

PhD
in Mathematical
Finance
HANDBOOK
2021-2022 ACADEMIC YEAR



PHD IN MATHEMATICAL FINANCE

PhD in Mathematical Finance Curriculum	4
PhD Degree Requirements	5
Course Requirements	5
Additional Requirements	Error! Bookmark not defined.
Curriculum Paper	5
Qualifying Examination	5
Dissertation	6
Teaching Requirement	6
Teaching Assistant & Research Assistant Requirements	6
Academic & Professional Conduct	6

ADVISING 7

DISSERTATION 8

The Final Phase of the Program	8
Formation of Dissertation Committee	8
Development of Proposal	8
Dissertation Proposal Presentation/Defense	9
Editing the Dissertation	9
Dissertation Defense	10
Submission of Final Dissertation	10
Publication of the Dissertation	10
Co-authorship with Faculty	10

PHD IN MATHEMATICAL FINANCE ACADEMIC STANDARDS

1

Residency Requirement	11
Time Limit for Degree Completion	11
Performance Review	11
Grading System	12
Incomplete: "I"	12
Course Withdrawal: "W"	12
Course Failure: "F"	12
Continuing Course: "J"	13
Calculating Cumulative Grade Point Average (CGPA)	13
Grade Verification	13
Beta Gamma Sigma	13

ACADEMIC/PROFESSIONAL CONDUCT & GRIEVANCES

15

Academic & Professional Conduct	15
Student Complaints & Grievances	15
Grade Grievance Policy	16
Course Load	16
Full-time Certification	17
Course Overload	17
Academic Standing & Course Overload	17

COURSE INFORMATION

Course Identification	18
School or College	18
Course Number	18
Credits	18
Prerequisites	19
Evaluation of Instructors & Courses	19

REGISTRATION PROCEDURES**20**

Registration	20
Adding a Course	20
Dropping a Course	20
Dropping All Courses	20
Auditing Courses	21

DIRECTED STUDY**22**

Investigation of Area of Interest	22
Procedure for Directed Study	22

LEAVES OF ABSENCE & WITHDRAWALS**22**

Leave of Absence for Medical Reasons	23
Childbirth & Adoption Accommodation for Full-Time PhD Students	23
Voluntary Withdrawal	23
Withdrawal for Non-Payment	24
Academic Withdrawal	24
Withdrawal for Academic or Professional Misconduct	24

ADVANCED STANDING AND COURSES OUTSIDE OF QUESTROM: WAIVERS, TRANSFER OF CREDIT, & CROSS-ENROLLMENT ..24

Transfer of Academic Credit for Previously Completed Coursework for New Students	24
Pre-Approval for Transfer of Academic Credit for Current Students	24
Process for Petitioning for Transfer of Academic Credit	25
Cross Enrollment (Taking Courses at Colleges/Universities in Consortium)	25
Taking Graduate Electives at Other BU Schools/ Colleges	25

STUDENT RECORDS & TRANSCRIPTS

Official Student Records	27
Access to Student Records	27
Unofficial Transcripts	27
Official Transcripts	27

GRADUATION/DEGREE COMPLETION

Recommendation for Degree	27
Submission of Dissertation to Mugar Library	27
Graduation Application	28
Graduation Dates	28
Diplomas	28

APPENDIX 1: PROFESSIONAL BEHAVIOR..... 29**APPENDIX 2: DISSERTATION PROPOSAL OUTLINE 29**

IMPORTANT CONTACTS

DOCTORAL PROGRAM

Name	Role	Phone	Email
Timothy Simcoe	Faculty Director PhD Program	(617) 358-5725	tsimcoe@bu.edu
Marta McManus	Director Special Programs & Initiatives	(617) 353-2732	mwyrodek@bu.edu
Lisa Blancato	Marketing, Operations & Assessment Manager	4074	lisablan@bu.edu
Savannah Cardoso	Student Support Coordinator	617-232-2673	scardoso@bu.edu

Name	Role	Phone	Email
Somaly Heang	Director of Graduate Financial Aid	(617) 353-3584	questromfa@bu.edu

ACADEMIC DEPARTMENTS

Department	Role	Faculty Name	Phone	Email
Finance	Department Chair	Fernando Zapatero	(617) 353-2000	fzapa@bu.edu
	Doctoral Liaison	Scott Robertson	(617) 353-4166	scottrob@bu.edu

PHD IN MATHEMATICAL FINANCE

The PhD in Mathematical Finance is intended for students seeking careers in research and academia. Doctoral candidates will have a strong affinity for quantitative reasoning and the ability to connect advanced mathematical theories with real-world phenomena. They will have an interest in the creation of complex models and financial instruments as well as a passion for in-depth analysis.

