



PhD Student/Faculty Handbook 2019-2020

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revision 01/27/20**

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This Handbook incorporates most of the minimum requirements and rules pertaining to the Doctoral Programs in the College of Science (COS) at George Mason University. Specific departments may have more stringent requirements. (Please contact your department for more information.) The requirements and rules found in the University Catalog (current edition), along with other pertinent University policies, apply. In the case of inconsistencies between the Catalog and College policies, the Catalog policies take precedence over this Handbook. These rules apply to the incoming class of 2019-2020.

Certain information in this Handbook (e.g., credits, names, places, times, course numbers, and URLs) is subject to change. This is a work in progress. Please report any discrepancies to the Office for Graduate Studies in the College of Science.

The original Handbook was created by the SCHAR School of Policy and Government at George Mason University. The COS is grateful to SCHAR, and especially Assistant Dean Elizabeth Eck Olchowski, for the help, support and permission to modify their document.

Introduction

Welcome to the College of Science's PhD Programs! Our faculty members and staff look forward to a rewarding professional association with you during this important part of your career.

This Handbook

The Student/Faculty Handbook guides each incoming class, although details may differ slightly between each yearly edition. This Handbook applies to the class of students entering during the 2019-2020 academic year. Students are expected to read it carefully to learn about their respective PhD programs and refer back to it as they progress through the stages.

Students are guided by the terms of this handbook throughout the PhD program, though the faculty reserves the right to make changes to the program. The provisions of this handbook supplement, but do not replace, those of the University Catalog.

Scholarly Research

Receiving a PhD is an honor awarded by the faculty of a university for advanced scholarly achievement. It is awarded for scholarship, not merely for the successful completion of coursework. Students must also successfully complete the comprehensive qualifying examination, the dissertation proposal, and the dissertation.

In addition to conveying existing knowledge to a new generation, doctoral programs are dedicated to expanding the knowledge base of a field. Hence, the development of research skills is of primary importance. In contrast to master's programs, students will spend much time on research not directly related to coursework but essential to mastery of the scholarship in a particular focus area. Students are expected to work with faculty-led research teams throughout their program, which will foster the maturation of research skills and facilitate the development of a doctoral dissertation proposal that addresses a significant issue in the field.

Many students return to academia after a significant period of time in the workforce, and many continue to work while pursuing degrees. Nevertheless, the program places a heavy emphasis on contributions by each student to the intellectual life of the program and the College. This includes participation in research projects; attendance at seminars, conferences, and workshops; and publication of research.

Students are expected to become acquainted with the research projects of program faculty, staff, and fellow students. A range of colloquia and other informal research reviews provide opportunities to do so. As students develop research interests, they should ask to join appropriate research teams. As new members of our scholarly community, doctoral students bring not only substantive knowledge of topics in the field, but also a set of analytical methods and the ability to use as well as expand on them.

Oral and written presentations serve as practice for a scholarly or professional career. We encourage our students to present their research at colloquia, professional conventions, and meetings with other professionals in their field of interest. Publication in peer-reviewed

journals is one of the primary ways that scholars communicate new research and contribute to knowledge in their fields. Such publications are important indicators of scholarly achievement and are used by universities and organizations to judge the quality of young scholars. Doctoral students should pursue opportunities to present their research at professional meetings and publish in journals in order to enhance a student's professional development.

I: PhD Program Administration, Policies, and Procedures

The College of Science administers a number of PhD programs. Key individuals responsible for the administration of the programs include:

Dean; COS Interim	Ali Andalibi, Ph.D.
Associate Dean; COS Student Affairs	Donna M. Fox, Ph.D.
Chair; Atmospheric, Oceanic and Earth Sciences	James I. Kinter, Ph.D.
Chair; Chemistry and Biochemistry	Gerald Weatherspoon, Ph.D.
Chair; Computational and Data Sciences	Jason Kinser, D.Sc.
Chair; Environmental Science and Policy	Alonso Aguirre, DVM
Chair; Geography and Geoinformation Science	Dieter Pfoser, Ph.D.
Chair; Mathematical Sciences	David Walnut, Ph.D.
Chair; Physics and Astronomy	Paul So, Ph.D.
Director; School of Systems Biology	Iosif Vaisman, Ph.D.
Director, Office of Graduate Programs	Melissa Hayes

In most cases, the PhD core faculty is composed of tenured, tenure-track and term members of the Mason faculty whose primary affiliations are with the College of Science. It may also include a select few members from the School of Integrative Studies.

Each program is administered by a departmental chair and a graduate program coordinator. These individuals propose policy changes, make assistantship appointments, and recommend dissertation committee membership to the Office of the Associate Dean of Student Affairs. The Office of the Director of Graduate Programs administers the program, including responding to information requests, tracking application and graduation forms, and communicating information about requirements and changes in status to students.

The Advisor

Key to each student's success in the program is close and continuing consultation with a faculty advisor. This begins as soon as a student enters the program. Initially, program administration may assign advisors based on students' interests and on the need to balance the advising load among the faculty. Some departments may use the Graduate Coordinator as the initial academic advisor. The faculty member who eventually agrees to chair the student's dissertation committee, based on their expertise and research area, will become the Dissertation Chair. This does not have to be the person originally assigned as an academic advisor to the students. Students may change advisors and/or Dissertation Chairs with the agreement of all parties and with the written approval of the Associate Dean for Student Affairs.

