

M.S. in Environmental Science Graduate Program Handbook

Department of Biology, Geology, and Environmental Science

Welcome

Welcome to the Master of Science in Environmental Science (M.S. ESC) program offered by the Department of Biology, Geology, and Environmental Science (BGES) at the University of Tennessee at Chattanooga (UTC). Our program is designed to prepare scholars and professionals to meet the needs of academia, business, government, and the non-profit sector in the field of environmental science. Toward this goal, we emphasize sound scientific and technical training coupled with an understanding of contemporary socioeconomic, political and legal realities.

Our Students

- Have the opportunity to contribute to the development of knowledge in the field of environmental science through scholarly research and/or experience.
- Prepare for careers with diverse employers including conservation organizations, consulting firms, government agencies, and schools, and for admission into doctoral and professional degree programs.

Our Faculty

- Offer courses that emphasize the development of advanced critical thinking and effective advocacy and communication skills useful to addressing environmental issues in a holistic and real-world context.
- Engage students in research in a wide range of subdisciplines including biodiversity and systematics, conservation and restoration, ecology, environmental and human health, environmental policy and law, evolution and behavior, geospatial science, and molecular biology, cellular biology and physiology.

Our Department

- Supports student experiential learning with access to state-of-the-art research and teaching facilities and resources both on and off campus.
- Connects with its community through relations with local organizations and agencies such as the Chattanooga Zoo, City of Chattanooga, Erlanger Health Systems, North Chickamauga Creek Conservancy, Tennessee Aquarium, Tennessee River Gorge Trust, and Tennessee Valley Authority.

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Table of Contents

| | |
|--|----------------|
| Welcome & Contact Information | <i>preface</i> |
| 1. Admissions | 1 |
| 1.1 Academic Requirements | 1 |
| 1.2 Identifying a Graduate Advisor | 1 |
| 1.3 Applying to the Program | 1 |
| 2. Program of Study | 3 |
| 2.1 Core Courses | 3 |
| 2.2 Electives | 3 |
| 2.3 Capstone Experience | 4 |
| 3. Policies & Procedures | 7 |
| 3.1 Program of Study Declaration | 7 |
| 3.2 Advisement | 7 |
| 3.3 Course Enrollment | 9 |
| 3.4 Thesis Requirements | 11 |
| 3.5 Internship Requirements | 14 |
| 3.6 Learning Discourse Requirements | 19 |
| 3.7 Academic Performance | 22 |
| 3.8 Capstone Experience Progress | 23 |
| 3.9 Graduation | 23 |
| 4. Financial Assistance | 26 |
| 4.1 Graduate Teaching Assistantships | 26 |
| 4.2 Graduate Research Assistantships | 27 |
| 4.3 Other Institutional Support | 28 |
| 4.4. Graduate Student Loans | 29 |
| 5. Campus Resources | 30 |
| 5.1 Graduate Student Association | 30 |
| 5.2 Library | 30 |
| 5.3 Technology | 30 |
| 5.4 Research Compliance | 30 |
| 5.5 Counseling | 31 |
| 5.6 Accommodation | 31 |
| List of ESC Graduate Faculty | Appendix A |
| 2016–2017 Important Dates & Deadlines | Appendix B |
| Student Checklists | Appendix C |

1. Admissions

Prior to applying to the M.S. ESC program at UTC, you should ensure that you meet associated academic requirements *and* identify a faculty member who will serve as your graduate advisor. It is important to note that the requirements listed here are minimums for consideration and do not guarantee acceptance into the program. Ultimately, admissions decisions are based on evaluations of quantitative and qualitative information, including the compatibility of your environmental science interests with that of our faculty.

1.1 Academic Requirements

As an applicant to the M.S. ESC program, you should meet the following academic *requirements*:

- A baccalaureate degree from a regionally accredited institution of higher education or foreign equivalent
- An overall GPA of 2.75 or a GPA of 3.0 for the last 60 credit hours
- Satisfactory scores on the general Graduate Record Examination (GRE), generally defined as scores above the 25th percentile for the verbal and quantitative sections
- Background knowledge of environmental science concepts equivalent to a two-semester undergraduate introductory environmental science sequence and/or an undergraduate or graduate ecology course

The following additional academic preparation is *recommended*:

- At least four upper-level undergraduate science courses with lab components
- One course each in environmental ethics and environmental law
- One course each in college calculus, introductory statistics, and computer science

1.2 Identifying a Graduate Advisor

Because a close advisory relationship between every graduate student and a graduate faculty member is a hallmark of the program, you must identify a faculty member willing to serve as your graduate advisor as part of the admission process. To initiate this process, we suggest that you email one or more graduate faculty members who share your interests in environmental science at least one full semester before you anticipate starting the program to allow time for consideration of their background and interests. Providing a CV or résumé and/or other relevant information with your email will facilitate this communication. A list of program faculty and research interests is provided inside the back cover of this Handbook.

1.3 Applying to the Program

All applications for admission to the program are initially handled by the Graduate School at UTC and then forwarded to the Department of Biology, Geology, and Environmental Science (BGES) for review by its graduate faculty. Application instructions and links to the online application process are available at <https://www.utc.edu/apply/>. To be considered complete, your application to the M.S. ESC program must include the following materials:

- Official transcripts from every institution of higher education that you attended
- An official report of your GRE scores
- A cover letter that serves as a statement of purpose by detailing your relevant experiences, reasons for pursuing the degree, and general plans for the graduate program of study, including identification of a graduate advisor who has agreed to serve in this capacity
- A CV or résumé
- Letters of recommendation from at least three individuals familiar with your academic ability and/or relevant experience

In addition, you may submit optional supplementary materials evidencing any relevant and substantial preparation and/or experience, such as a copy of a written undergraduate capstone project or publication

Complete applications are forwarded from the Graduate School to the ESC Graduate Program Coordinator and then distributed to members of the program faculty for review. Admission to the program is rolling. However, we suggest that you submit your application materials by mid-March for fall semester enrollment or by early-October for spring semester enrollment to allow sufficient time for application review. If you submit your application after these suggested submission times, it may not be reviewed in time for admission for the following semester.

2. Program of Study

To earn the M.S. ESC degree at UTC, you must complete a program of study consisting of 36 total semester hours (i.e., credits) of course work. These hours include academic credit associated with core courses, electives, and a graduate capstone experience. Descriptions of these requirements follow.

2.1 Core Courses

All ESC graduate students must complete 15 semester hours of required core courses. These course are listed in the table below:

Core Courses of the M.S. ESC Program

| Course Number | Title | Credit Hours |
|----------------------|---|---------------------|
| ESC 5020 | Mechanisms in the Environment | 3 |
| ESC 5050 | Biodiversity and Natural Resources Conservation | 3 |
| ESC 5120 | Applied Statistics for Environmental Scientists | 4 |
| ESC 5140 | Environmental Law and Regulations | 3 |
| ESC 5700 | Seminar I | 1 |
| ESC 5710 | Seminar II | 1 |

2.2 Electives

Every ESC graduate student also must complete either 15 or 18 semester hours of unrestricted graduate electives. Your required number of elective hours is determined by the capstone experience that you choose to pursue in partial fulfillment of the degree. Specifically, students conducting a thesis or internship for the capstone experience must complete 15 hours of electives, while students conducting a learned discourse must complete 18 hours of electives. Your elective hours may be comprised of graduate-level elective courses offered by the Department of Biology, Geology, and Environmental Science (BGES) or graduate-level courses offered by other departments that are relevant to the study of environmental science and your specific degree program objectives as approved by your graduate advisor. Questions about the relevance of specific courses to your degree program (especially those offered outside of BGES) should be directed to your advisor and to the ESC Graduate Program Coordinator.

2.3 Capstone Experience

Each ESC graduate student must choose one of three capstone experiences for the program of study – thesis, internship, or learned discourse. You should consult with your graduate advisor to devise a formal plan for this experience appropriate for your academic objectives, research interests, and career goals. Ideally, you initiated this conversation with your prospective advisor when you were applying to the program.

Thesis

The thesis option involves independent original research focused on a specific issue that is relevant to environmental science. This research will demonstrate broad knowledge of the topic, identify a gap in the knowledge base, and attempt to fill that gap through appropriate study. Initiation of a thesis requires acceptance by your graduate advisory committee of a proposal that describes your thesis objectives, provides a preliminary review of pertinent literature, outlines the methodologies that you will use, and details the relevance of your thesis to the field. You then will work closely with your graduate advisor toward meeting your thesis objectives. A thesis is an appropriate choice for your capstone experience if you want to gain broadly applicable research experience. It is especially recommended if you are considering future doctoral studies or a career involving research activities or oversight.

A thesis capstone experience culminates with your submission of a successful written thesis and your successful public oral defense of this thesis as assessed by your graduate advisory committee. A successful written thesis will include a clear and focused statement of purpose, comprehensive review of relevant literature, explanation of study design and methodologies, appropriate analyses and interpretation of data, and description of the significance of findings. A successful defense will involve clear presentation of your thesis and informed and thoughtful answers to questions from your graduate committee and the audience about its substance and significance. Once approved by the Graduate School, your written thesis becomes part of the permanent body of scientific knowledge and is considered a reflection of you, your advisor, BGES, and the UTC as a whole.

