methodology in ENST
- ENST702: Communication and Professional Development in ENST
- ENST798: Graduate Seminar (2 semesters)
- One graduate level statistics course (from among, or equivalent to, those on the approved list)
- Specialization requirements vary based on the area of specialization to which a student was admitted (minimum of 12 credits); See the ENST M.S. Graduate Program Summary of Requirements for specific requirements.
- All courses must be approved by the advisory committee.

### Doctoral Program

- At least 50 semester hours beyond the B.S. degree (in addition to research credits 898 and 899).
- ENST602: Research Principles and Methodology in ENST
- ENST702: Communication and Professional Development in ENST
- ENST798: Graduate Seminar (2 semesters) (if 2 semesters of ENST798 were completed during the MS, an additional 2 semesters are required during the PhD program)
- Two (total) graduate level statistics courses (from among, or equivalent to, those on the approved list)
- Specialization requirements vary based on the area of specialization to which a student was admitted. See the ENST Ph.D. Graduate Program Summary of Requirements for specific requirements.
- All courses must be approved by the advisory committee.

## Graduate Seminar/Semester Poster Session

### Seminar Series

During each semester, the weekly ENST Graduate Seminar is an important centerpiece of our departmental community. It is the place where our graduate students and faculty have the opportunity to inform the larger group about their proposed or current research, and to benefit from constructive dialogue with a broad spectrum of the faculty and graduate community. Seminar speakers include students, faculty, and invited guests. It is expected that all members of the ENST department will organize their schedules to attend this weekly event. *All ENST graduate students are expected to attend weekly ENST Graduate Seminars.*

### Poster Sessions

At the end of each semester, the ENST department hosts an afternoon poster session to highlight research being conducted by different lab groups, and as practice for students in preparation for outside conferences. All students and faculty are welcome to display posters.

### Seminar Requirement

During your time in the ENST graduate program, you will be expected to complete ENST798 (a one credit seminar course) two times; once as an entrance seminar, and once as an exit seminar. It is expected that the entrance seminar will present an overview of the research proposal (to be completed by end of



2<sup>nd</sup> semester for MS, by end of Yr 2 for PhD), and the exit seminar is typically presented after data collection is complete, or nearly complete, near the end of the degree program.

One of the seminars must be an oral presentation as part of the Seminar Series, and the other should be presented as a poster during the end of semester poster session.

## Teaching Requirement

Teaching is considered a valuable and integral component of the graduate education experience, and all ENST graduate students are required to undertake a teaching assignment during their graduate program<sup>3</sup>.

- For those supported as an ENST GA<sup>4</sup>, the expected teaching level would be the equivalent of two periods of a lab or discussion section for one semester (which is expected to require <20 hrs per week for a single semester)<sup>5</sup>.
- Grad students not supported as GAs are expected to assist in teaching for one semester, the equivalent of one lab or one discussion section (requiring <10 hrs per week on average for a single semester). The ENST department will compensate these students at an appropriate hourly rate equivalent to a GA level 2 for up to 10 hours/week for the semester they teach.
- For students who hold teaching assistantships outside of the ENST department, this teaching experience will be accepted for the ENST requirement.
- For students on other types of assistantships outside the ENST department, they are expected to assist in teaching for one semester, the equivalent of one lab or one discussion section (requiring <10 hrs per week on average for a single semester). The ENST department will compensate these students at an overload using an appropriate hourly rate equivalent to a GA level 2 for up to 10 hours/week for the semester they teach.

In many cases it will be most efficient for the GA to complete this during a single semester. In some cases, however, there may be advantages for the student or the department to spread this over two semesters. The teaching assignment for each student will be coordinated through the Academic Program Personnel and the Directors of Undergraduate and Graduate Studies, and in discussion with the student and their academic advisor. In determining the teaching assignment, the experience and academic qualifications of the student should be utilized to the degree possible, but will also depend upon the department's needs for teaching support.

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<sup>3</sup> If a 4+1 BS/MS program is instituted in ENST, those MS students who are completing a 4+1 BS/MS program will not be required to undertake this teaching assignment.

<sup>4</sup> Funding through ENST Faculty

<sup>5</sup> According to the UMD Policy for Graduate Assistantships, "Departments are to provide work assignments that GAs receiving full stipends can satisfactorily complete in no more than a 20-hour average work week, and are to ensure that GAs spend no more than 20 hours per week on average throughout the term of appointment on work unrelated to their research." Therefore, it is the expectation of ENST that when GAs are providing their semester of teaching assistance, that a) this requires no more than 20 hrs/week, and b) that it is clear to the GA and to their major advisor (supervisor) that the teaching activities are to be counted toward the "20 hours per week on average throughout the term of appointment on work unrelated to their research." This means that while teaching, students would not be assigned any additional duties unrelated to their research, which they might otherwise be expected to undertake.

## Compliance with Requirements

Responsibility for compliance with Departmental and Graduate School requirements rests with the student under the guidance of the Advisor and Advisory Committee. Students should be familiar with Graduate School requirements and deadlines as outlined in the current issue of the Graduate Catalog.

## ENST Annual Reports

An annual progress report (using a template provided, and signed by both the student and their advisor) is due the last day of classes during the Spring Semester (usually the second week of May). Timely submission of this form is important for documenting completion of your benchmarks, and failure to complete the annual report may jeopardize your standing in the ENST graduate program.

## Student Progress and ENST Benchmarks of Progress

Assuming a student enters the ENST graduate program having met our basic admission requirements, is supported on an assistantship, and is making normal progress toward completion of the degree, we expect the student to reach each of the following benchmarks in the time period indicated below.