The initial academic advisor may help determine the student's schedule of classes, answer general questions about the program, and guide the student in selecting a specialty and defining a research orientation. The advisor is the first point of contact for problems that may arise. Students must consult their advisors before making any program changes and keep the advisor up-to-date on decisions regarding the program. The advisor may help the student with research skill preparation and in choosing an appropriate Dissertation Chair.

Registration

Before the beginning of each semester, students should consult with their advisors regarding course registration for the upcoming semester. Accuracy of the registration is the personal responsibility of each student. Registration for most classes takes place electronically through PatriotWeb: <https://patriotweb.gmu.edu>

Students should contact their academic advisor to obtain permission to register for 998 credits. The Office of Graduate Programs provides approval for issuing 999 credits.

Requests for individualized sections and directed study sections must be approved by the advisor first and then forwarded to the Department Chair. The Associate Dean for Student Affairs provides the final level of review for this type of credit.

Credit for Prior Graduate Work

Students who have earned a master's degree or equivalent, before being admitted to Mason, may apply for up to a 30-hour reduction of credit in consultation with their graduate coordinator and the Director of Graduate Programs. Students with prior graduate work that was not used toward another graduate degree may transfer up to one-half of the 72 credits required for a PhD degree in the College of Science.

- Students, in consultation with their advisors, will make requests to the Graduate Coordinator as to how many credits could be accepted and toward which requirements they will be counted. When making decisions about prior work, advisors should consider both the subject and quality of the course requirements and student performance in courses. Students must provide their advisors with catalog copy and syllabi for the courses they wish to have considered for prior credit. The student's advisor can then refer this request to the Graduate Coordinator for review. The University catalog describes standards for prior course credits. Final approval can be granted by the Director of Graduate Programs.

Courses Eligible for Graduate Credit

Graduate courses numbered 500 and above may be applied to a graduate program. Graduate students are eligible to take undergraduate courses for undergraduate credit only. Registering for a graduate level independent study or directed studies in order to attend and gain credit for an undergraduate course offering is, on its face, unethical. Discovery of such an action could lead to dismissal from the graduate program and a grade of F in the individualized section.

Class Locations and Times

Courses are offered primarily at the Fairfax and Manassas campuses. The College of Science offers occasional online and hybrid classes. COS reserves the right to select the time and place of each class or seminar, within the limits set by general University policies and procedures.

Full-Time/Part-Time Status

Full-time students are expected to take a minimum of 9 credits every fall and spring semester until course requirements are complete. In the dissertation proposal stage (i.e., taking 998), full-time students must take 6 credits to maintain full-time status whether they have an assistantship or not. (This does not include summer semesters.) Students who wish to register for more than 12 credits in a fall/spring semester or who wish to request any adjustments to the full-time requirements must seek permission from the Office of the Director for Graduate Programs.

The College of Science makes every effort to schedule courses to accommodate the needs of part-time students. However, offering courses to meet diverse scheduling needs is a challenge. Those who pursue doctoral studies on a part-time basis must understand the schedule and plan ahead to meet the requirements of the program. Flexibility on the part of employers is essential for successful participation in the doctoral program. Failure to meet program requirements, particularly prior to completion of the Comprehensive Qualifying Examination, may be grounds for termination.

Courses at Other Institutions

After matriculation, students may take a maximum of 12 credits at other accredited institutions with prior permission from the College of Science. Students seeking approval must provide the Director of Graduate Programs with a written request that includes a copy of the catalog description of the course, a syllabus for the course (or a list of topics covered in it), identification of the texts used in the course, and written approval of the student's advisor or dissertation chair. Up to 6 credits of coursework taken at any member institution of the Consortium of Universities of the Washington Metropolitan Area may be billed at Mason tuition rates.

Secondary Program

Students who would like to pursue a secondary degree must declare their intent to do so by the end of their second year in the program. Master's degree course requirements and time limits are different from those of the doctoral degree; additional coursework is required. Only 30 credits from a master's degree may be applied to the doctoral degree. Doctoral students do not automatically complete master's degree requirements as part of their studies, and need to be advised appropriately. Please contact the Director of Graduate Programs if you are considering this option.

Graduate Assistantships

Each year, the COS provides a limited number of funded positions to full-time doctoral students. Typically, this takes the form of a Graduate Research Assistantship (GRA) or Graduate Teaching Assistantship (GTA). Each year, the Office of the Provost publishes “Graduate Student Hiring Rules and Procedures.” This document includes a number of policies and procedures defining the scope, roles, rules, and regulations governing such appointments. All assistantships assume a work commitment of 20 hours per week during the academic year.

Full-time GRAs and GTAs must enroll in a minimum of 6 credit hours each semester (excluding summer), and are expected to maintain high academic performance. GRAs and GTAs are encouraged to take 9 credits each semester during their first year. GRAs and GTAs may only have other employment with the approval of their supervisor, the program director, and the Associate Dean of Student Affairs. Appointment as a GRA or GTA does not constitute employment but rather is seen as part of one’s academic training. The College may determine at any time to discontinue support for any individual for any reason. All assistantships include some tuition remission, depending on the availability of funding.