If you opt to conduct a thesis in partial fulfillment of the M.S. ESC degree, you must enroll in at least 6 semester hours of ESC 5999 (Thesis) while actively engaged in your thesis research, writing, and/or defense preparation, with at least two of these credit hours completed during the semester of your graduation. Once you initiate your thesis, you must register for thesis hours continuously (i.e., every semester) until you graduate. For determining continuous thesis registration, the summer term is not considered. As such, you do not need to register for ESC 5999 during summer sessions while conducting your thesis research; however, you may opt to do so if this is suggested and approved by your graduate advisor. You should consult with your graduate advisor to determine the number of ESC 5999 hours for which you should register each semester, depending on the work that you plan to do toward completing your thesis.

Internship

The internship option is designed to provide you with an opportunity to acquire specialized technical/professional knowledge by working on an environmental project with an appropriate

sponsoring organization or business. As a form of experiential learning, an internship will integrate your academic knowledge in environmental science with its practical application in a workplace setting. Initiation of an internship in partial fulfillment of the M.S. ESC degree requires that you identify a suitable internship opportunity and that your graduate advisory committee and a workplace supervisor approve a proposal that describes your internship objectives, provides a preliminary review of pertinent literature, details work to be completed, and discusses the relevance of the internship to the workplace and your career goals. Your internship may be paid or unpaid. During the internship, you will work closely with your workplace supervisor with oversight from your graduate advisor toward meeting your internship objectives. You and your workplace supervisor will be required to document your experience via a series of formal periodic reports to your graduate advisor. An internship is an appropriate choice for your capstone experience if you wish to develop skills specialized for a particular type of environmental work. It is especially recommended if you have very specific career goals (e.g., natural resource management, environmental consulting) that do not require further graduate studies.

An internship capstone experience culminates with your submission of a successful written internship report and its successful public oral defense as assessed by your graduate advisory committee. A successful written internship report will include a clear and focused statement of goals, comprehensive review of relevant literature, description of specific activities performed, and explanation of the significance of those activities to meeting the internship objectives. A successful defense will involve clear presentation of your internship and informed and thoughtful answers to questions from the graduate advisory committee and audience about the substance and significance of your experience.

If you opt to conduct an internship in partial fulfillment of the M.S. ESC degree, you must complete 600 hours of environmentally focused work as a supervised intern with an external employer or other agency. This obligation amounts to 15 weeks of full-time (i.e., 40 hours/week) or 30 weeks of part-time (i.e., 20 hours/week) work. While actively engaged in your internship work, report writing, and/or defense preparation, you must enroll in at least 6 semester hours of ESC 5996 (Internship); at least two of these hours must be during the semester of your successful defense.

Learned Discourse

The learned discourse option allows you to explore deeply a specific topic relevant to environmental science through independent and original review of relevant available literature. Initiation of a learned discourse requires acceptance by your graduate advisory committee of a proposal that describes your learned discourse objectives, provides a preliminary review of pertinent literature, outlines a comprehensive literature review, and discusses the relevance of your learned discourse to the field. You then will work closely with your graduate advisor toward meeting your learned discourse objectives. A learned discourse is an appropriate choice for your capstone experience if you want to further your knowledge base in an environmental science topic without focus on development of applied research or specialized workplace skills. The learned discourse option is especially recommended if you want to advance in an already established career.

A learned discourse program of study culminates with your submission of a successful written discourse and its successful public oral defense as assessed by your graduate advisory committee. A successful written discourse will include a clear and focused statement of purpose, comprehensive review of relevant literature, synthesis of findings, and description of their significance to the field. A successful defense will involve clear presentation of your learned discourse and informed and thoughtful answers to questions from your graduate committee and audience about its substance and significance.

If you opt to conduct a learned discourse in partial fulfillment of the M.S. ESC degree, you must complete at least 3 semester hours of associated ESC 5998 (Research) while actively engaged in your learned discourse research and/or writing. You may complete these 3 hours prior to the semester of your defense; however, your program of study will not be complete until you successfully defend your learned discourse. You should consult with your graduate advisor to determine the number of ESC 5998 hours for which you should register each semester, depending on the work that you plan to do toward completing your thesis.

3. Policies & Procedures

Students pursuing the M.S. ESC degree at UTC are governed by the overall policies and procedures implemented by the Graduate School at UTC and related program-specific requirements set forth by the UTC Department of Biology, Geology, and Environmental Science. As such, you should familiarize yourself with both the policies and procedures described in this Handbook and those outlined in UTC's [Graduate Student Catalog](#), which is linked on the Graduate School website. Questions about policies and procedures should be directed to the ESC Graduate Program Coordinator.

3.1 Program of Study Declaration

Prior to admission or very early in your first semester of enrollment in the M.S. ESC program, you should have conversations with your graduate advisor that focus on the details of your program of study. You must officially declare your program of study by filing a [Program of Study](#) form with the Graduate School by the end of your first semester of enrollment.

On the form, you should declare 'ESC' as your major, and 'Thesis', 'Internship', or 'Learned Discourse' as your concentration. When describing your program of study coursework, you need only to list the *core* courses for the M.S. ESC degree program, as well as any courses taken prior to enrollment for which you are requesting Transfer Credit (see Handbook section 3.3). You are permitted also to include planned elective courses on the form, but you would then need to document formally any subsequent changes to these planned courses prior to program completion. For this reason, you are encouraged to include only the *core* courses of the degree program on this form. Prior to its submission to the Graduate School, you, your graduate advisor, and the ESC Graduate Program Coordinator must sign your Program of Study form. It is preferred that you submit all forms electronically.

Program of Study Changes

If you decide to change your program of study (e.g., from thesis to internship), you must officially document this change with the Graduate School prior to graduation. You should wait to make this formal notification until you near program completion and apply for a Graduation Audit (see Handbook section 3.9); do not submit a second Program of Study form to the Graduate School. However, you should inform the ESC Graduate Program Coordinator of your program of study change by email before the end of the current semester or the beginning of a new semester if the change is made during summer or winter break so that departmental records can be kept current.

3.2 Advisement

Advisory Roles

The role of your graduate advisor is to supervise your entire program of study, including the selection of appropriate coursework and your thesis, internship, or learned discourse progress. Early consultations between you and your graduate advisor should include discussion of at least two additional people with graduate faculty status and expertise in the study area to serve on

your graduate advisory committee. The role of the committee members is to provide you with supplementary advisement and additional evaluation of your thesis, internship, or learned discourse. (In the event that a committee member's role is expected to extend beyond such supplemental advisement, you may identify that committee member as a co-advisor.) You should meet with your graduate advisor regularly and with your entire graduate advisory committee as needed (as determined with the help of your advisor).

A current list of faculty in the Department of Biology, Geology, and Environmental Science with graduate faculty status is provided inside the back cover of this Handbook. An updated and more comprehensive list of approved [Graduate Faculty Members at UTC](#) is maintained by the Graduate School on its website. Other qualified persons may be appointed to the graduate faculty if your graduate advisor suggests that they will provide special academic expertise or professional experience to your graduate advisory committee. If you are interested in seeking committee appointment for a qualified external individual, talk with the ESC Graduate Program Coordinator for more information about this process.

Graduate Committee Appointment

Before the end of your first semester of enrollment in the M.S. ESC program, you must officially identify your graduate advisor and graduate advisory committee members. The process for doing this varies according to the capstone experience that you choose to pursue. If you are planning to conduct a thesis, you must identify your graduate advisor and committee members by filing an official [Graduate Committee Appointment](#) form with the Graduate School. You, your graduate advisor, all of your graduate advisory committee members, and the Department Chair must sign this form prior to its submission.

If you are planning to conduct an internship or learned discourse, you must identify your graduate advisor and committee members by filing an [Internship/Learned Discourse Committee Appointment](#) form with the ESC Graduate Program Coordinator. You, your advisor, and all of your graduate committee members must sign this form.

Graduate Committee Changes

If you decide to change your graduate advisor and/or any of your graduate committee members, you must officially document such changes. To do so, you should submit a new [Graduate Committee Appointment](#) form (thesis students only) or [Internship/Learned Discourse Committee Appointment](#) form before the end of the semester in which the change is made or by the beginning of the next semester if the change is made during summer or winter break.

Student & Faculty Responsibilities

Both ESC graduate students and faculty are responsible for following the policies and procedures of the Graduate School and the M.S. ESC program as set forth by the Department of Biology, Geology, and Environmental Science. This responsibility includes full understanding of program of study requirements and expectations for academic performance and thesis, internship, or learned discourse progress.

As a student, you are primarily responsible for fulfilling the requirements and meeting the expectations of the Graduate School and the program. This includes meeting expectations for performance and progress, as well as correct and timely submission of all required documents (i.e., forms, proposals, reports, final documents) associated with your program of study. Your graduate advisor will play a significant role in your education and training as a graduate student. As such, your graduate advisor assumes responsibility for helping you to select coursework appropriate to your program of study and being aware of your academic progress and status. Your graduate advisor also is responsible for guiding and facilitating your thesis, internship, and learned discourse objectives and activities toward the promotion of your environmental science knowledge, experiential learning, and professional skill development.

Frequent communication between you and your graduate advisor is imperative to your success in the program. This correspondence will facilitate early identification of concerns or issues that could impede your performance and/or progress so that those concerns or issues can be addressed. As such, we recommend that you devise a schedule for regular communication with your graduate advisor throughout enrollment in the program.