Benchmarks for Full Time ENST PhD Students.								
	Year 1		Year 2		Year 3		Year 4	
	S1	S2	S1	S2	S1	S2	S1	S2
Initial meeting with academic advisor	X							
Formation and meeting of advisory committee		X		X		X		X
Completion of Plan of Study		X						
Completion of Entrance Seminar				X				
Complete the majority of formal coursework				X				
Complete the comprehensive exams					X			
Approval of dissertation proposal				X				
Advance to candidacy						X		
Complete/defend the dissertation								X
Complete the program/graduate								X
Submission of Annual Report		X		X		X		X

Benchmarks for Full Time ENST MS Students.				
	Year 1		Year 2	
	S1	S2	S1	S2
Initial meeting with academic advisor	X			
Formation and meeting of advisory committee		X		X
Completion of Plan of Study		X		
Completion of Entrance Seminar		X		
Complete the majority of formal coursework			X	

Approval of research proposal/plan		X		
Complete/defend the thesis				X <sup>6</sup>
Submission of Annual Report		X		X

The responsibility to meet these benchmark falls primarily to the graduate students themselves, although we fully expect student progress toward benchmarks to be overseen and encouraged by the student’s Advisor. Student progress will be reviewed annually by the ENST Graduate Program Office. Students who fail to meet a benchmark within the allotted time frame will be notified, along with their Advisor, that they have been placed on probation, and will be given six weeks to present a plan for remedy. The policy of the Department is that graduate student funding will be renewed annually so long as the student is making satisfactory progress, as determined by our established benchmarks. Therefore, if a student fails to remedy the situation and complete the benchmark within the approved time period specified in their plan, or within a one semester probation period, they will face the possible loss of financial support. In such cases, prior to termination of financial support, personal interviews will be held with the student and the student’s Advisor to determine if there are unusual or extenuating circumstances that should be considered.

## COURSE REGISTRATION

To attend classes at the University of Maryland, College Park, it is necessary to process an official registration. Specific registration dates and instructions are printed in the Registration Guide and on the MyUM website, [www.my.umd.edu](http://www.my.umd.edu). Registration information for Summer Term, Winter Term, and Professional Programs may be found at [www.oes.umd.edu](http://www.oes.umd.edu).

All graduate students are expected to maintain continuous registration while at University of Maryland. This means that you must be registered for at least one credit each consecutive fall and spring semester while at the University. After the tenth day of classes of the second unregistered semester, your admission to the University will be terminated!

If you must be away from the University for an extended period, you can Petition for Waiver of Continuous Registration:  
[http://gradschool.umd.edu/sites/gradschool.umd.edu/files/uploads/petition\\_for\\_waiver\\_of\\_continuous\\_registration.pdf](http://gradschool.umd.edu/sites/gradschool.umd.edu/files/uploads/petition_for_waiver_of_continuous_registration.pdf)

Request a Leave of Absence:  
[http://gradschool.umd.edu/sites/gradschool.umd.edu/files/uploads/request\\_for\\_leave\\_of\\_absence.pdf](http://gradschool.umd.edu/sites/gradschool.umd.edu/files/uploads/request_for_leave_of_absence.pdf)

Request for Time Extension:  
[http://gradschool.umd.edu/sites/gradschool.umd.edu/files/uploads/request\\_for\\_time\\_extension.pdf](http://gradschool.umd.edu/sites/gradschool.umd.edu/files/uploads/request_for_time_extension.pdf)

ALL requests regarding registration and time away from the University must first be discussed with the student’s advisor. In most cases it will be necessary to communicate these requests with the Graduate Director also.

- Course listings can be found at <https://ntst.umd.edu/soc/>

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<sup>6</sup> In order for research in some disciplines to be publishable, it must include data from two summer field seasons, and in those cases, a more reasonable benchmark to *Complete/defend the thesis* would be the 1<sup>st</sup> (Fall) semester of Year 3.

- To register for a class, access <https://ntst.umd.edu/commonLogin?return-url=https%3A%2F%2Fntst.umd.edu%2Ftestudo%2Fmain%2FdropAdd>
  - o You can also view your unofficial transcript from [www.testudo.umd.edu](http://www.testudo.umd.edu)
- Type in the course code (e.g. ENST602) and click “Add”
- If you are having issues registering, contact Tina Scites ([tscites@umd.edu](mailto:tscites@umd.edu); x51178)

## Designation of Full-Time and Part-Time Status

The Graduate School uses a unit system in making calculations to determine full-time or part-time student status. Please note that graduate units are different from credit hours. The number of graduate units per credit hour is calculated in the following manner:

- Courses in the series: 000-399 carry 2 units per credit hour.
- Courses in the series: 400-499 carry 4 units per credit hour.
- Courses in the series: 500-599 carry 5 units per credit hour.
- Courses in the series: 600-897 carry 6 units per credit hour.
- Master's Research course: 799 carries 12 units per credit hour.
- Pre-candidacy Doctoral Research courses: 898 carries 18 units per credit hour.
- Doctoral Dissertation Research: 899 carries 18 units per credit hour. All doctoral candidates must pay candidacy tuition for which they will be automatically registered for six (6) credit hours of 899; this defines all currently registered doctoral candidates as full-time.
- All doctoral candidates must pay the flat candidacy tuition for which they will be registered for six (6) credit hours of 899; this defines all currently registered doctoral candidates as full-time (note that in this case you are only billed for 3 credits and not for 6 credits).

To be certified as full time, a graduate student must be officially registered for a combination of courses equivalent to 48 units per semester. Graduate assistants holding regular appointments have full-time status if they are registered for at least 24 units in addition to the assistantship; holders of half-time assistantships are considered full-time if registered for 36 units. Audited courses do not generate graduate units and cannot be used in calculating full-time or part-time status

## Testudo (Online Registrar Services)

Many important academic functions (e.g., registering for courses, viewing your unofficial transcript, updating official contact information) at the University of Maryland can be completed online at [www.testudo.umd.edu](http://www.testudo.umd.edu).