Time Limit

For both full-time and part-time students enrolled in Mason doctoral programs, whether entry is post-baccalaureate or post-master’s, the total time to degree will not exceed nine calendar years from the time of first enrollment as a doctoral student. Doctoral students are expected to progress steadily toward their degree and to advance to candidacy within no more than six years.

Degree Progress and Evaluations

Beginning in the spring semester of the student’s first year, the program faculty may conduct an annual review to evaluate the individual’s suitability to continue in the program. Satisfactory performance in a doctoral degree program involves much more than achieving passing grades in courses and on examinations. The faculty is concerned particularly with the capability of students to conduct individual scholarly inquiry, communicate their work effectively, and serve as members of the professional community. Timely progress in the program is also a significant consideration. Periodic student evaluations take all these factors into consideration. The College, at its sole discretion, may terminate a student from a program for any reason.

In addition to an annual review, at the time of the comprehensive qualifying examination, the faculty may evaluate whether or not a student should be encouraged to continue pursuing a doctoral degree. Many factors are examined such as GPA, academic performance, and the capability of the student to successfully complete a dissertation. The Office of the Director of Graduate Programs or the student’s advisor will convey the results of the evaluation to each student. For students making good academic progress and fulfilling all requirements in a satisfactory manner, the formal evaluation is typically pro forma in character.

It is the responsibility of faculty advisors to represent their students in the faculty discussion of student progress. Students should keep their advisors informed of progress or areas of concern.

Students who are concerned about their progress or ability to finish the degree should contact the Office of Graduate Programs to discuss options and explore the possibility of leaving with a master’s degree.

Program of Study

Usually, before the end of the second year of graduate study but no later than consideration for advancement to candidacy, doctoral students must submit a program of study for approval by the Associate Dean for Student Affairs. The program of study must include major courses and supporting courses to be completed, research skills required, subject areas to be covered by the candidacy exam, and a proposed date for the candidacy exam. Any changes in the programs of study must be documented with an amended Program of Study Form.

Termination

A student may be terminated from the program if the faculty feels the student has major academic deficiencies or has not made sufficient progress. The following is a list of reasons that will lead to a student's automatic termination from COS PhD programs:

- Failure to make satisfactory progress toward the degree as determined by the academic unit and/or the Associate Provost for Graduate Education.
- Accumulating grades of F in two graduate courses or 9 credits of unsatisfactory grades (C; 2.0) in graduate courses.
- Being found responsible for plagiarizing by the Office for Academic Integrity.
- Failure to pass the Comprehensive Qualifying Examination within the parameters set by the department in which the degree is sought (e.g. some departments require a pass within two attempts; some have a time deadline that must be met)

A student who is terminated from the program will receive written notification from the Associate Dean of Student Affairs. The termination is effective upon receipt of this notification unless an appeal to the Provost's Office for Graduate Education is approved (see below) .

Appeals of Termination

A student who is terminated from a program may appeal the decision to the Office of the Associate Provost for Graduate Education. This appeal must be in writing and must be received within 5 business days from the date on the notice of termination from the College. If no appeal is made, the college's decision is final.

Drops/Withdrawals

Students may be dropped from the program for failure to do any of the following:

- Take the comprehensive qualifying examination in the required timeframe
- Meet conditions of provisional admission status.

Grade Appeals

Although the individual faculty member is the best judge of student performance, there may be instances when a student disagrees with a grade or other evaluation. In such cases, the student first must ask the faculty member concerned to reconsider the grade. If the student is not satisfied, a written request for review may be made to the respective department chair. This request must be submitted prior to the end of the drop period of the next regular session, excluding summer. The department chair may dismiss the appeal as being without merit or may appoint a faculty committee to review the appeal. If a committee is formed, they will make a recommendation concerning the appeal to the Chair. The Chair will forward the decision to the Associate Dean of Student Affairs where a final determination will be made which cannot be appealed. Grading of the comprehensive qualifying exam is not subject to appeal.

Students should submit a written request to withdraw from the program to the Director of Graduate Programs, who will make a recommendation to the Associate Dean of Student Affairs. The Associate Dean reserves the right to reject any withdrawal in which a student's academic performance is in question.

Leave of Absence

The University does not grant a formal leave of absence from its PhD programs. Students who wish to take leave from their program should write the Director of Graduate Programs beforehand, explaining their circumstances. The College will evaluate each student's situation when the student wishes to re-enroll (see below). Should a student need to withdraw mid-semester, it is critical either to complete courses or go through formal withdrawal procedures so that future enrollment may be possible.

Re-Enrollment Procedures

A student who has failed to enroll in at least one credit of coursework for two or more consecutive semesters at George Mason University must obtain permission to re-enroll in the program. The student should complete and submit a Graduate Re-Enrollment form to the Director of Graduate Programs. This form is available on the Registrar's website at <http://registrar.gmu.edu>. The Director of Graduate Programs, the student's advisor and, the Departmental Graduate Coordinator will conduct a review of the student's record for any academic deficiencies. If the student is granted permission to re-enroll, the approved Graduate Reenrollment form, first completed by the student, will be forwarded to the Registrar's Office .