3.3 Course Enrollment

Registration

You must consult with your graduate advisor to discuss appropriate courses in which to enroll each semester. We recommend initiating this discussion just prior to the course registration periods designated by the UTC Records Office (around early November for spring courses and early April for fall courses). After the consultation, your advisor will provide you with a six-digit PIN that will enable you to register for classes via the online UTC registration system located in [MyMocsNet](#) under the 'Academics' tab. For complete details, including your eligibility and appointment times, see the [Important Information for Registration at UTC](#) posted by the Records Office on its website.

Course Loads

If you are *not* receiving a Graduate Assistantship provided by UTC (see Handbook section 4), you technically may register for up to 15 semester hours during the fall and spring semester. However, this course load is not typical or recommended by our faculty given the intensive nature of graduate courses. If you are funded by a Graduate Assistantship (see Handbook section 4), you may register for up to 12 semester hours during the fall and spring semesters. We recommend that you consult with your advisor to determine semester course loads that are appropriate for you given your time expectation to complete the program and other major obligations (such as outside employment). A good rule of thumb to consider is that graduate courses typically require about 4-5 hours of study time per week outside of class for each hour spent in class. So, a typical 3-credit graduate course could involve a 12-15-hour total time commitment each week with most of this time occurring outside of class.

If you are *not* receiving a Graduate Assistantship provided by UTC during the summer, you may register for up to 12 total semester hours during the summer academic terms. If you are funded

by a Graduate Assistantship during the summer, you may register for up to 6 semester hours. However, graduate courses are typically extremely limited in summer. Given this, graduate students often use the summer as an opportunity to focus intensively on their thesis, internship, or learned discourse. During this time, you may register for ESC 5999 (Thesis), ESC 5996 (Internship), or ESC 5998 (Research; for learned discourses) hours if appropriate sections are available and this registration is approved by your graduate advisor.

Enrollment Status

The University will consider you to have full-time status as a graduate student if you are enrolled in 9 or more semester hours for graduate credit and half-time status if you are enrolled in 6-8 semester hours for graduate credit during the fall and spring semesters. In addition, you will be reported as full-time equivalent for external financial aid purposes if you are enrolled in less than 6 hours of ESC 5999 (Thesis) toward the end of your program of study regardless of the total number of semester hours for which you are registered. If you are supported by a Graduate Assistantship provided by UTC (see Handbook section 4), are approaching graduation, and do not need to register for full-time hours to complete your program of study, you may request prior authorization from the Dean of the Graduate School to enroll in less than full-time hours by submitting a [GA Nine Hour Waiver](#) form. If you have specific concerns about how your enrollment status will influence your financial aid, you should discuss these concerns with the ESC Graduate Program Coordinator.

Transfer Credit

You must complete at least 24 of the 36 semester hours required to earn the M.S. ESC degree for graduate credit at UTC. You may request that up to 12 semester hours of other qualified courses that carry graduate credit from a regionally accredited institution of higher education count as credit toward the M.S. ESC degree. Qualified courses must be associated with a grade of B or better, fit within the time limit of the M.S. ESC program of study (see Handbook section 3.9), and *not* have counted toward a previous undergraduate or graduate degree.

If you want to request that credit from a qualified course be included in your M.S. ESC program of study, you should talk with the ESC Graduate Program Coordinator about your request and provide him or her with a copy of the course syllabus. The Coordinator then will review the syllabus with consultation from appropriate members of the graduate faculty given the scope of the course. If your request for transfer credit is approved at the program level, the course may be listed either when you declare your program of study (see Handbook section 3.1) or listed when you apply for a graduation audit (see Handbook section 3.9). All program approvals of transfer credits are subject to final approval by the Dean of the Graduate School.

Continuous Enrollment

As an ESC graduate student, you should work continuously toward the completion of your program of study. If you are conducting a thesis, this also means that you must register for semester hours every fall and spring semester until your program of study is complete (i.e., until you graduate), as this continuous enrollment requirement is part of the thesis program of

study. Registration during summer sessions is not required as part of a continuous program of study. If you are conducting an internship or learned discourse, continuous enrollment also is expected, but not mandated. However, all breaks in enrollment will require readmission to the M.S. ESC program. Questions about these policies should be directed to the ESC Graduate Program Coordinator.

Leaves of Absence & Stop Outs

All breaks in continuous enrollment in the M.S. ESC program will require that you apply for readmission to the program. Informing the Graduate School of a need to break your continuous enrollment in M.S. ESC program will facilitate your subsequent readmission into the program. If you are experiencing circumstances that preclude your continued enrollment in the M.S. ESC program, you should consult with your graduate advisor and the ESC Graduate Program Coordinator to discuss filing a possible leave of absence request with the Graduate School.

If extenuating circumstances preclude your continuous enrollment in ESC 5999 (Thesis), you may use a [Request for Stop Out](#) form to request a one-time 'stop out' of your thesis progress for up to four continuous semesters. This request must be made even if you will continue to enroll in other (i.e., non-thesis) coursework. Your stop out request must be made no later than the end of the enrollment period of the semester preceding the start of your requested stop out and must include rational and justification for your request. For the purposes of stop out requests, the entire summer *is* counted as a semester. Your stop out request must be approved by your graduate advisor, the ESC Graduate Program Coordinator, and the Dean of the Graduate School.

3.4 Thesis Requirements

Initiation of a thesis for partial fulfillment of the M.S. ESC degree involves the development of an approved proposal for your thesis research. Your thesis will culminate with the submission of an approved written thesis and its successful public defense.

Thesis Proposal Development

If you opt to complete a thesis, you should begin to prepare a thesis proposal outlining all aspects of your planned thesis research with guidance from your graduate advisor during your first semester in the program. A standard thesis proposal will describe your thesis objectives, provide a preliminary review of pertinent literature, outline the methodologies that you will use, and detail the relevance of your thesis to the field. Your graduate advisor may have additional specific ideas and requests for the content of your proposal. Your proposal should be sufficiently detailed to provide you with a plan to follow to conduct your research, including a timeline for significant accomplishments.

A final draft of your thesis proposal should be approved by your graduate advisor prior to its distribution to your other graduate advisory committee members for their review. As a courtesy, you should ask your committee members of their preferences for electronic or hard copies of your proposal. Once all of your committee members have had adequate time to

review the proposal (at least two weeks is recommended), you should organize a full committee meeting to discuss your proposal and acquire constructive feedback.

As evidence of timely progress, your thesis proposal should be approved by your graduate advisory committee by the end of your second semester of enrollment in the program. However, you are encouraged to complete your proposal by the end of the *first* semester of enrollment so that you can initiate your thesis work as early as possible.

ESC 5999 Registration & Grading

After your thesis has been approved by your graduate advisory committee, you may register for ESC 5999 (Thesis) semester hours. In total, you must register for 6 semester hours of ESC 5999 while engaged in your thesis research, writing your thesis, and/or preparing for its defense. You must register for at least 2 of these semester hours of ESC 5999 during the semester of your graduation. You should consult with your graduate advisor to determine an appropriate plan for registration and completing your 6 total ESC 5999 semester hours.

For all semesters that you register for ESC 5999 hours prior to the semester of your graduation, you will earn a grade of SP (Satisfactory Progress) or NP (Non-satisfactory Progress) as determined by your graduate advisor. These grades are not factored into your grade point average. However, if you earn an NP grade for ESC 5999 for two semesters, the departmental Graduate Faculty Committee will review your thesis proposal and progress to determine an appropriate course of action. If you are found to be responsible for the lack of timely progress toward completing your thesis, such actions could involve formal probation or dismissal from the program.

To compete your ESC 5999 hours, you must prepare a written thesis that is approved by your graduate advisory committee and successfully defend it. You also must submit a final version of your thesis to the Graduate School for review. (These tasks are detailed later in this section of the Handbook). If approved, you will be assigned a grade of S (Satisfactory) for your final ESC 5999 semester, indicating completion of your thesis. This grade is not factored into your grade point average.

Written Thesis Preparation

As a culmination of your degree program, you must prepare and successfully defend an approved written thesis that includes a clear and focused statement of purpose, comprehensive review of relevant literature, explanation of study design and methodologies, appropriate analyses and interpretation of data, and description of the significance of findings. Your graduate advisor may have additional specific ideas and requests for the content and organization of your written thesis depending on the nature of your project.

When complete, the final draft of your thesis should be approved by your graduate advisor prior to its distribution to your other graduate committee members for their review. This distribution must occur at least two weeks prior your planned defense date to allow adequate time for thorough review. As a courtesy, you should ask your committee members of their preferences for electronic or hard copies of your thesis.

Because your final approved and successfully defended written thesis will be submitted to the Graduate School, it must conform to the [UTC Thesis and Dissertation Standards](#) detailed on the Graduate School website. We strongly recommend that you familiarize yourself with these formatting guidelines early in the process of writing your thesis and incorporate them into your early drafts. The standards are detailed and extensive. As such, planning to format your thesis as a last-minute exercise is not a good strategy for meeting submission deadlines.

Scheduling the Thesis Defense

You must present your approved thesis during a thesis defense and ‘pass’ this defense as part of the M.S. ESC degree program. A successful defense will involve clear presentation of your thesis and informed and thoughtful answers to questions from your graduate advisory committee and the audience about its substance and significance. As with your written thesis, you should consult with your graduate advisor while preparing your defense. Your thesis defense must occur no later than the relevant date posted on the [Graduate School Calendar](#) to qualify for graduation during that semester.