## Residency Classification

All students receiving GA/TA's are considered as in-state by the University of Maryland in regard to tuition and fees. For those are self-funded, there is a different process that must be taken to be

classified as in-state for tuition purposes. Website for reclassification information:  
<http://www.registrar.umd.edu/resreclass.html>

## Important Academic Deadlines

The University Academic Calendar is available online: <http://www.provost.umd.edu/calendar/>

There are a few dates during each semester that are important for graduate student's and their advisors to be aware of:

- Typically, you must apply for graduation no later than ten days after the semester you intend to graduate in begins ( <https://ntst.umd.edu/testudo/#/main/graduationApp?null>).
- Doctoral students need to submit their Nomination of Dissertation Committee within three weeks of the start of the semester. Master's students usually have a month. In both cases, the form must be submitted at least 6 weeks before the scheduled defense. The form is available online here, and must be signed and returned to the Registrar's Office:  
[http://gradschool.umd.edu/sites/gradschool.umd.edu/files/uploads/nomination\\_of\\_thesis\\_or\\_dissertation\\_committee\\_form.pdf](http://gradschool.umd.edu/sites/gradschool.umd.edu/files/uploads/nomination_of_thesis_or_dissertation_committee_form.pdf)
- The third important deadline is the submission of the Electronic Thesis and Dissertation Publication Form ( [http://gradschool.umd.edu/sites/gradschool.umd.edu/files/uploads/thesis\\_and\\_dissertation\\_electronic\\_publication\\_form.pdf](http://gradschool.umd.edu/sites/gradschool.umd.edu/files/uploads/thesis_and_dissertation_electronic_publication_form.pdf); signed and returned to the Registrar's Office).

All important dates can be viewed online here:

<http://gradschool.umd.edu/calendar/deadlines>

If for any reason you miss a deadline, you will be required to submit an additional form, the Petition for Waiver of Regulation alongside the late form:

[http://gradschool.umd.edu/sites/gradschool.umd.edu/files/uploads/petition\\_for\\_waiver\\_of\\_regulation\\_0.pdf](http://gradschool.umd.edu/sites/gradschool.umd.edu/files/uploads/petition_for_waiver_of_regulation_0.pdf)

*What if I have a course related question?*

Email [enstacademicprograms@umd.edu](mailto:enstacademicprograms@umd.edu)

## **FUNDING AND FINANCIAL AID**

There are multiple ways to fund your degree while in the ENST program. Departmental assistantships are highly competitive, and are awarded to top students. The University awards some scholarships and fellowships, which are also highly competitive. Research assistantships are from grants awarded to advisors, many of whom will not accept a student unless they have funding available to support them. Some students support themselves through finding assistantships offered by other departments on campus, or through support from current employers. Most assistantships and fellowships constitute support for tuition, along with a stipend and a health insurance option.

### **Tuition and Fees**

#### Costs

To view current costs associated with attending the University of Maryland, click here:

<https://billpay.umd.edu/tuition-billing-tuition-and-fees/graduate-tuition-and-fees>

Typically, assistantships and fellowships cover tuition costs, but not registration fees, which are expected to be paid by the student. These fees give the student access to campus facilities including shuttle buses, the Health Center, athletic facilities (including free tickets to sporting events as well as gym membership), and also include the technology fee, which pays for software and computer labs across campus.

#### University Support

The Graduate School and the University of Maryland offer fellowships to recruit and retain outstanding students. There are also competitive awards available through the Graduate School. More information on these awards can be viewed here: <http://gradschool.umd.edu/funding>

#### Departmental Support

The ENST department has some funding available to support and recruit a few outstanding students with full or partial Assistantships.

#### Fellowships and Scholarships

All ENST students are encouraged to pursue Fellowships and Scholarships offered by outside groups and agencies. These awards typically cover the same expenses as university and departmental support, and often include funding to attend conferences and meetings. It is important to satisfy any additional non-academic requirements as specified by the awarding entity in order to continue to receive funding.

#### Self Funded Options

Unfortunately, there is not always financial support available to students in the department. In the past, some students have worked part time off campus to help support their tuition, while others have been able to secure Graduate Assistantships through other departments and programs on campus. A good resource to be aware of for seeking out and applying for other assistantships on campus is the University of Maryland job website: <https://ejobs.umd.edu/>

## GA Working Hours and Responsibilities

Consistent with University policies, students receiving funding through a GA are generally expected to contribute, on average, 20 hrs/week of work not related to their thesis or dissertation research study. This time commitment can be modified (down, but not up) by their advisor (feel free to clarify with your advisor) and may vary from season to season (summer can be especially busy with field-work). Different assistantships require different responsibilities and time commitments, so you should be sure to discuss this with your advisor before starting the position so that you know what to expect and no issues arise. Students should become familiar with **UMD Campus Policies for Graduate Assistantships**<sup>7</sup> (<https://academiccatalog.umd.edu/graduate/policies/policies-graduate-assistantships/>).

### **Time Away from Duties** (updated July 2011 from UMD Campus Policies for GAs.)

*"GAs do not earn paid annual, personal, or sick leave.... A full time (20 hours per week), 12-month assistantship carries the expectation that the GA will be allowed ten workdays (40 hours) of collegially supported absence.... It may not be accumulated or transferred.... It does not include time when the University is closed.... Reasonable notice and prior approval by the GA's supervisor are required. ...it is distinct and separate from allowable absences for illness, maternity, or adoption."*

### **Illness**

*"If a GA becomes ill, time away from duties should initially be supported collegially. Occasional, short-term absences on account of illness generally will not require the use of the allowable "time-away from duty" days. In the event an absence due to illness extends for a period longer than two weeks, support for time away from duties must be requested by the GA and lies in the discretion of the head of the funding unit or of the Principal Investigator or other grant administrator."*

## Outside Employment

### Off Campus

If you wish to work off campus in addition to your research and other departmental responsibilities (GA, TA, etc), you should first discuss it with your advisor. You must be sure not to violate any rules regarding financial aid, etc. Be aware that the ENST graduate program is rigorous, and working at another job could potentially slow progress and delay the completion of your degree.