II: Preparing and Writing the Dissertation

Selecting a Dissertation Topic

As with other colleges with PhD programs, students are expected to complete most coursework and exams before beginning work on a dissertation proposal. While completing the coursework phase of the PhD program, students are encouraged to think about specific topics that might be of interest to them for further exploration later. The College of Science encourages its students to talk to multiple professors and research groups in order to better identify their main area of interest.

Dissertation Chair

An important key to success in a dissertation is the selection of a dissertation chair who, in most cases, must be a member of the COS Department from which the degree will be earned. The dissertation chair gives primary guidance to the student during the proposal and dissertation stages of the program.

Typically, students and faculty members discover or develop mutual interests, and the decision of who will be the chair flows naturally from their evolving relationship. This decision is voluntary on both sides; that is, the student is free to select a dissertation chair, and the faculty is free to decide which students' committees to chair. ***It is the student's responsibility to identify a dissertation chair who will accept the responsibility of supervision.*** The student's failure to do so may result in termination from the program.

The Role of the Chair

Chairs serve as the major advisor and mentor to the doctoral candidates as they research and write their dissertation. Expectations of the chair include the following:

For the Proposal:

- Consult and meet with the student on a regular basis
- Advise on topic selection (e.g., appropriateness, academic value)
- Guide the student in the proposal writing process (e.g., understanding the need for a clearly defined problem statement, precise research questions, viable methodology, focused literature review, and thorough bibliography)
- Counsel student on reliability and validity of data-gathering methods
- Ensure that all research activities are reviewed by the Office of Research Development, Integrity, and Assurance (RDIA) prior to implementation of the research activities. Refer to <http://rdia.gmu.edu/>
- Serve as the principal investigator for the research and assume responsibility for the legal and ethical conduct of the work.
- Facilitate committee discussions about creating and improving the proposal

For the Dissertation:

- Meet with student on a regular basis to provide guidance and evaluation during the research and writing stages
- Review dissertation drafts in a timely manner
- Offer recommendations for revisions
- Communicate with committee members
- Discuss any problematic issues in the dissertation with the committee, student, and program director
- Approve the final draft for the dissertation defense, with the concurrence of the committee members
- Supervise the dissertation defense

In some instances, a change in dissertation chair may be needed. A discussion of the proposed change should involve the present chair, the proposed chair, the Department Chair, the Department Graduate Coordinator and the Director of Graduate Programs. Both the Director of Graduate Programs and the COS Associate Dean of Student Affairs provide final approval for a change in chair.

Dissertation Committee

The first formal step in pursuing the dissertation is the formation of a dissertation committee. The chair, in consultation with the student, selects the other members from among Mason faculty. The College of Science requires that a minimum of three members serve on the dissertation committee. (Please note that some departments may require more than 3. Check with your department.) In most cases, the chair of the committee must be assigned to a department in COS from which the degree will be awarded. The chair and those who have agreed to serve must sign the Dissertation Committee form.

With the approval of the Director of Graduate Programs, the committee may include additional members. These additional members may be part of the Mason faculty, or they may have other affiliations. The Director of Graduate Programs will recommend the dissertation committee to the Associate Dean for Student Affairs. The Associate Dean will confirm and then approve the members and reserves the right to make substitutions, as necessary, after consultation with the dissertation committee chair.

The dissertation committee is responsible for supervising and approving all aspects of dissertation preparation and production: additional coursework, research design, model building, data collection, data analysis, dissertation writing, and the oral defense. The committee reads the various drafts of the dissertation, advises the student about directions the dissertation should take, and identifies changes the student may need to make.

The Role of the Committee

The dissertation committee works with the dissertation chair to provide advice and consultation to the candidate throughout the process of research and writing. Expectations of the committee members include the following:

For the Proposal

- Meet with the student
- Advise on topic selection (e.g., appropriateness, academic value)
- Offer expertise in the member's area of study
- Read and review the proposal in a timely manner
- Discuss any recommendations for revisions with the committee chair and student

For the Dissertation

- Meet with the student to provide guidance and evaluation during the research and writing stages
- Review dissertation drafts in a timely manner
- Offer recommendations for revisions
- Discuss any problematic issues in the dissertation with the committee chair and student
- Approve the final draft for the dissertation defense, in consultation with the other committee members

Members of the dissertation committee are required to be present in person at the dissertation defense.

Dissertation Proposal

Before writing the dissertation itself, each student must prepare a dissertation proposal and defend it successfully. The purpose of the proposal is to demonstrate to the committee that the student has conducted sufficient research and planning to be able to complete the dissertation. Passing the proposal defense constitutes approval for the student to undertake the research and writing of the dissertation. Students should expect to spend several months writing the proposal, but the dissertation chair will determine the appropriate length for any specific proposal.

The proposal narrows the scope of research from broad fields or areas of specialization to a focused research question or hypothesis. The precise format of the proposal will take shape in consultation between the student and committee members. While the structure of each individual student's proposal might differ somewhat, the following outline serves as a guide for both the student and the committee.