You should have approval from your graduate advisor and graduate advisory committee members prior to scheduling your thesis defense. After receiving this approval, you should discuss multiple possible dates and times with your committee and then inform the ESC Graduate Program Coordinator of several possible dates and times during which all of your committee members are available. Either the Program Coordinator or Department Chair also must be available to attend your defense, so your defense date and time also will need to consider their availability. Once an agreeable date and time are determined, the Program Coordinator will schedule your defense and inform you and your graduate advisory committee of its date, time, and location.

Once your defense is scheduled, you must email a [Notice of Scheduled Defense](#) to Amy-Campbell@utc.edu at least two weeks prior to your scheduled defense date so that a public announcement may be made.

Thesis Defense Format

A thesis defense in the M.S. ESC program involves a public presentation and a private examination. Your graduate advisor and graduate advisory committee members will attend both parts of your defense. The UTC community will be invited formally to the public presentation part of your defense by the Graduate School. Outside persons also may attend the presentation, and you are encouraged to invite your family and friends to this part of your thesis defense. Only your graduate advisor and committee members typically attend the private examination that follows the public presentation. The ESC Graduate Program Coordinator or Department Chair also may attend the examination as an observer if invited by you or a member of your graduate advisory committee.

During the public part of your defense, you should give a professional presentation that describes and justifies all aspects of your thesis. Typically, this is achieved with a PowerPoint presentation that is about 30-45 minutes in length. After your presentation, you should solicit and field questions from the audience about the information that you presented.

During the private examination that immediately follows, you will be expected to field questions from your graduate advisor and graduate advisory committee members. These questions can range from ones specific to your presentation to questions about your broader research topic and related areas of environmental science. Questions also may focus on material covered in your relevant graduate coursework. This part of your thesis defense is intended to enable your graduate advisor and committee members to assess your understanding of your thesis topic, comprehension of its relevance to the broader field, competency and professionalism as an environmental expert, and communication skills.

Following the examination, your advisor and committee members will request that you leave the room so that they can discuss in private your written thesis and its defense. Ultimately, your committee will provide a collective 'pass' or 'fail' assessment of your defense that also conveys general acceptance or rejection of your written thesis and inform you of their assessment. Even if you pass your defense, you may be required to make minor conditional changes to your written thesis prior to its final approval for submission to the Graduate School. The committee also may request to review your revised written thesis to evaluate requested changes. If you fail your defense, you may be permitted to repeat the defense after an interval to allow for improvement at the discretion of your committee.

Thesis Defense Results

Your final thesis defense results will be recorded by your graduate advisor on a [Graduate Degree Examination Results](#) form. This form will be signed by your advisor and other graduate advisory committee members. You must subsequently obtain the signatures of the ESC Graduate Program Coordinator and the Dean of the College of Arts and Sciences prior to having the ESC Graduate Program Coordinator submit this form to the Graduate School on your behalf. You may not submit this form yourself. The completed form must be submitted no later than the relevant date posted on linked from the Graduate School website to qualify for graduation during the semester of the defense.

Thesis Submission

You must submit your approved final written thesis electronically via [UTC Scholar](#) to the Graduate School no later than the relevant date specified on the [Graduate School Calendar](#) linked from the Graduate School website to qualify for graduation during the same semester as the defense. Once submitted, your thesis will be checked by the Graduate School for determination of its adherence to the UTC Thesis and Dissertation Standards. If your submitted thesis is not approved, you will be required to make necessary changes to the document in UTC Scholar. Failure to make timely requested revisions to your thesis may result in delayed graduation.

3.5 Internship Requirements

Initiation of an internship for partial fulfillment of the M.S. ESC degree involves the development of an approved proposal for your internship experience. Your internship will

culminate with the submission of an approved written internship report and its successful public defense.

Internship Proposal Development

If you opt to complete an internship, you should begin to prepare an internship proposal outlining all aspects of your planned internship experience with guidance from your graduate advisor and a proposed workplace supervisor during your first semester in the M.S. ESC program. A standard internship proposal will describe your internship objectives, provide a preliminary review of pertinent literature, detail the work to be completed, and discuss the relevance of the planned internship to the workplace and your career goals. Your graduate advisor and/or workplace supervisor may have additional specific ideas and requests for the content of your proposal. Your proposal should be sufficiently detailed to provide you with a plan to follow during your internship, including a timeline for significant accomplishments. You should specify how you will spend the 600 hours of internship experience required for partial fulfillment of the M.S. ESC degree.

A final draft of your internship proposal should be approved by your graduate advisor prior to its distribution to your other graduate advisory committee members for their review. As a courtesy, you should ask your committee members of their preferences for electronic or hard copies of your proposal. Once all committee members have had adequate time to review your proposal (at least two weeks is recommended), you should organize a full committee meeting to discuss your proposal and acquire constructive feedback. Simultaneous to the review of your internship proposal by your committee, you should seek the approval of your planned workplace supervisor for the work that you are proposing.

As evidence of timely progress, your internship proposal should be approved by your graduate advisory committee by the end of your second semester of enrollment in the program. However, you are required to complete these tasks earlier if you plan to begin your internship prior to the end of your second semester in the program.

ESC 5996 Registration & Grading

After your internship proposal has been approved by your graduate advisory committee, you may register for ESC 5996 (Internship) semester hours. In total, you must register for 6 semester hours of ESC 5996 while engaged in your internship experience, drafting your internship report, and/or preparing for its defense. You must register for at least 2 of these semester hours of ESC 5996 during the semester of your successful defense. You should consult with your graduate advisor to determine an appropriate plan for registration and completing your ESC 5996 semester hour requirements.

For all semesters that you register for ESC 5996 hours prior to the semester of your defense, you will earn a grade of SP (Satisfactory Progress) or NP (Non-satisfactory Progress) as determined by your graduate advisor. These grades are not factored into your grade point average. However, if you earn an NP grade for ESC 5996 for two semesters, the departmental Graduate Faculty Committee will review your internship proposal and progress to determine an appropriate course of action. If you are found to be responsible for the lack of timely progress

toward completing your internship, such actions could involve formal probation or dismissal from the program.

To complete your ESC 5996 hours, you must prepare a final internship report that is approved by your graduate advisory committee and successfully defend it. (These tasks are detailed later in this section of the Handbook.) If approved, you will be assigned a grade of S (Satisfactory) for your final ESC 5996 semester, indicating completion of your internship. This grade is not factored into your grade point average.

Internship Progress & Evaluation Reports

Internships generally occur off-campus without direct supervision by a graduate advisor. As such, if you are completing an internship in partial fulfillment of the M.S. ESC degree, you must take responsibility for the completion and filing of two sets of internship-specific reports while your internship is underway.

As a student, you must submit a set of three [Student Intern Progress Reports](#) to your graduate advisor at specified regular intervals during your internship (i.e., beginning, middle, and end). In these reports, you will describe the activities that you are conducting as an intern and their relevance to the sponsoring organization or business. The third and final report also will include your assessment of the overall internship experience. These reports also provide a mechanism for you to describe the workplace environment and any resource deficiencies that may exist therein.

In addition, you must ensure that a set of three [Student Intern Evaluation Reports](#) are submitted by your workplace supervisor to your graduate advisor at specified regular intervals while your internship is underway (concurrent with the progress reports submitted by you to the advisor). These reports will solicit your supervisor's rating of you as an intern for qualities like initiative, attention to detail, and mastery of critical skills. The third and final report also will include an overall evaluation of you as an intern. Collectively, these internship reports will help your graduate advisor to assess your progress.

Internship Report Preparation

As a culmination of your degree program, you must prepare and successfully defend an approved internship report that includes a clear and focused statement of goals, comprehensive review of relevant literature, description of specific activities performed, and explanation of the significance of those activities to meeting your internship objectives. Your graduate advisor may have additional specific ideas and requests for the content and organization of your internship report depending on the nature of your experience.

When complete, the final draft of your internship report should be approved by your graduate advisor prior to its distribution to your other graduate committee members for their review. This distribution must occur at least two weeks prior your planned defense date to allow adequate time for thorough review. As a courtesy, you should ask your committee members of their preferences for electronic or hard copies of your report.

Unlike theses, internship reports are *not* to be submitted to the Graduate School. Instead, you must submit your final approved and successfully defended internship report to the ESC Graduate Program Coordinator on behalf of the Department. For consistency, we recommend that your report be formatted professionally in accordance with the [UTC Thesis and Dissertation Standards](#) as detailed on the Graduate School website.

Scheduling the Internship Defense

You must present your approved internship report during a defense and ‘pass’ this defense to advance toward the M.S. ESC degree. A successful defense will involve clear presentation of your internship and informed and thoughtful answers to questions from your graduate advisory committee and the audience about its substance and significance. As with your written internship report, you should consult with your graduate advisor while preparing your defense.

The Graduate School does not specify a deadline for internship defenses each semester. However, as a Department, we require that your internship defense occur no later than the relevant date posted for thesis defenses posted on the [Graduate School Calendar](#) linked from the Graduate School website to qualify for graduation during that semester.

You should have approval from your graduate advisor and graduate advisory committee members prior to scheduling your internship defense. After receiving this approval, you should discuss multiple possible dates and times with your committee and then inform the ESC Graduate Program Coordinator of several possible dates and times during which all of your committee members are available. Either the Program Coordinator or Department Chair also must be available to attend your defense, so your defense date and time also will need to consider their availability. Once a mutually agreeable date and time are determined, the Program Coordinator will schedule your defense and inform you and your graduate advisory committee of the date, time, and location.