### Overload

In some instances, it may be appropriate to work additional hours on campus, in addition to the 20 required by a GA/TA. This should be discussed on a case by case basis with your advisor. An overload form must be completed if your advisor supports your request:

[http://gradschool.umd.edu/sites/gradschool.umd.edu/files/uploads/graduate\\_student\\_overload\\_assignment\\_request.pdf](http://gradschool.umd.edu/sites/gradschool.umd.edu/files/uploads/graduate_student_overload_assignment_request.pdf)

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<sup>7</sup> *The assigned duties of a Graduate Assistant are consistent with the objectives of the teaching and research missions of the university, including the objective that assistantships are to be educationally productive for graduate students. Workload expectations of the department, and of the student's advisor/supervisor, should be explicit and clear. The appointment may be full-time (20 hours per week) or half-time (10 hours per week). Departments are to provide work assignments that GAs receiving full stipends can satisfactorily complete in no more than a 20-hour average work week, and are to ensure that GAs spend no more than 20 hours per week on average throughout the term of appointment on work unrelated to their research. The actual number of hours required to complete assignments in any given week may vary.*



*If you have questions about your paycheck, or contract, contact the Director of Administrative Services.*

## **SPECIAL CIRCUMSTANCES**

### **Provisional Status**

In some cases, students who do not meet the minimum admission requirements but still show promise to be a successful graduate student will be admitted to the ENST program on a provisional basis. These students must meet certain provisions/benchmarks as determined by either the Graduate School, or the ENST department. Some examples of provisions include earning a 3.0 gpa in first 12 credits, or a 3.25 gpa in first two semesters, etc.

More information available here: [http://apps.gradschool.umd.edu/catalog/admissions\\_policies.htm](http://apps.gradschool.umd.edu/catalog/admissions_policies.htm)

### **Exceptions to Policy**

Occasionally, and under the right circumstances, some policies can be overridden through an Exception to Policy. Some examples include exceeding the allowed course credit limit in a semester, a time conflict for two classes, or a leave of absence. You should first discuss this with your Advisor, and then with the Director of Graduate Studies, and Academic Programs personnel.

### **Academic Probation**

The minimum cumulative grade point average (GPA) required by the Graduate School for graduation is 3.0, and grades below C are unacceptable for graduate credit. If a student's cumulative GPA falls below 3.0 at any time, the student must meet with the Advisory Committee as soon as possible in the semester following the occurrence of this deficiency. The purpose of this special meeting is to discuss the situation and to help the student set guidelines for its correction. A student whose cumulative GPA falls below a 3.0 average for two consecutive semesters of enrollment will not be permitted to re-enroll, and the Department will recommend termination of their admission by the Graduate School.

### **STRUGGLING in Some Area of Graduate School?**

Graduate school can be time consuming and stressful, and sometimes you might even feel like you will never finish! Be aware that there are plenty of resources both in the ENST department and University to support you during your time at UMD.

To whom should you go if you are having trouble in ENST?

- Your Fellow grad students
- Your advisor
- The Director of Graduate Studies
- The Department Chair

- The Graduate Ombudsperson at 301-405-3132 (as a last resort)  
<http://www.gradschool.umd.edu/ombuds/>

What if I am having other trouble at UMD?

UMD Counseling Center <http://www.counseling.umd.edu/>

## Grievances

Should you feel that you have been treated unfairly, or have an equity or harassment issue to discuss you should feel welcome to approach the Graduate Director, or Academic Programs personnel for guidance and potential solutions. Should formal grievance be necessary, they can assist in the process.

## Injury Related to Work

If you are injured while in the lab or field when conducting work or research for the department, you must notify your supervisor immediately, seek medical treatment if needed, and then complete the necessary Injury Report Forms ([http://www.des.umd.edu/risk\\_comm/wcomp/form/wcomp.pdf](http://www.des.umd.edu/risk_comm/wcomp/form/wcomp.pdf)). Forms and quick reference pages can be found at the end of this guide.

More information is available here: [http://www.des.umd.edu/risk\\_comm/wcomp/](http://www.des.umd.edu/risk_comm/wcomp/)

## Potential to advance to PhD track from MS track

It is rare for students to advance to the Ph.D. track from the M.S. track without first completing their degree. However, if you feel you have the appropriate justification, please discuss your rationale with your advisor.

## Maternity Leave

It is important: that graduate assistants becoming parents be accommodated; that parental accommodation be regarded as accepted practice; that the terms of an accommodation be reasonable and appropriate; that accommodations within a unit be consistent and equitable in application; and that a request for parental accommodation, if denied, receive timely review.

1. Graduate Assistants will be provided a guaranteed parental accommodation of six weeks, retaining their full stipends and benefits during the accommodation. If both parents are Graduate Assistants, the six-week accommodation will be divided between them.

2. Departments, faculty, and graduate assistants should continue to work collegially on further details of the accommodation, recognizing that these may differ from case to case owing to individual student circumstances and departmental cultures. The Graduate School Parental Accommodation Form should be submitted at least eight weeks prior to anticipated leave and is available at:

[http://gradschool.umd.edu/sites/gradschool.umd.edu/files/uploads/parental\\_accommodation\\_application.pdf](http://gradschool.umd.edu/sites/gradschool.umd.edu/files/uploads/parental_accommodation_application.pdf)

3. A graduate assistant whose request for a reasonable accommodation is not approved should consult first with his or her Director of Graduate Studies or Department Chair, next with his or her college Dean, and last, if necessary, with the Dean of the Graduate School. Alternatively, the assistant may go directly to the Ombuds Officer for Graduate Students for advice and/or informal mediation. In either case, the Dean of the Graduate School will serve as the final arbiter between college/department and student.