1. Title and Abstract: A working title for the dissertation and an abstract will head the proposal; the student should be able to state the purpose of the dissertation in one sentence.
2. Introduction: The introduction defines the area of inquiry, explains why it is important to the discipline or field, and shows how the dissertation relates to the broader area of

scholarship. The introduction also briefly states the research question or hypothesis, and it lays out the framework for the rest of the proposal.

3. Literature Review: The proposal includes a focused survey of the field to which the student will make a new contribution. The literature review is not merely a descriptive list of related books and scholarly articles or an annotated bibliography. It should focus on scholarship directly relevant to the dissertation and show how the dissertation will contribute new knowledge to that literature. What are the major controversies in the field and how will the dissertation help advance knowledge of the issue in question? How has the literature dealt with these topics thus far? What is the gap in the scholarship that the dissertation is intended to fill? The literature review should not be seen as a survey of related scholarship; it should be carefully integrated into the purpose of the proposed dissertation.
4. Research Questions and Hypotheses: After placing the dissertation topic in the extant literature, the proposal explains in detail the research question or hypothesis and how the dissertation will answer the central question. Secondary questions or hypotheses are appropriate, but overall, the dissertation should address one central question. What theoretical or causal connections will the dissertation demonstrate? What leads the student to expect the predicted outcomes? What sub-questions will the student answer in addressing the main research question?
5. Data Collection: This section of the proposal describes how the data will be collected. What data or information will the student explore in order to bring empirical evidence to bear on the topic (databases, archival sources, documents, laws, survey data, interviews, etc.)? What new evidence will the student develop that has not been available before? Alternatively, how will the student use the existing data to address questions that have not yet been addressed?
6. Methods of Analysis and Limitations of the Data: Once the proposal addresses theoretical, substantive, and data gathering issues, it then explains the methodology of the inquiry. The methods used should flow from the type of question the proposal asks and the nature of the evidence available (or to be developed). If the proposal uses quantitative data, how will the student operationalize the main concepts being addressed? That is, how will the data being explored represent the issues the student is addressing? Is the student aware of the limits of the data? If the proposal uses quantitative data or evidence, what specific data analysis techniques will be used? If the proposal uses qualitative data, how will the student evaluate the empirical data? If the proposal uses a case study, how representative will the case be? The proposal should be clear about gaps or limitations in the data selected.
7. Implications of the Research: Finally, the proposal addresses the potential implications of the research. How will this research improve our understanding of the field? The significance might be theoretical (e.g., how can we understand the issue better?), methodological (e.g., how can we use better measurements in understanding the issue?), or practical (e.g., how can this area of the discipline or field be better implemented?). The student should be clear about limitations of the research and the potential gaps between what the study is measuring and the conclusions the student wishes to draw from them.

8. Time Frame and Bibliography: The proposal should include a concrete time frame for completing the research and tentative chapter titles, as well as a bibliography of the sources cited in the proposal, using the citation or reference style that the dissertation chair has approved.

It is essential for students to keep in touch with their committee members, especially their dissertation chairs. Students should avoid surprising their committees with what they think are finished products. The expectation is that students correspond regularly with their committee members, sending outlines and ideas, and reporting progress on the research. It is the responsibility of the student to keep the committee informed of the status of the research and writing.

Dissertation Proposal Defense

Once the committee has reviewed and approved the proposal, the student schedules a defense with the help of the COS Director of Graduate Programs. At the defense, the student makes an oral presentation of the proposal to the committee and any other interested faculty, students, or members of the public who wish to attend.

In scheduling the defense, it is the student's responsibility to ensure that all members of the committee are available and will be physically present for the defense. This is especially important during the summer, as ***faculty members are not obligated to be available during summer session***. Any requests for exceptions to these requirements must be made well in advance in writing by the student's committee chair and approved by the Director of Graduate Programs and the Associate Dean for Student Affairs.

Students must submit to the Director of Graduate Programs **at least 15 days** before the scheduled date of defense:

- a signed Statement of Readiness for Proposal Defense form
- an e-mail with the proposed dissertation title, date and time of defense, names of the committee members, and an abstract of no more than 100 words
- a copy of the final draft of the full dissertation proposal

After the proposal defense, the student is responsible for collecting faculty signatures and submitting the Dissertation Proposal Defense form to Office of the Director of Graduate Programs.

Advancement to Candidacy

Advancement to candidacy for the doctoral degree occurs when a student has met the coursework requirements, passed all required examinations, established an approved dissertation committee, and successfully defended a dissertation proposal.

In accordance with University requirements, the total time to degree for all doctoral students will not exceed ***nine calendar years*** from the time of first enrollment. Doctoral students are expected to progress steadily toward their degree and to advance to candidacy within ***six years*** of admission to the program. ***Failure to do so may result in termination from the program.***

Students who advance to candidacy after the last day to add for the semester must wait until the next semester to register for 999 credits. Late adds will not be allowed.