Once your internship defense is scheduled, your report title, names of your graduate advisor and committee members, and abstract should be emailed to the ESC Graduate Program Coordinator at least two weeks prior to the defense date so that a public announcement may be made. The email subject line should read ‘Notice of Scheduled Internship Defense’.

Internship Defense Format

An internship defense in the M.S. ESC program involves a public presentation and a private examination. Your graduate advisor and graduate advisory committee members will attend both parts of your defense. The UTC community is invited formally to the public presentation part of your defense. Outside persons also may attend the presentation, and you are encouraged to invite your family and friends to this part of your thesis defense. Only your graduate advisor and committee members typically attend the examination that follows the public presentation. The ESC Graduate Program Coordinator or Department Chair also may attend the examination as an observer if invited by you or a member of your graduate advisory committee.

During the public presentation, you should give a professional presentation that describes and justifies all aspects of your Internship. Typically, this is achieved with a PowerPoint presentation that is about 30-45 minutes in length. After your presentation, you should solicit and field questions from the audience about the information that you presented.

During the private examination that immediately follows, you will be expected to field questions from your graduate advisor and committee members. These questions can range from ones specific to your presentation to questions about the broader field of your internship and related areas of environmental science. Questions also may focus on material covered in your relevant graduate coursework. This part of your internship defense is intended to enable your graduate advisor and committee members to assess your understanding of your internship area, comprehension of its relevance to the broader field, competency and professionalism as an environmental expert, and communication skills.

Following the examination, your advisor and committee members will request that you leave the room so that they can discuss in private your internship report and its defense. Ultimately, your committee will provide a collective 'pass' or 'fail' assessment of your defense that also conveys general acceptance or rejection of your report and inform you of their assessment. If you pass your defense, you may be required to make minor conditional changes to your internship report prior to its final approval for submission to the ESC Graduate Program Coordinator. The committee also may request to review your final report to evaluate requested changes. If you fail your defense, you may be permitted to repeat the defense after an interval to allow for improvement at the discretion of your committee.

Internship Defense Results

Your final internship defense results will be recorded by your graduate advisor on a [Graduate Degree Examination Results](#) form. This form will be signed by your advisor and other graduate advisory committee members. You must subsequently obtain the signatures of the ESC Graduate Program Coordinator and the Dean of the College of Arts and Sciences prior to having the ESC Graduate Program Coordinator submit this form to the Graduate School on your behalf. The completed form must be submitted no later than the relevant date posted on linked from the Graduate School website to qualify for graduation during the semester of the defense.

Internship Report Submission

Following a successful defense and final committee approval, you must submit an electronic copy of your internship report as a single professionally formatted PDF file to the ESC Graduate Program Coordinator on behalf of the Department. You should submit your report by the same date that approved final written theses are due electronically to the Graduate School as posted on the [Graduate School Calendar](#) linked from the Graduate School website.

3.6 Learned Discourse Requirements

Initiation of a learned discourse for partial fulfillment of the M.S. ESC degree involves the development of an approved proposal for your project. A learned discourse culminates with the submission of an approved written discourse and its successful public defense.

Learned Discourse Proposal Development

If you opt to complete a learned discourse, you should begin to prepare an associated proposal with guidance from your graduate advisor outlining all aspects of your planned project. A standard learned discourse proposal will describe your objectives, provide a preliminary review of pertinent literature, outline a comprehensive literature review, and discuss the relevance of your learned discourse to the field. Your graduate advisor may have additional specific ideas and requests for the content of your proposal. Your proposal should be sufficiently detailed to provide you with a plan to follow, including a timeline for significant accomplishments.

A final draft of your learned discourse proposal should be approved by your graduate advisor prior to its distribution to your other committee members for their review. As a courtesy, you should ask your committee members of their preferences for electronic or hard copies of your proposal. Once all of your committee members have had adequate time to review your proposal (at least two weeks is recommended), you should organize a full committee meeting to discuss your proposal and acquire constructive feedback.

As evidence of timely progress, your learned discourse proposal should be approved by your graduate advisory committee by the end of your second semester of enrollment in the program. However, you are encouraged to complete your proposal by the end of the *first* semester of enrollment so that you can initiate your learned discourse work as early as possible.

ESC 5997 Registration & Grading

After your learned discourse proposal has been approved by your graduate advisory committee, you may register for ESC 5998 (Research) semester hours specific to your proposed learned discourse work.

In total, you must register for 3 semester hours of ESC 5998 while engaged in your learned discourse project, writing your learned discourse, and/or preparing for its defense. As a learned discourse student, you are not required to register for any semester hours (of ESC 5998 or other courses) during the semester of your defense. You should consult with your graduate advisor to determine an appropriate plan for registration and completing your ESC 5998 semester hour requirements.

For all semesters that you register for ESC 5998 hours prior to the semester of your defense, you will earn a grade of I (Incomplete) as assigned by your graduate advisor. Incomplete grades are not factored into your grade point average. However, the Records Office automatically will convert an I grade to an F if the course instructor (in this case, your graduate advisor) does not indicate that the course was completed successfully by three weeks before the last day of classes in the next semester. If you are making satisfactory progress toward completing your

learned discourse but will require additional time to complete and defend it, your graduate advisor may submit a written request for an extension to this next-semester timeframe on your behalf to the Dean of the Graduate School. Extension requests must be made by two weeks prior to the I grade change deadline described above. Ideally, such requests would be made earlier than this deadline.

To complete your ESC 5998 hours, you must prepare a final written discourse that is approved by your graduate advisory committee and successfully defend it. (These tasks are detailed later in this section of the Handbook.) You then will earn an appropriate letter grade for ESC 5998 as determined by your committee. To formally assign this grade to your ESC 5998 semester hours, your graduate advisor must submit an electronic Grade Change Request to convert each I grade assigned for ESC 5998 to the letter grade. This may involve changes to multiple semesters of ESC 5998 registrations. As an ESC graduate student, it is your responsibility to be aware of any I grades earned in your coursework and to ensure that those grades are converted to appropriate letter grades by the regular University deadline or the deadline associated with an extension request if filed. Because no course with a grade below C can be counted toward the M.S. ESC degree, conversion of an I grade for ESC 5998 to an F would prevent you from earning the degree.

Written Learned Discourse Preparation

As a culmination of your degree program, you must prepare and successfully defend an approved written discourse that includes a clear and focused statement of purpose, comprehensive review of relevant literature, synthesis of findings, and description of their significance to the field. A successful defense will involve clear presentation of your learned discourse and informed and thoughtful answers to questions from your graduate committee and audience about its substance and significance.

When complete, the final draft of your written discourse should be approved by your graduate advisor prior to its distribution to your other graduate committee members for their review. This distribution must occur at least two weeks prior your planned defense date to allow adequate time for thorough review. As a courtesy, you should ask your committee members of their preferences for electronic or hard copies of your learned discourse.

Unlike theses, written discourses are *not* to be submitted to the Graduate School. Instead, your final approved and successfully defended written learned discourse will be submitted to the ESC Graduate Program Coordinator on behalf of the Department. For consistency, we recommend that your written discourse be formatted professionally in accordance with the [UTC Thesis and Dissertation Standards](#) as detailed on the Graduate School website.

Scheduling the Learned Discourse Defense

You must present your approved learned discourse during a defense and ‘pass’ this defense to advance toward the M.S. ESC degree. A successful defense will involve clear presentation of your learned discourse and informed and thoughtful answers to questions from your graduate committee and audience about its substance and significance. As with your written discourse, you should consult with your graduate advisor while preparing your defense.

The Graduate School does not specify a deadline for learned discourse defenses each semester. However, as a Department, we require that your learned discourse defense occur no later than the relevant date for thesis defenses posted on the [Graduate School Calendar](#) linked from the Graduate School website to qualify for graduation during that semester.

You should have approval from your graduate advisor and committee members prior to scheduling your learned discourse defense. After receiving this approval, you should discuss multiple possible dates and times with your committee and then inform the ESC Graduate Program Coordinator of several possible dates and times during which all of your committee members are available. Either the Program Coordinator or Department Chair also must be available to attend your defense, so your defense date and time also will need to consider their availability. Once a mutually agreeable date and time are determined, the Program Coordinator will schedule your defense and inform you and your graduate advisory committee of the date, time, and location.

Once your learned discourse defense is scheduled, your project title, names of your graduate advisor and committee members, and abstract should be emailed to the ESC Graduate Program Coordinator at least two weeks prior to the defense date so that a public announcement may be made. The email subject line should read 'Notice of Scheduled Learned Discourse Defense'.

Learned Discourse Defense Format

A learned discourse defense in the M.S. ESC program involves a public presentation and a private examination. Your graduate advisor and graduate advisory committee members will attend both parts of your defense. The UTC community is invited formally to the public presentation part of your defense. Outside persons also may attend the presentation, and you are encouraged to invite your family and friends to this part of your thesis defense. Only your graduate advisor and committee members typically attend the examination that follows the public presentation. The ESC Graduate Program Coordinator or Department Chair also may attend the examination as an observer if invited by you or a member of your graduate advisory committee.