Some other useful information regarding graduate students who are parents can be found here:

UMD Parents: <https://groups.yahoo.com/neo/groups/UMDparents/info>

Family Resources: [http://thestamp.umd.edu/gh/campus\\_resources/family\\_services](http://thestamp.umd.edu/gh/campus_resources/family_services)

## **FIELD, LAB, AND PROJECT DEVELOPMENT**

### **Laboratory Safety**

The Department of Environmental Safety (DES) provides safety training and creates policies and guidelines for both laboratory and field work. Their website provides information on practices ranging from scientific diving to chemical hygiene plans: <http://www.des.umd.edu/general/guide.cfm?unit=20#>

It is expected that all new graduate students attend a Safety Orientation for Graduate and Teaching Assistants. Information on dates and registering will be provided by your advisor, or you can contact Gary Seibel (x51181; [gseibel@umd.edu](mailto:gseibel@umd.edu)) for more information.

ENST Graduate Students working in laboratories must complete the following online training:

- Chemical Hygiene - <https://umd.bioraft.com/node/1388322>
- Laboratory Exposure Controls - <https://umd.bioraft.com/node/1388339>
- Hazardous Waste Generator - <https://umd.bioraft.com/node/1809176>
- New Laboratory Researcher Training - [https://umd.bioraft.com/raft/training/training\\_prerequisite/1467503](https://umd.bioraft.com/raft/training/training_prerequisite/1467503)

In addition, if you are serving as a TA for a course with a lab, the following training is also required:

- Laboratory Teaching Assistant Training - <https://umd.bioraft.com/node/1982696>

Individual labs use different chemicals, and have different protocols related to specific equipment or procedures performed in that lab. Be sure to discuss the lab's Chemical Hygiene Plan with the faculty member in charge of the lab **BEFORE** you begin any work.

Be aware of the safety related to chemicals you may be using. Material Safety Data Sheets can be accessed online here: <http://www.des.umd.edu/os/rtk/msds/index.html>

## **Fieldwork S.O.P.'s**

Much of the research conducted by faculty and students in the ENST department includes a field component, as well as some courses. At some point during your time as a graduate student in ENST you will likely find yourself in a farm field, an urban center, up to your waste in mud in a wetland, or out on a boat in the Chesapeake Bay. Field-work is rewarding, but comes with different risks, and necessary safety and research procedures.

In general, you should try to avoid conducting field-work by yourself. Bring plenty of water, sunscreen, and a first aid kit for minor injuries. Depending on the specific work you are doing, other safety equipment and procedures may be necessary both for sample collection and transportation (particularly if you might be handling any chemical or biological samples). Be sure to discuss this with your advisor before beginning any field research.

More information is available through DES: <http://www.des.umd.edu/general/guide.html>

Another good resource for field research safety:

<http://ehs.berkeley.edu/sites/default/files/lines-of-services/field-safety/fieldresearchsfty.pdf>

## **Animal Research (IACUC)**

If your research involves the use of animals, be sure to consult the Institutional Animal Care and Use Committee (IACUC) website: <http://www.umresearch.umd.edu/IACUC/> IACUC also offers training related to animal research.

## **Institutional Review Board (IRB)**

The IRB is responsible for generating and maintaining research protocols at the University of Maryland, particularly focused on research that involves human participants. If any of your research involves human participation, or you plan to apply for grants that involve human participation, be sure to review the IRB website: <http://www.umresearch.umd.edu/RCO/New/index.html> The IRB also offers training related to human research.

## **Lab Equipment Available to Graduate Students**

There is a wide range of analytical equipment operated by different labs in the department. Lab abilities range from water quality analysis, to DNA quantification in soil and sediment. Many labs share equipment, or will process samples for each other. More information on available equipment here: <http://enst.umd.edu/research/research-labs>

## **Fabrication Assistance in the Project Development Center**

To obtain design and/or fabrication assistance from the ENST Project Development Center, contact Gary Seibel (x51181; [gseibel@umd.edu](mailto:gseibel@umd.edu) )

## **Purchasing**

Inevitably, you will need to purchase supplies for your research. To do so, you should always have prior approval from your advisor. Ask your advisor to be sure you understand the appropriate protocols for making purchases.

## **Travel Related to Work**

For travel to and from field-work sites, you can use either a departmental (preferred), or personal vehicle. If you choose to use a personal vehicle, you may be reimbursed for mileage by completing and submitting a Travel Reimbursement Form(<http://www.dbs.umd.edu/travel/services/expguidelines.php>). Be sure to obtain prior approval! Additionally, if travel is out of state, you must obtain permission by completing an Out of State Travel Form.

## **Using a Departmental Vehicle**

To use a departmental vehicle, a copy of your official driver's license must be made and kept in your file (Academic Programs Support). Ask your advisor about vehicle access: some labs have their own vehicles, while others share vehicles. For labs that share vehicles, use is scheduled through Gary Seibel (x51181; [gseibel@umd.edu](mailto:gseibel@umd.edu)). The reservation calendar is in room 0530C (ENST Project Development Center).

Travel to conferences and meetings is be funded by grants through your advisor, but some opportunities for other funding to support travel to scientific meetings is available. In order for your expenses to be covered, you must complete a Travel Approval Request (in the "Forms" section). If you plan to travel frequently (more than once a year), you should apply for access to complete travel forms online (<http://ares.umd.edu/Elf/Elf.html>). There is additional training related to this that is provided once you have been approved for access (A sample Travel Approval Request can be viewed online: <http://www.dbs.umd.edu/travel/services/training/guide/>). If you will only travel once, work with Tina Scites (x51198; [tscites@umd.edu](mailto:tscites@umd.edu)) to arrange your travel. She will also assist with booking any flights, hotels, etc.