The curriculum for the PhD in Mathematical Finance is tailored to each incoming student, based on his or her academic background. Students will begin the program with a full course load to build a solid foundation in understanding not only math and finance but the interplay between them in the financial world. As technology plays an increasingly larger role in financial models, computer science is also part of the core coursework. Once a foundation has been established, students will work toward a dissertation and embark on in-depth research, working closely with a faculty advisor in a mutual area of interest. Students will also be expected to perform teaching assistant duties, which may include lectures in master's-level classes.

Fall 1	Spring 1	Fall 2	Spring 2
GRS EC701- MICROECONOMIC THEORY	GRS EC703-ADVANCED MICROECONOMIC THEORY	QST FE919- DERIVATIVE SECURITIES	QST MF921 - ADVANCED TOPICS IN ASSET PRICING
QST FE918 - DOCTORAL SEMINAR IN FINANCE	QST FE920 - ADVANCED CAPITAL MARKET THEORY	GRS MA776 - PARTIAL DIFFERENTIAL EQUATIONS	GRS EC704 - ADVANCED MACROECONOMIC THEORY
GRS MA779- PROBABILITY THEORY	GRS MA780 - PROBABILITY THEORY II	QST MF922- ADVANCED MATHEMATICAL FINANCE	SPRING ELECTIVE 1
GRS MA711 - REAL ANALYSIS	GRS MA783 - ADVANCED STOCHASTIC PROCESSES	FALL ELECTIVE 1	SPRING ELECTIVE 2

Fall Electives: choose one

- **MF730:** Portfolio Theory
- **MF770:** Advanced Derivatives
- **MF772:** Credit Risk
- **MF850:** Advanced Computational Methods
- **EC745:** Macroeconomics and Financial Markets

Spring Electives: choose two

- **MF728:** Fixed Income
- **MA717:** Functional Analysis
- **MF794:** Stochastic Methods of Asset pricing
- **MF796:** Computational Methods in Mathematical Finance
- **MF821:** Algorithmic and High Frequency Trading
- **MF840:** Data Analysis and Financial Econometrics
- **EC794:** Financial Econometrics

PhD Degree Requirements

Course Requirements

Students' course choices must be approved by your faculty advisor prior to registration each semester. The minimum course requirement is 16 courses (48-64 credits).

Qualifying Examination

Students must appear for a qualifying examination after completion of all course work and the curriculum paper to demonstrate that they have:

- acquired advanced knowledge of literature and theory in their area of specialization

- acquired advanced knowledge of research techniques
- developed adequate ability to craft a research proposal

Guidelines for the examination are available from the department. Students who do not pass either the written and/or oral comprehensive examination will be reviewed by the Mathematical Finance Program Development Committee (MF PDC). The committee will determine if the student has to withdraw from the PhD Program. The PhD fellowship (if applicable) of any student who does not pass either the written and/or oral comprehensive examination on the first attempt will be suspended the semester after the exam was attempted.

Dissertation

Following successful completion of the Qualifying Examination, the student will develop a research proposal for the dissertation. The final requirement of the program is the completion of an approved dissertation. The dissertation must be based on original work that makes a substantive contribution to existing knowledge and demonstrates a capacity for independent, scholarly research.

Teaching Requirement

Students must teach at least one 3 or 4 credit class independently as the lead instructor before they can be awarded the doctoral degree. The teaching takes place during the third or fourth year of the program. The Department Chairperson is responsible for assigning courses to PhD students. An exemption to this requirement can only be granted by the MF PhD PDC.

Teaching Fellow & Research Fellow Requirements

Fellowship students are required to carry out teaching fellow and/or research requirements as part of their fellowship obligations, as listed in their fellowship award letters. Students must carry out the assigned tasks in order to maintain their fellowships. A student who fails to carry out the assigned tasks adequately may lose his/her fellowship. The Department Chairperson is responsible for assigning research and teaching assistant responsibilities to fellowship students and for determining whether the assignments have been completed successfully.