During the public presentation, you should give a professional presentation that describes and justifies all aspects of your Internship. Typically, this is achieved with a short PowerPoint presentation that is about 30-45 minutes in length. After your presentation, you should solicit and field questions from the audience about the information that you presented.

During the private examination that immediately follows, you will be expected to field questions from your graduate advisor and graduate advisory committee members. These questions can range from ones specific to your presentation to questions about the broader field of your learned discourse and related areas of environmental science. Questions also may focus on material covered in your relevant graduate coursework. This part of your defense is intended to enable your graduate advisor and committee members to assess your understanding of your learned discourse topic, comprehension of its relevance to the broader field, competency and professionalism as an environmental expert, and communication skills.

Following the examination, your advisor and committee members will request that you leave the room so that they can discuss in private your learned discourse and its defense. Ultimately, your committee will provide a collective 'pass' or 'fail' assessment of your defense that also conveys general acceptance or rejection of your written discourse and inform you of their assessment. If you pass your defense, you may be required to make minor conditional changes to your written work prior to its final approval for submission to the Department. The committee also may request to review your final report to evaluate requested changes. If you fail your defense, you may be permitted to repeat the defense after an interval to allow for improvement at the discretion of your committee.

Learned Discourse Report Submission

Following a successful defense and final committee approval, you must submit an electronic copy of your written learned discourse as a single professionally formatted PDF file to the ESC Graduate Program Coordinator on behalf of the Department. You should submit your report by same date that approved final written theses are due electronically to the Graduate School as posted on the [Graduate School Calendar](#) linked from the Graduate School website.

3.7 Academic Performance

The Graduate School sets continuation standards for UTC graduate students based on their performance in graduate courses.

Grade Requirements

As an ESC graduate student, you are expected to earn high grades for all of your coursework. As such, credit in fulfillment of the M.S. ESC degree will not be assigned for courses in which you earn a grade below a C. You may repeat a course with approval from your graduate advisor. However, all letter grades earned while you are a graduate student at UTC will be computed into your cumulative grade point average (GPA), including all grades earned in repeated courses. In contrast, only the final grade earned for a repeated course will be used to calculate your M.S. ESC program GPA.

Continuation Standards

You must maintain a 3.0 cumulative grade point average for all courses taken for graduate credit. If you fail to meet this standard, you will be placed on 'academic probation' for the next semester or two semesters if the cumulative GPA remains below 3.0. If you earn a *semester* GPA below 3.0 while on academic probation, you will be dismissed from the program. Program dismissal also will occur if you fail to raise your cumulative GPA to 3.0 or higher by the end of the next two semesters while on academic probation. For the purposes of evaluating continuation standards, the entire summer term would be counted as a semester. You also may be dismissed from the program if you earn a grade of NC, D, or F in any course; earn more than two grades lower than a B; or receive unsatisfactory assessment of your completed thesis, internship, or learned discourse. Decisions regarding continuation are made by the Dean of the Graduate School.

3.8 Capstone Experience Progress

At the Departmental level, we consider your thesis, internship, or learned discourse progress along with your academic performance to be reflective of your overall success in the M.S. ESC program. To assess your thesis, internship, or learned discourse progress, you and your graduate advisor are required to define associated goals for each semester. Your advisor then will evaluate your progress toward those goals at the end of each semester. If you are an internship student, you and your workplace supervisor will be required to file additional progress reports while your internship is in progress to inform your advisor of progress not under his or her direct supervision (see section 3.5 of this Handbook).

Semester Goals & Reports

Very early during the first semester of your enrollment in the ESC graduate program, you should meet with your graduate advisor to set first-semester progress goals for your thesis, internship, or learned discourse. You should have similar meetings at the end of each semester (including the first semester) to set your progress goals for the *next* semester. You are encouraged to describe these goals and a plan for meeting them on a [Capstone Progress Goals](#) form each semester and obtain your advisor's signature on this form. This form may be filed with the ESC Graduate Program Coordinator, who will retain it as an official record, or it may be retained by you or your advisor.

At the end of each semester, you also should meet with your graduate advisor to discuss your progress toward achieving your goals for that semester. This is good opportunity to refer back to your capstone progress goals for the semester to determine if you met expectations and discuss a plan for improvement if necessary. In the event that you do not meet expectations for two consecutive semesters, your graduate advisor may request that the departmental Graduate Faculty Committee members review your progress to determine an appropriate course of action. If you are found to be responsible for the lack of timely progress, such actions could involve formal probation or dismissal from the program.

The purpose of setting goals associated with your capstone experience each semester and reporting on progress toward meeting those goals is to help you to manage your time in the program effectively and stay on track, to ensure your advisor has clearly articulated expectations to you, and to ensure you are aware of and agree with the expectations of your advisor. Additionally, this process should help both you and your advisor to quickly recognize if there is an area of concern regarding your research progress and allow you and your advisor to come up with a plan of action to address issues of timely progress.

3.9 Graduation

To earn the M.S. ESC degree, you must successfully complete your program of study (i.e., core courses, electives, and capstone experience) within the specified time limit, be admitted to candidacy for the degree as determined by your academic record, apply for graduation, and meet all other graduation eligibility criteria specified by the Graduate School.

Time Limit

All credit applied toward the M.S. ESC degree must be earned within six years of registration for the earliest course counted toward the degree. This time limit includes any transfer courses being counted toward your degree and the semester of your thesis, internship, or learned discourse submission. You may request in writing an extension of this time limit of up to one year by filing a [Graduate Student Petition](#) with the Graduate School. Your extension request must be signed by your graduate advisor and the ESC Graduate Program Coordinator prior to submission to the Dean of the Graduate School for approval.

Requesting a Graduation Audit & Applying for Graduation

By formally requesting a graduation audit, you cue specialized academic advisors affiliated with the Graduate School to review your file for expected compliance with the specific graduation requirements of your program. Applying for Graduation similarly cues the Records Office to review your status. Requesting a graduation audit and applying for graduation are required to earn the M.S. ESC degree. You should both request a graduation audit and apply for graduation in the semester prior to your anticipated semester of graduation.

To request a graduation Audit, you must submit a [Graduation Audit](#) form to the Graduate School. You, your graduate advisor, and the ESC Graduate Program Coordinator must sign this form prior to its submission. Your request for an audit should list any additions to the courses that you listed on the Program of Study form that you submitted during your first semester of enrollment. These additions should include any elective courses that you have completed, as well as credit hours completed that are associated with the capstone experience (i.e., ESC 5996, 5998, or 5999). If you have changed your capstone experience (e.g., thesis to internship, internship to learned discourse, etc.) and/or have any other special course-based circumstances of which the Graduate School should be aware, you should attach a note to the form describing those circumstances. The due dates for requesting a graduation audit for graduation during specific academic semesters are posted on the [Graduate School Calendar](#) linked from the Graduate School website.

To apply for graduation, you must use the online graduation application located in your MyMocsNet account under the 'Academics' tab. The due date for applying for graduation is October 15th for anticipated spring graduation, March 15th for anticipated summer degree conferral, and June 15th for anticipated fall graduation. Late graduation applications may be submitted on paper to the UTC Records Office by November 1st for fall graduation, July 5th for summer degree conferral, and April 1st for spring graduation. You should obtain late graduation application forms from the Records Office. Late applications require an application fee.

Graduation Eligibility

To be eligible for degree conferral, you must have completed all coursework listed in your application for candidacy with no grades below C for courses presented for the degree and a minimum grade point average of 3.0 or better on: 1) all coursework that you took for graduate credit at UTC, 2) all coursework that you transferred to UTC for graduate credit, and 3) all

coursework that you completed to fulfill the program as approved in your application for candidacy.

4. Financial Assistance

Financial assistance in direct support of the pursuit of the M.S. ESC degree may be available to you in various forms. Other financial assistance can help to support your research activities, associated travel, and participation in professional meetings and conferences relevant to your environmental science interests and capstone experience.

4.1 Graduate Teaching Assistantships

The Department of Biology, Geology, and Environmental Science can offer a limited number of Graduate Teaching Assistant (GTA) positions to qualified graduate students each year. These positions are funded by the UTC College of Arts and Sciences and typically are awarded for one academic year with possible renewal for a second academic year if a GTA remains eligible and performs well in his or her assigned duties.

A typical GTA appointment involves teaching laboratory sections of the introductory environmental science or biology courses offered by the Department. GTAs also help to organize and prepare lab classrooms for weekly lab activities. As such, GTAs are expected to devote time to lab preparation, instruction, grading, and office hours. GTAs are supervised by a Lab Coordinator in the Department.

GTAs in the ESC graduate program are considered to be full-time assistants; as such, GTAs should expect to work 20 hours/week performing associated duties. Collectively, the responsibilities of a GTA and graduate coursework represent a significant workload. As such, GTAs in the ESC graduate program may not be otherwise employed (i.e., outside the department or off-campus) for more than an additional 10 hours/week. Part-time GTAs may not be otherwise employed for more than an additional 20 hours/week.

Currently, full-time GTAs are supported by a maintenance fee (i.e., tuition) waiver and a \$3,500 stipend per semester. GTAs are required to assume the costs of all other fees (e.g., student activity fee, green fee, technology fee, lab fees) required by the University. All full-time GTAs must maintain a full-time course load of at least 9 semester hours during each semester of the GTA appointment. GTAs may register for up to 12 semester hours during each semester; the maintenance fee waiver will cover the cost of semester hours in excess of 9 hours. All GTAs must demonstrate satisfactory progress in their program of study to retain their appointments.