The University of Maryland Traveler's Guide can be viewed online here:  
[http://www.dbs.umd.edu/travel/policy/umtravel/trav\\_guide.php](http://www.dbs.umd.edu/travel/policy/umtravel/trav_guide.php)

The guide includes information on policies, expenses, per diem, reimbursement for travel in a personal vehicle, etc. The Travel Services website also has useful information:  
<http://www.dbs.umd.edu/travel/services.php>

## University Opportunities

There are some awards and grants available through the Graduate School to support travel to conferences: [http://www.gradschool.umd.edu/current\\_students/travel\\_awards.html](http://www.gradschool.umd.edu/current_students/travel_awards.html)

### Departmental

In very rare circumstances, departmental funds may be available. You should discuss this with your advisor.

## **INCIDENTALS**

There are many resources available to grad students around campus. For more information, check out the Graduate Student Life Handbook (<http://thestamp.umd.edu/gh/>). The following sections highlight resources specific to students in the ENST program, and may not be covered in the handbook, or are department specific.

### **Student I.D.**

Your student I.D. is used in many aspects on campus: as a key card for lab and office access, entrance to computer labs, and is needed to use University buses. Your I.D. can be picked up from the Registrar's Office (First Floor, Mitchell Building) once you are registered for classes. More info here: <http://registrar.umd.edu/current/Policies/id-cards.html>

### **Libraries**

There are multiple libraries around campus, the two main ones being Hornbake and McKeldin. The University of Maryland also has subscriptions and access to a multitude of current and past journals, theses and dissertations, and research articles, which can be accessed online here: [www.researchport.umd.edu](http://www.researchport.umd.edu)

Grad Student library guide: <https://issuu.com/umdlibraries/docs/2016gradguide-issuu>

### **Software/Computing**

The University of Maryland makes some software available free to students (Microsoft Office, Adobe, Matlab, etc.) for both Windows and Mac. The software can be accessed here: <https://terpware.umd.edu/Mac>

Other software (SAS, JAVA, etc.) is available for use in computer labs across campus. Not all software is available in every computer lab, and not all labs are available to all students. Software resources available and locations of labs can be checked here: <https://it.umd.edu/students>

Some specialized software is also available in campus library computers:

<http://www.lib.umd.edu/services/computing>

Computer Lab Location: ANS 0509

Open 8:00am-5:00pm

After hours access available in advance by request: see Tina Scites: x51198; [tscites@umd.edu](mailto:tscites@umd.edu)

ENST Computer Access (ID and PW)

Contact: [enstit@umd.edu](mailto:enstit@umd.edu)

Software for Computer Lab Machines:

Contact: [enstit@umd.edu](mailto:enstit@umd.edu)

Software for Personal Computers:

OIT Software Licensing <http://www.oit.umd.edu/slic/>

## Grad Student Offices

There are two ENST graduate student offices: one in ANSC (0426), and the other in HJP (0109). The offices have a desk for each student, along with a fridge and microwave. ID swipe access is required to enter the offices.

## Desk Assignment

When you first start in the program, you will be assigned a desk. Students should contact Academic Programs Support ([enstACprograms@umd.edu](mailto:enstACprograms@umd.edu)).

### ***Policy Regarding Access to Graduate Student Office Space***

*Individuals who have received assigned desk/room space in one of the graduate student offices (rooms 0426 and 0428 ANSC and room 0109 HJP) will be granted card access to the room in which they have assigned space. Graduate students or faculty with a particular need to access one of the other graduate student offices may request access to that space by a letter (providing justification) sent to both the Director of Graduate Studies and to the Department Chair.*

## Access

How do I get access to buildings and rooms?

Building and office access assigned with desk

All other rooms – Formal request by your advisor (Bldg #, Room #, Key Core #)

Tina Scites (x51198; [tscites@umd.edu](mailto:tscites@umd.edu))

## Facilities Issues

What if there is a facilities problem in the building?

Work Control x52222

Also email Gary Seibel

## **Meeting Rooms and Projectors**

To reserve a classroom or conference room, contact Shannon Pederson ([shannonp@umd.edu](mailto:shannonp@umd.edu)) at least two weeks ahead of time.

## **Website**

You might have noticed that current graduate students are listed on the ENST website. We ask that you please provide a picture, brief bio, research goal, and any publications you may have. This info can be sent to Melissa Rogers ([mroger@umd.edu](mailto:mroger@umd.edu)) Please keep Melissa informed of any updates!!!

## **Mailroom/Shipping and Receiving Packages**

### Receiving Mail/Packages

Students in ANSC will receive mail in room 1426, above the Grad Student Office. Each student has their own mail cubby on the wall. Large packages will be delivered to the shop (0530 ANSC).

For students in HJP, mail will be delivered to the MEES Office – 1213HJP).

### Sending Mail/Packages

When receiving packages, DO NOT send them to yourself or your advisor in the mail room!!!

Students in ANSC should have the package shipped under their name to:

*University of Maryland  
Building 142, Dock H  
College Park, MD 20742*

Students in HJP should also ship packages under their name to:

*Department of Environmental Science and Technology  
University of Maryland  
Building 142, Dock H  
College Park, MD 20742*

## **Posters/Printing/Copying**

### Posters



At some point in your career as a graduate student in ENST, you will need to create and print a poster presentation, either for a conference, or the ENST poster session at the end of a semester. The department requests that you include an ENST Logo Banner on any poster that you present related to research you complete while at the University of Maryland.