Academic & Professional Conduct

All PhD students are expected to demonstrate high professional standards in all aspects of their work and conduct. This includes:

- Observing the Academic Conduct Code (<http://www.bu.edu/academics/policies/academic-conduct-code/>).
- Observing the University's policy on appropriate research conduct (<http://www.bu.edu/orc/about/research-misconduct/>).
- Interacting with faculty, staff and other students in a mature, professional, and civil manner in classes and colloquia and in all other professional interactions. (Appendix 1 presents an example of some suggested guidelines for appropriate professional interactions.)

A student who engages in academic and/or professional misconduct may be subject to disciplinary action.

ADVISING

The PhD program and the student's academic department are committed to providing guidance, support and feedback throughout the program. Several people play key roles in the doctoral student's program: (

- The Program Faculty Director & PhD Liaison are responsible for the, funding decisions, and annual review of student performance.
- The Student Support Coordinator for the PhD Program (Master's & PhD Center) is responsible for advising students regarding program rules, requirements, and deadlines and tracking student progress.
- The Department Chairperson also provides guidance regarding program options and opportunities and is responsible for assigning research and teaching assignments to fellowship students and for assigning each student a course to teach (for the teaching requirement).
- The Dissertation Chairperson provides feedback and guidance to the student on the dissertation work.
- The Dissertation Committee faculty also provides input on the dissertation work.

Students should get to know all members of their department's faculty as soon as possible in order to identify research and teaching interests.

When the student enters the program, the Faculty Mentor will meet with the student to provide guidance on course selection and professional development. The student is responsible for proactively seeking advice from the mentor and other faculty prior to registering for classes or engaging in research and teaching activities.

The PhD Program Director serves as the student's primary advisor until the student passes the comprehensive examination.

After successfully completing this exam, the student progresses to the dissertation stage. The student is required to form a dissertation committee (discussed later). From this point forward, the Dissertation Committee Chairperson serves as the principal advisor.

The Final Phase of the Program

The final phase of the Doctoral Program is the completion of an approved dissertation. The dissertation must be based on an original investigation that makes a substantive contribution to knowledge and demonstrates capacity for independent scholarly research. The quality of the dissertation should meet the standards for publication in leading scholarly journals in the field. When beginning preliminary exploration of a topic, the student is encouraged to consult with faculty members whose interests coincide with the kind of project the student has in mind.

Formation of Dissertation Committee

The first formal step after the comprehensive exam is the selection of a dissertation committee and the submission of a dissertation proposal. The committee is composed of, at minimum, three (3) faculty members. The dissertation chairperson should be from the candidate's department. An additional member should be on the faculty of the Questrom School of Business, and ordinarily this member should also be from the candidate's department. Individual department guidelines may mandate that the third committee member be from outside of the candidate's department. Depending on department guidelines, a committee member may be from outside the School or the University. The dissertation chairperson and at least two other committee members should be full time tenured or tenure-track faculty members.

It is the responsibility of the PhD candidate to select a willing faculty chairperson of his/her Dissertation Committee who will direct the student's research. The student and the Dissertation chairperson together select the other members of the dissertation committee. Should the candidate be unable to find a willing chair, he/she should meet the Executive Director and the Department Chairperson, who will make reasonable efforts to help the student to find a dissertation chair. However, it is ultimately the student's responsibility to find someone willing to guide the dissertation within one year of completing the comprehensive exams.

If the student begins dissertation work with a faculty member and this faculty member subsequently leaves the school prior to the completion of the student's dissertation, the department will attempt to arrange for the student to continue to work on the dissertation under the departed faculty member's guidance. The candidate is advised to be aware of any other departmental requirements concerning the composition of the Dissertation Committee.

Development of Proposal

Since the substance and format of an acceptable proposal varies among departments, a student should work closely with his/her Committee while developing the proposal. (See Appendix 2, Dissertation Proposal Outline).

Early in the process of preparing the dissertation proposal, doctoral candidates are advised to review *Research Guide: A Guide for Writers of Theses and Dissertations*, prepared by Mugar Library, which contains essential information for the preparation of the manuscript. The dissertation will not be accepted at Mugar Library unless it conforms to the specifications in the Guide.