The Dissertation

The doctoral dissertation is a critical element of advanced research-based education. A dissertation is expected to contribute significantly to new knowledge of the world in which we live. It builds on the best of what has been discovered and understood by scholars who came before, and it provides a foundation on which further inquiry and additional understanding can be built in the future. Occasionally, a dissertation results *de novo* from a blinding flash of original insight. However, most often a dissertation represents a logical extension of past work and demands that the author have a comprehensive grasp of prior work in the chosen field of inquiry. Thus, a substantial part of the effort of doing research and writing the dissertation is devoted to building and codifying that base of prior knowledge.

The College of Science expects its candidates' doctoral dissertations to represent outstanding contributions to the base of scholarly inquiry relevant to their fields or disciplines. Thus, a marriage of scholarship and relevance is the hallmark of a good dissertation. A dissertation should incorporate the best professional practices related to style, format, referencing, graphics, and language. Publication is an appropriate goal of any dissertation, and candidates should write with that goal in mind.

Oral Defense

After each committee member has signed the Oral Dissertation Defense Readiness form, the candidate must defend the dissertation in public before the dissertation committee, fellow graduate students, the University community, and other scholars.

As with the dissertation proposal defense, candidates will contact the Office of Graduate Programs for a room and equipment reservation. Candidates must submit their request to the Office of Graduate Programs **at least 15 calendar days** before the scheduled date of defense:

- A signed Oral Dissertation Defense Readiness form (see Appendix B)
- An e-mail including the dissertation title, date and time of defense, all committee members (including external reader), and an abstract of no more than 100 words
- A copy of the final draft of dissertation

At the same time, the candidate provides copies of the dissertation to all members of the dissertation committee. The candidate also must place a copy on reserve at the Reserve Desk of the Fenwick Library so that it is available to the University community at least fifteen days before the scheduled oral defense. In scheduling the defense, it is the candidate's responsibility to ensure that all members of the committee are available and will be physically present for the defense. Availability of the committee is especially important during the summer, as ***faculty members are not obliged to be on campus during the summer session***. Any request for exceptions to these requirements must be made well in advance in writing by the student's committee chair and approved by the Director of Graduate Programs and the Office of the Associate Dean for Student Affairs. Candidates must be registered for at least one credit of 999 during the semester in which they graduate. August graduates must register for summer session.

It is common for a committee to require revisions after a successful defense to accommodate both substantive improvements and editorial corrections. If the defense is successful, all members of the dissertation committee sign at least three copies of the signature sheet. Candidates can find a sample sheet on the University Dissertation & Thesis Services (UDTS) website:

<http://library.gmu.edu/udts>

The candidate must ensure that the signature sheet follows the formatting guidelines before presenting it to the committee for signatures. After a successful defense, the candidate should submit the above form to the Office of Graduate Programs to obtain final approval from the Director of Graduate Programs and the Office of the Associate Dean of Student Affairs. If the defense is unsuccessful, the candidate may need to revise the dissertation and schedule a new defense date with the committee. The decision to allow a second defense is at the discretion of the dissertation committee.

Use of Editors

COS doctoral students are permitted to use copy editors for the sole purpose of formatting dissertations according to Fenwick Library requirements. Outside editors may not be used for a draft dissertation prior to the defense.

Dissertation Format and Delivery of Final Copies

Candidates are required to follow the University's "Thesis, Dissertation, or Project Guide." The University rigidly applies its requirements for format, graphics, style, and timeline. It is the responsibility of the candidate to follow the established guidelines, available on the web at:

<http://library.gmu.edu/udts>

The University requires a format review by the University Dissertation & Thesis Services (UDTS) Coordinator in Fenwick Library. The candidate should forward a copy of the dissertation to the Coordinator as soon as possible *before the defense* to allow time to make the necessary changes to the document. The Coordinator reviews the completed dissertation for compliance with the guidelines. The Coordinator does not assume responsibility for editing or putting the dissertation in final form, which is fully the responsibility of the candidate. UDTS is in Room 2005 Fenwick Library on the Fairfax campus, MS 2FL, telephone: (703) 993-2222.

Once the candidate receives all necessary approvals, the dissertation must be submitted to the University under the mandatory Electronic Submission Policy and will be placed in the Mason Archival Repository Service (MARS). It is the candidate's responsibility to review the dissertation submission information available online and to contact the UDTS Coordinator to understand the submission requirements. (See Dissertation Electronic Access Guidance below.)

Dissertation Electronic Access Guidance

In the final dissertation submission stage, University Dissertation and Thesis Services (UDTS) requires you to submit a UDTS Electronic Thesis and Dissertation Embargo Request form. The form presents options for broad or restricted public access to the finished dissertation.

Considerations include the impact on publication, employment, and research collaboration and funding. No single approach is right for everyone.