Departmental logo banners:

<http://enst.umd.edu/people/faculty-staff-resources>

Where to print posters:

Library: <http://www.lib.umd.edu/tlc/tlc-tech-desk>

Departmental printing: see below

Off campus: there are multiple locations nearby campus that offer printing services

### ENST Plotter: Terms and Conditions

General:

The Department of Environmental Science and Technology (ENST) has a *HP Designjet 4500* color plotter located in Room 1434 of the Animal Science/Ag. Engineering Building. This plotter is to be used only for direct support of the ENST mission including printing posters for departmental research, conferences, and marketing promotional material.

For posters to be presented at research meetings and conferences, up to one ½ size draft poster for review and comment prior to the conference, and up to one full size poster for presentation at the conference may be produced.

**Final posters will be printed at least one week prior to the start date of the conference. Final posters provided to staff after this date will not be printed by the Department and all costs for their printing will be the responsibility of the faculty member responsible for this project.**

Realize that for meetings where large numbers of ENST personnel are presenting, it is your responsibility to plan ahead for production of the poster. **It is suggested that you provide staff a nearly complete draft poster at least two weeks prior to the start date of the conference. This way staff can work out any formatting or technical problems with your poster.** No staff member will be expected to work outside of normal working hours or on weekends to produce your poster on time. From time to time, technical problems with the printer occur. If this results in circumstances outside of your control regarding the one week time requirement, the ENST Chair will decide, on a case by case basis, if the Department will pay for poster printing by an alternative outlet.

Use of the plotter requires staff assistance. Our experience is that a minimum of one hour is required and often two to get an acceptable product. Therefore, it is best to plan for plotting during regular business hours Monday---Friday between 10 a.m. to 3 p.m. Remember that you are utilizing staff time, so please be considerate of the many requests for their time that they receive every day.

**Design requirements:** The allowed maximum size of the document is 42” wide, therefore please do not exceed this width and allow 1” margins around your whole poster. While any file size that

is supported by software on the staff/faculty computer may be printed (PDF, JPG, TIFF, PPT), **the plotter works best with a poster designed in Powerpoint.**

Templates are available from Melissa Rogers ([mroger@umd.edu](mailto:mroger@umd.edu), x57273) to assist you in designing a poster.

All printed materials must include a Departmental logo/banner on your poster (Available for download here: <http://enst.umd.edu/people/logos-and-presentation-resources> ).

#### **Logistics:**

- Poster plotting should be planned ahead. Please coordinate with the staff at least 7 days prior to when you need the product. (*Plotter can be out of order or servicing personnel not available*).
- It is suggested that you sent your planned poster to Melissa Rogers , Web and Communications Coordinator ([mroger@umd.edu](mailto:mroger@umd.edu), x57273) to review at least 14 days before your meeting. That way she has the time to look for problems and you can change them without being pressed for time.

Please review your posters before submitting it for final printing. The staff can assist with final versions but does not have time to be involved in last-minute rearranging of content.

- Cost to print is approximately \$6 per/liner ft. Currently, this cost is informally supported by asking users to purchase a roll of paper, or an ink cartridge.
- This plotter is for departmental use only and more specifically, for research conference presentations or directly marketing the department.
- Staff printing out your poster may decline printing any poster, especially if it is deemed not meeting design guidelines or wasting departmental resources.

#### Printing

Each grad student office has a printer available for use. Specific instructions for how to connect your computer to the printer are available in each office.

#### Copying

There is a photocopier available in the ANSC mail room (1426 ANSC). We ask students not to make copies unnecessarily (this is the Environmental Science and Technology department after all!). Please limit your copying to exams/assignments for teaching ENST courses . If you wish to make copies of other documents, please consult with your advisor first.

#### **Parking/Transportation**

Can grad students park in lots near the buildings after hours?

HJP (Lot HH) Restricted during the day on Weekdays

Weekday evenings and all day on Weekends – any campus permit.

ANSC (Lot CC1)

After 4 pm, can park in lot CC1 (right outside of the Project Development Center door)

Campus Parking Permits

Parking permits can be purchased online at [www.dots.umd.edu](http://www.dots.umd.edu)

Bus Routes

Schedules for University shuttles can be viewed here:

[www.transportation.umd.edu/schedules.html](http://www.transportation.umd.edu/schedules.html)

Pre-Tax Metro Passes:

[http://thestamp.umd.edu/gh/graduate\\_assistantships/pre-tax\\_metro\\_pass](http://thestamp.umd.edu/gh/graduate_assistantships/pre-tax_metro_pass)

The Campus Bike Shop offers free bike repairs to registered students:

<http://crs.umd.edu/Maryland-Adventure-Program/Campus-Bike-Shop>

## GETTING INVOLVED

### **Professional Societies**

Membership in professional societies is an important aspect of your professional development. A list of some of the societies ENST faculty and graduate students are involved with is found below, with the number of faculty members in parentheses following the society name. Keep in mind that society membership fees cannot be covered by University funding.

American Association for the Advancement of Science (4)  
American Chemical Society (1)  
American Ecological Engineering Society (3)  
American Fisheries Society (1)  
American Geophysical Union (1)  
American Ornithologist's Union (1)  
American Society for Engineering Education (1)  
American Society of Agricultural and Biological Engineers (5)  
American Society of Agronomy (4)  
American Society of Microbiology (1)  
American Society of Mining and Reclamation (1)  
American Society of Plant Biologists (1)  
American Society of Tropical Medicine and Hygiene (1)  
Applied Spectroscopy and National Speleological Society (1)  
Association for Women in Soil Science (2)  
Association of Field Ornithologists (1)  
Association of Natural Resource Extension Professionals (1)  
Atlantic Estuarine Research Society (2)  
Clay Minerals Society (1)  
Coastal Estuarine Research Federation (3)  
Cooper Ornithological Society (1)  
Ecological Society of America (5)  
Geological Society of America (1)  
International Society for the Advancement of Energy Research (3)  
International Society for Ecology and Health (1)  
International Society for Ecological Economics (1)  
International Society for Industrial Ecology (1)  
International Union of Soil Scientists (1)  
Mid-Atlantic Association of Professional Soil Scientists (3)  
Mineralogical Society of America (1)  
Raptor Research Foundation (1)  
Society for Ecological Restoration (2)  
Society for Experimental Biology (1)  
Society of American Foresters (1)  
Society of Environmental Toxicology and Chemistry (3)  
Society of Mammalogists (1)  
Society of Wetland Scientists (5)  
Soil and Water Conservation Society (1)  
Soil Science Society of America (5)  
The Wildlife Society (4)  
The World Aquaculture Society (1)  
Water Environment Federation (1)  
Waterbird Society (1)  
Weed Science Society of America (1)  
Wilson Ornithological Society (1)