Applying for a GTA Appointment

GTA awards are typically made late in the spring semester for the following academic year. A few GTA positions may be awarded at other times if they become available. If you are a current graduate student in good standing or an entering graduate student with a cumulative undergraduate GPA of 3.25 or higher, you are eligible to apply for a GTA position. All GTA awards are competitive and are based on consideration of the qualifications of all applicants.

To apply for a GTA position, you should request and file a [Graduate Assistantship Application](#) with the ESC Graduate Program Coordinator. Priority consideration of GTA applications will be given to those received by February 15th. We strongly recommend that you include a cover

letter with your application expressing your interests in and summarizing your qualifications for a GTA appointment.

If you are selected as a GTA, you will receive a GTA Appointment Letter from the ESC Graduate Coordinator prior to the first semester of your assistantship. The letter will outline the terms and duties associated with your award. You will need to sign this letter indicating your agreement with the terms of the assistantship and return it to the Department.

Continuing a GTA Appointment

Departmental needs, your evaluations from the supervisory Lab Coordinator, feedback from introductory lab students during your end-of-semester course evaluations, your academic performance, and your capstone experience progress will be used to determine the continuation of your GTA appointment.

If you are accepting a new GTA appointment or planning to continue your GTA duties into a new semester, you should submit a copy of your class schedule for that semester to your supervisory Lab Coordinator as soon as possible to facilitate scheduling.

If you are interested in continuing an existing GTA appointment beyond the term of your original appointment, you must notify the ESC Graduate Program Coordinator via email of your intent to continue prior to the last day of classes during the final term of the original appointment.

4.2. Graduate Research Assistantships

Students may be awarded graduate research assistant (GRA) positions funded by the research grants and contracts of their graduate advisors. GRAs play a fundamental role in the funded research, and may participate in related literature reviews, lab- or field-based research tasks, and/or preparation and presentation of research results. Graduate advisors serve as the supervisors of GRAs supported by their research funding.

GRA appointments can require full-time (20 hours/week) or part-time (10/hours week) performance of associated duties. Collectively, the responsibilities of a GRA and graduate coursework represent a significant workload. As such, full-time GRAs in the ESC graduate program may not be otherwise employed (i.e., outside the department or off-campus) for more than an additional 10 hours/week. Part-time GRAs may not be otherwise employed for more than an additional 20 hours/week.

Currently, all GRAs are supported by a maintenance fee (i.e., tuition) waiver and a minimum stipend of \$3500/semester for full-time appointments and \$1750/semester for part-time appointments. GRA support also may include coverage of additional student fees (e.g., student activity fee, green fee, technology fee, lab fees) charged by the University. All GRAs must maintain either full-time (9 semester hours) or part-time (6 semester hours) enrollment status in accordance with their GRA award. To retain their appointments, GRAs must demonstrate satisfactory progress in their program of study.

Applying for a GRA Appointment

The timing of GRA awards is dependent largely on the cycles of external funding competitions. As such, GRA positions can be awarded at any time that they become available. If you are a current graduate student in good standing or an entering graduate student, you are eligible for a GRA awards. GRA awards are offered at the discretion of the supervisory graduate advisor with approval from the Graduate School. Typically, students who are offered GRA positions are already involved in their advisor's research as returning students or have communicated extensively with the advisor about their interests and qualifications as incoming students.

You may apply for GRA positions by corresponding directly with the supervisory graduate advisor and filing a [Graduate Assistantship Application](#) with the ESC Graduate Program Coordinator.

4.3 Other Institutional Support

Historically, GRA and GTA appointments have been the most common and substantial types of institutional support for ESC graduate students. However, UTC also provides internal funding to support graduate students and their activities in the form of other types of assistantships, institutional employment, and graduate student awards.

Other Assistantships

On occasion, the University may make additional graduate assistantships available for students to assist with University needs as Graduate Professional Service Assistants or Graduate Administrative Assistants. Current or incoming students can check with the Graduate School and ESC Graduate Program Coordinator for information about any available positions.

In addition, the Office of Equity and Diversity at UTC sponsors Opportunity Graduate Assistantship positions for first-generation graduate students in degree programs who will promote the benefits of a diverse graduate student body. More information about the OGA program can be found by referring to the [Opportunity Assistantship Application](#).

Graduate Scholarships

The Graduate School offers a limited number of scholarships to graduate students with a cumulative institutional GPA of 3.0 or higher. Each scholarship has its own specific additional eligibility criteria. A complete list of [Graduate Scholarships](#) is linked from the Graduate School website. To apply for a graduate scholarship, you should complete the [Application for Graduate Scholarships](#). The priority deadline for applications is February 15th.

Graduate Student Awards

Graduate students are encouraged to apply for competitive internal awards to support activities associated with their capstone experiences. If you are a full-time M.S. ESC students engaged in research, you are eligible to apply to the [Provost Student Research Award](#) (PSRA) program for up to \$1000 of funding to support original research with faculty members.

Information and application materials can be found on the Office of Research and Sponsored Programs website.

In addition, the Graduate Student Association (GSA) offers [Graduate Student Travel Awards](#) to defray the cost of engaging in professional development activities, such as attending a conference or gathering data for research. All ESC graduate students are eligible to apply. Information and application materials are located on the GSA website.

Institutional Employment

Employment opportunities for graduate students to perform specific duties on behalf of the Department or its faculty members may become available at times. These duties could include assistance with faculty research, courses, and/or departmental needs. Such employment would involve an appropriate hourly pay rate for a specified amount of work each week. Typically, students learn of these opportunities directly from the Department or involved faculty.

4.4 Graduate Student Loans

Graduate students pursuing the M.S. ESC degree who are enrolled at least half time may be eligible for low-interest unsubsidized federal loans. Graduate students also may be eligible for private education loans; eligibility requirements vary by private loan lender. For more information about [Graduate Student Financial Aid](#), please visit the UTC Office of Financial Aid website.

5. Campus Resources

5.1 Graduate Student Association

The [Graduate Student Association](#) (GSA) represents graduate and professional students at UTC in an official capacity. GSA members advocate for graduate and professional students through regular communications with campus administrators and representation on the UTC Graduate Council. GSA also organizes and sponsors social networking events that bring together graduate and professional students from across campus. As an ESC graduate student, you are encouraged to become involved with GSA. More information is available on the GSA website.

5.2 Library

The [UTC Library](#) provides all students with valuable resources and space, including print and electronic scholarly materials, Windows and Mac computers, group study rooms for reservation, private study carrels, 24-hour study space, and practice presentation rooms. The Library also houses a Graduate Student Lounge on the 1st floor exclusively for use by graduate students. For more information about the library or to reserve a study room, please visit the UTC Library website.

5.3 Technology

Information Technology (IT) manages access to UTC's online services (MyMocsNet, UTCLearn) and email accounts (MocsMail+) and provides technological support for both students and faculty. Students should become familiar with how to access and use UTC's online services as they provide general and up-to-date campus information, resources specific to individual students, and course content. As a UTC student, you should expect to use your UTC email account for official University business, including correspondence with faculty and being notified of important announcements by the Graduate School, the Department, and the ESC Graduate Program Coordinator. For this reason, even if you primarily use a different existing email account, you should check your UTC email account frequently.

IT also provides free software for current UTC students to install on their computers. This software includes the popular statistics packages SPSS and SAS, which often are used by ESC graduate students conducting empirical research. The bibliography management program Endnote also is available to current UTC students at no cost. Endnote is popular among ESC graduate students writing theses because UTC thesis standards require that bibliography management software be used. Information technology also provides free access to the online survey platform Qualtrics, which can be useful to ESC graduate students wanting to survey people as part of their capstone experience. A complete list of [Software Available to Students](#) is available on the IT website.

5.4 Research Compliance

If you are planning to use animal subjects or human participants in your research as an ESC graduate student, you must have your plans approved by UTC's Institutional Animal Care and

Use Committee (IACUC) or Institutional Review Board (IRB), respectively. Such research may not be initiated without IACUC or IRB approval. Information about the [IACUC](#) process and [IRB](#) process is available online.

5.5 Counseling

The [Counseling and Personal Development Center](#) at UTC provides counseling at no charge to students struggling with stress, feeling depressed or anxious, having time management difficulties, or experiencing other issues that are adversely impacting their academic progress and success. For more information, you are encouraged to visit the Center's website.

5.6 Accommodation

The [Disability Resource Center](#) (DRC) at UTC provides support to students with disabilities seen or unseen (e.g., physical, learning, psychiatric), including special assistance or accommodation in courses. For more information, you are encouraged to visit the DRC website.

Appendix A – Program Faculty

David A. Aborn, Ph.D.

University of Southern Mississippi
Ornithology, Behavior, Conservation

José M. F. Barbosa, Ph.D.

Auburn University
Plant Physiology, Cell Biology, Genetics

DeAnna Beasley, Ph.D.

University of South Carolina
Insect Ecology, Evolutionary Biology, Urban Ecology, Citizen Science

Jennifer Boyd, Ph.D.

Columbia University
Plant Ecology, Physiological Ecology, Global Change Biology

Ethan Carver, Ph.D.

University of Tennessee
Developmental Biology, Human Anatomy, Environmental Genetics

Stylianos Chatzimanolis, Ph.D.