Dissertation Proposal Presentation/Defense

The student will schedule a proposal defense when, in the opinion of the chairperson of the Dissertation Committee, the proposal is sufficiently prepared, with a clear statement of the problem, a review of relevant literature, and an analytical development of appropriate measures for the investigation, including collection and analysis of the data. The written proposal is presented in a seminar to which the faculty are invited by written announcement. In order for the student to benefit from suggestions and guidance that may be provided, the presentation should be scheduled as soon as sufficient progress has been made to establish the nature and scope of the work, and well in advance of the anticipated time of completion.

The student must submit a Petition Form signed by his or her department representative (Faculty Mentor or Chairperson). The student must schedule the proposal defense at a date and time that is convenient for all members of the dissertation committee and the department. The student must also arrange for the room. At least three weeks before that date, the student must submit a one-page announcement with a maximum 350-word abstract to the Master's & PhD Center's Student Support Coordinator, who will circulate the announcement to departments and faculty members.

The purpose of the proposal presentation is to ensure that the student has a worthwhile and feasible research project. At the presentation, the student must have sufficient understanding of the relevant conceptual framework so that they can draw upon and relate the research work effectively to existing theory and practice.

Following the presentation, the chairperson will poll the members of the committee and the department to determine whether a consensus has been reached regarding the candidate's proposal. The chairperson will inform the candidate and the Master's & PhD Center's Student Support Coordinator of the outcome of the defense. (Following sentence explains the same idea)

Approval of the proposal is essentially an agreement between the candidate and the Committee that the basic framework of the dissertation is acceptable. If the Dissertation Committee and the department approve the proposal, the student will proceed to carry out the proposed investigation with the close guidance of the chairperson and other members of the Committee. Thereafter, any future questions by the Committee should relate only to carrying out the research and analyzing the findings. Following the collection and analysis of the data, the student will prepare the final dissertation report.

In the event that the faculty cannot reach consensus on the research proposal, the chairperson shall inform the candidate of the issues in dispute. If the candidate and the Committee are unable to reach consensus on a satisfactory research plan, the candidate may petition the department to change the membership of the Committee.

Editing the Dissertation

It is generally allowable for doctoral students to have assistance with proofreading their dissertations. In some cases, particularly when students are not fluent in English, assistance with rewriting text is permissible to bring it into Standard English. In such cases, the student will need explicit permission from the Dissertation Committee Chairperson and the Chairperson of the Department.

Dissertation Defense

When the Dissertation Committee agrees that the candidate has completed his/her research and a satisfactory draft of the dissertation has been written, the candidate must arrange a formal dissertation defense hearing. Three weeks before the hearing, the candidate must submit a petition to defend the dissertation to the Master's & PhD Center's Student Support Coordinator. Once the Student Support Coordinator and the student's faculty mentor have approved the petition form, the student should send an electronic announcement and a 350-word abstract to the Student Support Coordinator. The announcement and abstract are sent to all Questrom faculty and doctoral students by e-mail. The dissertation document must, in the view of the Dissertation Committee chairperson, be complete before the dissertation defense is scheduled. The oral defense of the dissertation will be open to the Questrom community, as well as academics from Boston University and other interested academics from outside of BU. The members of the Dissertation Committee render final judgment on the dissertation and the oral defense. For emergency situations (illness, etc.), a proxy faculty member may serve at the oral defense if approved by the Chairperson of the Dissertation Committee and the Department Liaison.

Submission of Final Dissertation

Following the dissertation defense, the Committee may request minor changes to the dissertation document. Once the Committee has approved the final dissertation document and signed the appropriate documents per the Master's & PhD Center's Student Support Coordinator, the candidate must submit the final dissertation document to Mugar Library. This submission must occur no later than six weeks following the dissertation defense.

Publication of the Dissertation

The Questrom School of Business faculty urges the publication of the dissertation, in whole or in part. Holders of PhD degrees who publish their completed dissertation should state that such work was submitted originally in partial fulfillment of the requirements for the degree of PhD in Mathematical Finance at Boston University Questrom School of Business. When materials for the dissertation are published in part, or when they are published before degree requirements have been fulfilled, credit should be given to Boston University. One copy of all published material must be submitted to the Graduate Academic & Career Development for deposit in the University Library.