## **GATES**

GATES (Graduate Association for Technology and Environmental Science) is an informal association of graduate students in the ENST Department. We provide a network to introduce new students to the department, plan events to encourage social and professional development, and serve as a forum for communication between grad students, faculty, and staff. Past events have included brewery tours, events in DC, hiking, and camping. We are not an official university club, so leadership and decisions are handled with informal meetings, planned when needed.

### **GATES Leadership:**

President(s) - Primary point of communication within GATES, and between grad students and faculty. Responsible for calling and organizing meetings, though anyone can (and is encouraged to!) plan and organize events they're interested in. Ideally, this is a shared role, with one person in each of our two buildings filling the position.

<https://enst.umd.edu/graduate/graduate-association-technology-environmental-science>

Faculty Representative – Attends monthly faculty meetings during the school year, and communicates any relevant issues between grad students and faculty.

## **COMPLETING REQUIREMENTS**

### **Master's Thesis Defense**

Must obtain the "Nomination of Exam Form" from the Graduate School which shows names of approved committee members, Deans representative, and place for Graduate Director signatures. You may not defend without first obtaining this form from the Graduate School.

### **PhD**

#### **Advancing to Candidacy**

Doctoral students must pass a written and an oral comprehensive exam and prepare a written research proposal that must be approved by the student's Advisor and members of the Advisory Committee before the student will be advanced to candidacy. Once the Advisor believes the student is ready to Advance to Candidacy, the Application for Admission to Candidacy must be completed and returned to the Registrar's Office:

[http://gradschool.umd.edu/sites/gradschool.umd.edu/files/uploads/application\\_for\\_admission\\_to\\_candidacy.pdf](http://gradschool.umd.edu/sites/gradschool.umd.edu/files/uploads/application_for_admission_to_candidacy.pdf)

\*\*Add deadlines to submit form, must advance to candidacy min 1 year prior to expected graduation

## Comprehensive Examination

The comprehensive exam is intended to demonstrate that a student has adequate general knowledge, background and understanding to hold a PhD in a given field, and to undertake doctoral level research; it is not an evaluation of the student's research proposal. The comprehensive examination for doctoral students includes a written part followed by an oral part, both of which are coordinated by the student's advisor. The Advisory Committee conducts both parts of this examination, and then informs the Department (Director of Graduate Studies) of the results.

The written part of the exam is composed of portions contributed by committee members and administered over a maximum of a two-week period. The written portions of the exam may be closed book or open book, at the discretion of the individual contributing the questions, but in all cases, questions from any single committee member should be able to be completed within a single day.

The oral part of the comprehensive exam is intended to provide an opportunity to further explore questions and issues raised in the written exam and should be scheduled within one month of the written part; all committee members are expected to participate in the oral exam.

A student will have passed the exam if they receive four positive votes from committee members present at the oral portion of the exam. Students failing the comprehensive examination may retake it one time after a period of six months of the date of the first examination. A second failure will result in termination of the student's program unless a petition from the student to the ENST Graduate Committee is approved to allow the student to change from a Ph.D. to an M.S. program.

Upon passing the exam, a departmental form must be signed and submitted, requiring signatures of the committee members indicating the outcome of the comprehensive examination. A separate Graduate School form requires the signature of the student's advisor and the ENST Director of Graduate Studies, and must be submitted to the Graduate School.

## **Applying For Graduation**

Students must apply for graduation within 10 days of the start of the semester in which they plan to graduate. The application is available online: <http://www.testudo.umd.edu/candapp/>

There are also numerous forms that must be completed and submitted to the Registrar's Office at this time:

- Approved Program Form (Master's):  
[http://gradschool.umd.edu/sites/gradschool.umd.edu/files/uploads/approved\\_program\\_form.pdf](http://gradschool.umd.edu/sites/gradschool.umd.edu/files/uploads/approved_program_form.pdf)
  - Thesis and Dissertation Electronic Publication Form:  
[http://gradschool.umd.edu/sites/gradschool.umd.edu/files/uploads/thesis\\_and\\_dissertation\\_electronic\\_publication\\_form.pdf](http://gradschool.umd.edu/sites/gradschool.umd.edu/files/uploads/thesis_and_dissertation_electronic_publication_form.pdf)
  - Nomination of Thesis or Dissertation Committee (see Important Academic Deadlines):  
[http://gradschool.umd.edu/sites/gradschool.umd.edu/files/uploads/nomination\\_of\\_thesis\\_or\\_dissertation\\_committee\\_form.pdf](http://gradschool.umd.edu/sites/gradschool.umd.edu/files/uploads/nomination_of_thesis_or_dissertation_committee_form.pdf)
- Graduating Doctoral students are also required to complete surveys: <http://gradschool.umd.edu/students/academic-progress/doctoral-student-surveys>

## **Once You Graduate**

Data collected during your research may be the property of the University – be sure to discuss any specifics, or legalities of data ownership, or storage with your advisor. Additionally you may have expectations for published works, which should also be discussed with your advisor (including agreements on deadlines!).

Please be sure to keep your non-university email address on file with your advisor and the Academic Programs personnel!

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