While considering the options available, please keep the following in mind:

1. COS recommends immediate, open access availability of its graduates' dissertations. Students who wish to request an embargo must provide a compelling argument for delayed access and must receive approval from their dissertation committee chair.
2. Dissertations embargoed from universal access for any period of time still will be available electronically on campus in the [Special Collections Research Center](#).
3. The UDTS form includes the option of delaying the availability of your work in MARS (see below). The form does not outline the required ProQuest process that involves parallel yet separate procedures. Each of these services mean something different for public access to your dissertation.
 - **MARS** (Mason Archival Repository Service) is free and open access. Anyone anywhere with an internet connection will be able to see your work. UDTS requires you to decide when your work will be available on MARS. Students may request one, five or ten year embargo.. For students who forgo immediate access and receive embargo approval, COS recommends a two-year delay for dissertations. Two years provides the graduate a reasonable period for publication and while also allowing wider access when the research is still timely or relevant.
 - ProQuest is a subscription service with a worldwide reach. It only publicly displays the abstracts of dissertations free of charge. To view the full dissertation, users need a subscription. Most academic institutions and other organizations with library collections maintain subscriptions.

UDTS requires you to upload your dissertation to ProQuest. You have several options: 1) making the dissertation available immediately to anyone holding a subscription; 2) paying a fee to make it possible for all users to have full and open access to your complete dissertation; 3) delaying availability in ProQuest for certain periods of time. As with MARS, for students who forgo immediate access and receive embargo approval, COS recommends a two-year delay for dissertations.

4. Please note that for any delay of MARS access, the signatures of your advisor as well as the school are required. After you've gathered your chair's signature, please submit the UDTS Embargo Request Form to the Associate Dean for Student Affairs for administrative approval.

Registration during Dissertation Work

While preparing the dissertation proposal, students can register for 998 credits - Research/Proposal for Dissertation.

- The University requires no minimum number of 998 credits, but some departments may have stricter requirements. Be sure to check with the graduate coordinator.
- Students are permitted to take additional courses along with 998 in order to maintain full-time status.

After a successful dissertation proposal defense, students may enroll in 999 Dissertation.

- Students are required to take a minimum of 3 credit hours of 999 in the fall and spring semesters until they meet graduation requirements.
- Students may apply up to a combined total of 24 credits of 998 and 999 toward the graduation requirement.
- Students who have fulfilled all degree requirements may take 1 credit of 999 each semester and be considered full-time until the program is completed, provided they are making adequate progress. Full-time status at this stage must be documented in the Office of the Registrar.
- **Students must maintain continuous enrollment until graduation, excluding summer.**

Students must contact their advisor in order to obtain permission to register for 998 credits or contact the Office of the Director of Graduate Programs for 999 credits.

Please note that the College of Science will not retroactively approve conversion of 998 credits to 999.

Enrollment in Other Degree Programs

In accepting admission to a PhD Program in COS, students certify that they are not currently enrolled in any other degree program, either at Mason or elsewhere. Further, after admission to the doctoral program, students are not permitted to enroll in any other degree program, either at Mason or elsewhere, at any time prior to graduation, resignation, or dismissal from the PhD Program. Violations of this policy will result in automatic termination, which is not subject to appeal.

Graduation and Commencement

Intent to Graduate Form & Graduation Application

At the beginning of the semester in which a candidate intends to graduate, the student must file an “Intent to Graduate” form on PatriotWeb at: <https://patriotweb.gmu.edu/>

The current deadlines are available on the web at: <http://registrar.gmu.edu/graduation/>

Participation in Commencement

Candidates who have qualified for graduation for the summer, fall, and spring semesters are invited to participate in the University’s commencement and COS’s degree celebration ceremonies. Information and dates relating to Commencement can be found at: <http://events.gmu.edu/>

III. University Services and Policies

Electronic Communication

Students are required to activate and access the e-mail account provided by the University. The University will communicate only via Mason e-mail accounts for registration, student accounts/billing, and financial aid. Students are responsible for the content of any communication sent to them by e-mail. Students may choose to have Mason e-mails forwarded directly to another account. Account setup instructions can be found at the MasonLive website:

<http://masonlive.gmu.edu>

Please note that the default setting for mail forwarding retains copies of e-mail on the Mason server. To avoid errors due to mailboxes being over quota, students should either regularly delete e-mail from their Mason account or, when setting up mail forwarding, choose to not save a copy of e-mails on the server. If students have any difficulties with this process, they should contact Information Technology Services at support@gmu.edu or by phone at (703) 993-8870.

Health Insurance

Students may purchase health insurance through UnitedHealthCare StudentResources. F-1 and J-1 visa students are automatically enrolled in the University's plan. The deadline for an annual policy or for fall semester enrollment is **September 15, 2019**. For additional information contact Student Health Services at (703) 993-2831 or visit the Student Health Services web site at:

<http://shs.gmu.edu/>

Human Subjects Research

All researchers must receive written approval from Mason's Office of Research, Development, Integrity, and Assurance (RDIA) prior to conducting a research project involving human subjects. Ethical review of projects will be conducted either by RDIA staff or by members of the Institutional Review Board (IRB), a committee composed of faculty, staff, and community members who are trained in issues related to protecting human participants in research. Please see the RDIA website for more information:

<http://rdia.gmu.edu/>

International Student Services

Visa Status

Each international student is responsible for having a current and valid visa. Students on F-1 and J-1 visas must maintain their full-time status, demonstrate appropriate financial resources, and remain in good academic standing. All visa-related issues are handled through the Office of International Programs and Services.