Co-authorship with Faculty

The program encourages student and faculty joint authorship of professional papers. However, this policy should not be implemented in ways that undercut the imperative that dissertations be the independent and original work of the doctoral candidate. When Faculty Mentors have made substantial contributions in addition to the work carried out by the student for his/her dissertation, co-authorship of resulting papers is appropriate. When students and faculty co-author professional papers based on the student's dissertation, it is expected that their relative contributions will be appropriately acknowledged.

PHD IN MATHEMATICAL FINANCE ACADEMIC STANDARDS

Residency Requirement

After matriculation into the PhD Program, a candidate for the degree must register for and satisfactorily complete a minimum of thirty-two (32) graduate-level credits at Boston University. More courses may be needed depending on departmental requirements.

Time Limit for Degree Completion

After matriculation into the PhD Program, a candidate for the degree must meet certain milestones within a specified maximum time period (as noted in the table below) and complete all degree requirements within six (6) years of the date of first registration. Those who fail to meet the milestones within the specified time or who do not complete all requirements within six years will be reviewed by the PhD PDC and may be withdrawn from the program. Any request to deviate from the milestones and time frame below must be approved by the student's academic department and then by the Faculty Director and PhD Liaison of the PhD Program. A Leave of Absence does not extend the six-year time limit for degree completion (see Leaves of Absence).

Milestone	Maximum Time Period
Complete all required courses (no incompletes).	End of fall of 3 rd year.
Successfully complete comprehensive examination.	End of 3 rd year.
Have a dissertation committee with at least three members, a committee chair, and a dissertation topic.	End of fall of 4 th year.
Have a defended dissertation proposal.	End of 4 th year.
Complete dissertation.	End of 6 th year.

Performance Review

The Mathematical Finance Program Development Committee will review the progress of each doctoral candidate. Students must maintain a 3.30 cumulative grade point average in all courses to remain in good academic standing. Students who are not in good academic standing will be allowed one semester to correct their status. Prior to the start of the semester, the student must submit a letter to the Executive Director (who will forward it to the PDC) explaining why he/she has fallen short of the CGPA requirement and how he/she plans to correct the situation. Failure to so increase the CGPA to acceptable levels may result in probation or withdrawal from the program, at the discretion of the Program Development Committee (PDC).

Grading System

All for-credit courses at the Questrom are graded on a letter scale according to the following criteria:

Level	Grade	Honor Points/Credit
Superior Performance	A	4.0
	A-	3.7
	B+	3.3
	B	3.0
	B-	2.7
	C+	2.3
	C	2.0
	C-	1.7
	F	0.0
Lowest Grade Acceptable for Credit		
Failing Grade		

Incomplete: "I"

A grade of "I" indicates that course requirements, such as a final exam or written course work, have not been completed by the end of the semester. An "I" grade is given at the instructor's discretion. The student must arrange with the instructor to complete the remaining requirements by no later than the end of the following semester by completing an Incomplete Contract with the instructor. When the work is completed, the instructor will determine the final grade.

If work is not completed and a final grade is not submitted within one calendar year of when the "I" was issued, the "I" will be converted into an "F" grade. In extenuating circumstances, a student may petition for an extension of the time limit to complete the work. The instructor who gave the "I" grade must endorse the written petition, which must then be submitted to the Master's & PhD Center.

An "I" grade has no honor points; therefore, it is not calculated into the cumulative GPA. When the professor reassigns the grade once the student completes the work, or when the Master's & PhD Center Senior Systems Administrator (registrar) converts the "I" to an "F" following the procedures outlined above, the grade for the course is then included in the calculation of the GPA. **A student may not graduate with an "I" grade on his or her transcript.**

Course Withdrawal: "W"

A grade of "W" in a full-semester course indicates that the course was dropped after the fifth week and before the last six full weeks of classes. A student who withdraws from a course forfeits the right to complete the course in that semester and receive a grade. Students are charged full tuition for "W" grades.

Course Failure: "F"

A grade of "F" indicates failure to pass the course. A student who earns a grade of "F" in a required PhD course must repeat that course with a passing grade. A student who earns a grade of "F" in an elective course must subsequently repeat that course or take another approved elective and earn a passing grade. When a course is repeated, both the "F" and the subsequent grade remain on the student's permanent record, and both grades are included in the calculation of the cumulative grade point average (CGPA).