University of Kansas
Entomology, Invertebrate Zoology, Evolution, Systematics, Paleoentomology

Habte Giorgis Churnet, Ph.D.

University of Tennessee
Origins, Formations, and Deformation of Rocks and Economic Mineral Deposits

J. Hill Craddock, D.R.

University of Torino, Italy
Horticulture, Dendrology, Mycology

Timothy J. Gaudin, Ph.D.

University of Chicago
Comparative Vertebrate Zoology, Vertebrate Paleontology, Mammalogy

David Giles, Ph.D.

East Tennessee State University
Environmental Microbiology

Loren Hayes, Ph.D.

University of Miami, Ohio
Behavioral Physiology, Social Behavior

Azad Hossain, Ph.D.

University of Mississippi

GIS, Remote Sensing, Spatial Analysis, Environmental Geoscience

Hope Klug, Ph.D.

University of Florida

Evolutionary Ecology, Behavioral Ecology

Margaret J. Kovach, Ph.D.

Colorado State University

Mammalian Genomics, Molecular Biology

Sean M. Richards, Ph.D.

Texas Tech University

Environmental Toxicology, Environmental Chemistry

Mark S. Schorr, Ph.D.

Mississippi State University

Limnology, Ichthyology, Stream Ecology

Joey Shaw, Ph.D.

University of Tennessee

Plant Taxonomy, Biogeography, Molecular Phylogenetics, Evolution

Henry G. Spratt, Jr., Ph.D.

University of Georgia

Microbiology, Microbial Ecology, Biogeochemistry, Bioremediation

John C. Tucker, J.D., LL.M.

University of Florida, Lewis & Clark College

Environmental Law & Policy

Thomas P. Wilson, Ph.D.

George Mason University

Herpetology, Ecology, Spatial Sciences

Appendix B – Important Dates & Deadlines

These lists are provided to help you meet required deadlines of M.S. ESC students during the 2017-2018 academic year. You should note that they do not substitute for the details of requirements as described in the full contents of the Graduate Student Handbook.

Fall 2017

| | | |
|---------------|-------|---|
| Aug 18 | Fri | <ul style="list-style-type: none">• Graduate Teaching Assistant Workshop for GTA students |
| Aug 21 | Mon | <ul style="list-style-type: none">• First day of classes |
| Sept 1 | Fri | <ul style="list-style-type: none">• Deadline for Fall 2017 GSA travel award applications: Graduate Student Travel Award Application |
| Sept 6 | Wed | <ul style="list-style-type: none">• Thesis Formatting Workshop |
| Oct 15 | Sun | <ul style="list-style-type: none">• Deadline to apply online for Spring 2018 graduation |
| Oct 19 | Thurs | <ul style="list-style-type: none">• Last day for defenses for Fall 2017 graduation |
| Nov 6 | Mon | <ul style="list-style-type: none">• Thesis and thesis/internship defense results due for Fall 2017 graduation: UTC Scholar Graduate Degree Examination Results• Internship reports and learned discourses due for Fall 2017 graduation (to be submitted to the ESC Graduate Program Coordinator)• Registration for Spring 2018 begins |
| Nov 17 | Fri | <ul style="list-style-type: none">• Deadline to apply for a graduation audit for Spring 2018 graduation: Graduation Audit |
| Nov 20 | Mon | <ul style="list-style-type: none">• Deadline for Spring 2018 GSA travel award applications: Graduate Student Travel Award Application |
| Dec 4 | Mon | <ul style="list-style-type: none">• Last day of classes• Program of Study declarations due from first-semester students: Program of Study• Committee appointments due from first-semester students: Graduate Committee Appointment (for thesis) Internship/Learned Discourse Committee Appointment |
| Dec 6 | Wed | <ul style="list-style-type: none">• Final exams begin |
| Dec 15 | Fri | <ul style="list-style-type: none">• Graduate Student Commencement |

Spring 2018

| | | |
|---------------|-------|--|
| Jan 8 | Mon | <ul style="list-style-type: none">• First day of classes |
| Jan 19 | Fri | <ul style="list-style-type: none">• Thesis Formatting Workshop |
| Mar 8 | Thurs | <ul style="list-style-type: none">• Last day for defenses for Spring 2018 graduation |
| Mar 15 | Thurs | <ul style="list-style-type: none">• Deadline to apply online for Summer 2018 degrees |
| Mar 19 | Mon | <ul style="list-style-type: none">• Registration for Summer 2018 courses begins |
| Mar 30 | Fri | <ul style="list-style-type: none">• Thesis and thesis/internship defense results due for Spring 2018 graduation: UTC Scholar Graduate Degree Examination Results• Internship reports and learned discourses due for Spring 2018 graduation (to be submitted to the ESC Graduate Program Coordinator) |
| Apr 2 | Mon | <ul style="list-style-type: none">• Deadline for returning students to apply for ESC graduate assistantships: Graduate Assistant Application• Registration for Fall 2018 begins |
| Apr 16 | Mon | <ul style="list-style-type: none">• Deadline to apply for a graduation audit for Summer 2018 degrees: Graduation Audit |
| Apr 23 | Mon | <ul style="list-style-type: none">• Last day of classes• Program of Study declarations due from first-semester students: Program of Study• Committee appointments due from first-semester students: Graduate Committee Appointment (for thesis) Internship/Learned Discourse Committee Appointment• Deadline for capstone experience proposal approval for second-semester students |
| Apr 25 | Wed | <ul style="list-style-type: none">• Final exams begin |
| May 4 | Fri | <ul style="list-style-type: none">• Graduate Student Commencement |

Summer 2018

| | | |
|----------------|-----|---|
| June 15 | Fri | <ul style="list-style-type: none">• Deadline to apply for a graduation audit for Fall 2018 graduation: Graduation Audit• Deadline to apply online for Fall 2018 graduation |
| July | Fri | <ul style="list-style-type: none">• Thesis and thesis/internship defense results due for Summer 2018 degrees: UTC Scholar Graduate Degree Examination Results• Internship reports and learned discourses due for Summer 2018 degrees (to be submitted to the ESC Graduate Program Coordinator) |
| Aug 11 | Sat | <ul style="list-style-type: none">• Summer degrees awarded (no ceremony) |

Appendix C – Student Checklists

These checklists are provided to help you make timely and successful progress through M.S. ESC degree program. Specific checklists are provided for your first and second semesters of enrollment, the semester before your graduation, the semester of your graduation, and all other semesters in which you are enrolled in the program. You should note that they do not substitute for the details of requirements as described in the full contents of the Graduate Student Handbook.

ESC Graduate Student Checklist - First Semester

Early:

- Set up a schedule for regular meetings with your advisor.
- Define capstone progress goals for the semester with your advisor.
- Submit [Capstone Progress Goals](#) to the Graduate Program Coordinator.

During:

- Discuss the details of your capstone experience plans with your advisor.
- Discuss appropriate graduate committee members with your advisor.
- Discuss course offerings for *next* semester with your advisor and register.
- Work on your thesis, internship, or learned discourse proposal.

By the End:

- Declare your [Program of Study](#) to the Graduate School.
- Appoint your graduate committee members:
 - [Graduate Committee Appointment](#) (thesis students)
 - [Internship/Learning Discourse Committee Appointment](#)
- Discuss your progress for the semester with your advisor.
- Define capstone progress goals for the *next* semester with your advisor.

ESC Graduate Student Checklist - Second Semester

Early:

- Set up a schedule for regular meetings with your advisor.
- Submit [Capstone Progress Goals](#) to the Graduate Program Coordinator.

During:

- Discuss course offerings for *next* semester with your advisor and register.
- Finalize your thesis, internship, or learned discourse proposal (if still in progress).
- Begin your capstone experience (if proposal has been approved/submitted).

By the End:

- Discuss your progress for the semester with your advisor.
- Define capstone progress goals for the *next* semester with your advisor.

ESC Graduate Student Checklist – Semester *before* Graduation

Early:

- Set up a schedule for regular meetings with your advisor.
- Attend a UTC Thesis and Dissertation Formatting Workshop (recommended if not previously attended).
- Submit [Capstone Progress Goals](#) to the Graduate Program Coordinator.

During:

- Discuss course offerings for *next* semester with your advisor and register.
- Prepare the final written document of your capstone experience.

By the Due Dates:

- Submit your [Graduation Audit](#) request to the Graduate School.
- Apply for graduation online.

By the End:

- Discuss your progress for the semester with your advisor.

ESC Graduate Student Checklist – Semester of Graduation

Early:

- Set up a schedule for regular meetings with your advisor.
- Submit [Capstone Progress Goals](#) to the Graduate Program Coordinator.

During:

- Finalize the final written document of your capstone experience.
- Plan and schedule your defense.

By the Due Dates:

- Defend your thesis, internship, or learned discourse.
- Report the results of your defense (thesis *and* internship students)
[Graduate Degree Examination Results](#)
- Submit your final written document to the Graduate School or the Graduate Program Coordinator.

ESC Graduate Student Checklist – All Other Semesters

Early:

- Set up a schedule for regular meetings with your advisor.
- Submit [Capstone Progress Goals](#) to the Graduate Program Coordinator.

During:

- Discuss course offerings for *next* semester with your advisor and register.
- Work on your capstone experience toward meeting semester goals.

By the End:

- Discuss your progress for the semester with your advisor.
- Define capstone progress goals for the *next* semester with your advisor.