Office of International Programs and Services (OIPS)

OIPS provides advice on immigration matters, employment applications, taxation, Mason academic policies, cultural adjustment, and other practical issues. The office conducts an international student orientation each semester, organizes outings, arranges bi-weekly workshops on topics of interest, and co-sponsors International Week each spring.

To learn more, visit the Office of International Programs and Services located in Student Union Building I, Fairfax Campus, Suite 4300, (703) 993-2970, <http://oips.gmu.edu/>. OIPS also holds office hours in Arlington. Please check the OIPS website for more information.

International Student Health Insurance

Health insurance is required for all F-1 and J-1 visa holders. Health insurance fees are deducted from all payments received by the University before funds are applied to tuition or other charges. Failure to make this payment may result in cancellation of classes. See the Health Insurance section for further information.

International Travel for Educational Purposes

Students pursuing independently arranged international educational travel experiences such as internships, independent study, service learning, or dissertation research must:

1. Register travel through the Mason Abroad Travel Registration System.
2. Sign and file *Acknowledgement of Risks and Medical Consent Form*.
3. Attend any required orientations.
4. Pay applicable tuition, administrative, and program fees, if any.
5. Comply with policies and procedures regarding academic advising.
6. Abide by applicable University regulations and policies, including but not limited to the University Catalog, the Code of Student Conduct, and University drug and alcohol policies.
7. Students must purchase the University-approved travel insurance for the duration of the international educational travel.

Office of Disability Services

As part of Mason's continuing commitment to uphold the letter and spirit of the laws that ensure equal treatment of people with disabilities, the university established and maintains the Office of Disability Services (ODS). The mission of the ODS at Mason is to facilitate equal access for students with disabilities to university programs, events, and services. They do this by collaborating with students, faculty, staff, and community members to create diverse learning environments that are usable, equitable, inclusive, and sustainable. Students who believe they may be eligible for disability-related services should call ODS at (703) 993-2474 or visit the office on the Fairfax Campus in the Student Union Building (SUB) I, Room 2500, to find out what is needed to establish a file and receive services. Please see the ODS website for more information:

<http://ods.gmu.edu/>

IV. Ethics and Professional Conduct

Mason Honor Code

Mason operates under an honor system that has existed in the Commonwealth of Virginia for over 150 years. Students are responsible for understanding the provisions of the code that is described in detail in the *George Mason University Catalog*. The Mason Honor Code is as follows:

To promote a stronger sense of mutual responsibility, respect, trust, and fairness among all members of the George Mason University community and with the desire for greater academic and personal achievement, we, the student members of the university community, have set forth this honor code: Student members of the George Mason University community pledge not to cheat, plagiarize, steal, or lie in matters related to academic work.

PhD studies go hand-in-hand with participation in an academic community, and students who pursue the degree must understand and uphold the norms and values of that community. Doctoral study is a rigorous intellectual endeavor. Students can expect the College of Science and the University to hold them to the highest standard of scholarly conduct. Students should familiarize themselves with the “Statement of Professional Ethics” and “Statement on Plagiarism” adopted by the American Association of University Professors. These statements are incorporated in the George Mason University Faculty Handbook, which is available on the Mason website:

<http://www.gmu.edu/facstaff/handbook>

As members of the academic community, students are held to these standards of professional conduct. Should disagreements between students or between a student and faculty member arise, every effort should be made to resolve these differences in a collegial manner. If this is not possible, students are responsible for taking the initiative to consult with their advisors, the Program Director, and then the Dean to discuss their concerns.

College of Science Policy on Plagiarism

The profession of scholarship and the intellectual life of a university depend fundamentally on a foundation of trust. Thus, any act of plagiarism strikes at the heart of the meaning of the University and will be referred to the Office of Academic Integrity. It constitutes a serious breach of professional ethics and it is unacceptable. Plagiarism is the use of another’s words or ideas presented as one’s own. It includes, among other things, the use of specific words, ideas, or frameworks that are the product of another’s work. Honesty and thoroughness in citing sources is essential to professional accountability and personal responsibility. Appropriate citation is necessary so that arguments, evidence, and claims can be critically examined.

Plagiarism is wrong because of the injustice it does to the person whose ideas are stolen. But it is also wrong because it constitutes lying to one's professional colleagues. From a prudential perspective, it is shortsighted and self-defeating, and it can ruin a professional career.

The faculty of the College of Science takes plagiarism seriously and has adopted a zero-tolerance policy. Cases of suspected plagiarism are referred to the Office of Academic Integrity and may lead to termination from the program. This termination will be noted on the student's transcript. For foreign students who are on a university-sponsored visa (eg. F-1, J-1 or J-2), termination also results in the revocation of their visa.

To help enforce the University policy on plagiarism, all written work submitted in partial fulfillment of course or degree requirements must be available in electronic form so that it can be compared with electronic databases, as well as submitted to commercial services to which the College subscribes. Faculty may at any time submit a student's work without prior permission from the student.

Individual instructors may require that written work be submitted in electronic as well as printed form. The COS policy on plagiarism is supplementary to the George Mason University Honor Code; it is not intended to replace it or substitute for it.

<https://oai.gmu.edu/mason-honor-code/>