Continuing Course: "J"

If a course spans two semesters or more, such as dissertation, a **"J"** grade will be listed on the student's transcript after the first semester. The **"J"** grade is replaced with a **"P"** or passing grade when the dissertation is successfully defended and the dissertation manuscript has been accepted at Mugar Library.

Calculating Cumulative Grade Point Average (CGPA)

The grades in all courses approved for credit in the doctoral program including all directed studies and courses taken at Consortium schools, are included in the computation of the CGPA. Grades earned in MBA foundation courses that may be required of a student by his or her department, are not factored in to the PhD CGPA.

- Divide the number of grade points earned in courses by the number of credits attempted:
(Total grade points from all courses) ÷ (total credits attempted) = Cumulative GPA
- Grades and credits of all repeated courses are calculated in the GPA;
- The following grades do not carry credits and are not used in the calculation of grade point averages:
AU, P, W, and J;

Retaking Courses

PhD students cannot retake a course in which they have already earned a grade of C- or higher **in** order to improve their grade performance and/or CGPA. Courses for which a grade of **"F"** or **"W"** have been received may be retaken, as courses for which **"F"** and **"W"** grades have been received cannot be used to satisfy PhD requirements.

Grade Verification

Federal law prohibits staff members from giving grades over the phone. Students may receive their grades in one of the following ways:

- Students may obtain an unofficial or official copy of their grades/transcript by logging on to the Boston University Student Link at [www.w.bu.edu/ studentlink](http://www.w.bu.edu/studentlink), Click on Academics, then on Transcript Preview and Ordering;
- At any time, a student may request a grade mailer in person at the Office of the University Registrar.

Beta Gamma Sigma

PhD students who have successfully completed all of their doctoral requirements, including the dissertation proposal defense and are in their last year of the PhD Program, are eligible for induction into the Beta Gamma Sigma International Honor Society. Additional information on Beta Gamma Sigma can be obtained from the Master's & PhD Center or the Beta Gamma Sigma website: <http://www.betagammasigma.org/>.

External Work/Internship while pursuing your PHD

This is a 12-month residential program and the terms of the Questrom fellowship forbids external work (such as an internship or external teaching) while you are receiving the fellowship. This general rule is designed to avoid unnecessary distractions away from your coursework, research or dissertation. However, in some cases additional work or internship experience may serve to enhance your research and academic work. In these rare situations, you may seek approval of your faculty advisor, PhD PDC liaison for your

department and the PhD Program Director for these activities. If you obtain the approval you may take on the experience. During the academic year your work may not exceed 5 hours per week (in addition to the 15 hours you are fulfilling for your fellowship). During breaks and summer, you may work on a part-time or full-time basis. If you accept a full-time opportunity, your fellowship stipend will be suspended for the duration of the full-time work.

If you are an international student, you are required to consult ISSO to ensure you are meeting all of the guidelines provided by them as related to your additional work. Visit the PhD Program page of the Grad Center website for the Internship Approval Form.

Academic & Professional Conduct

All PhD students are expected to demonstrate high professional standards in all aspects of their work. This includes:

- Observing the Academic Conduct Code (<http://www.bu.edu/academics/policies/academic-conduct-code/>)
- Observing the University's policy on appropriate research conduct (<http://www.bu.edu/orc/about/research-misconduct/>).
- Interacting with faculty, staff and other students in a mature, professional, and civil manner in classes and colloquia and in all other professional interactions.

The procedure for reporting, reviewing, and disciplining academic and professional misconduct is as follows:

1. A student may be reported for academic misconduct to the school's Academic Conduct Committee. While matriculated in the PhD Program, all students are expected to exhibit appropriate behavior in their academic performance. Any student who fails to do so will be brought before Questrom's Academic Conduct Committee, as outlined in the Academic Conduct Code, for appropriate action. Students may be suspended or expelled at the discretion of the Committee.
2. For professional misconduct, the student may be reported to the Faculty Director or Executive Director of the doctoral program. This report may be made by a fellow student or by a faculty member. The Faculty Director or Executive Director will meet with the reported student to see if the matter can be resolved through advising or mentoring. However, if the Faculty Director or Executive Director determines that the offense is so serious that it cannot be so resolved, or if the past attempts at advising have failed, the Executive Director will form a Review Committee to review the case and recommend action.

The Review Committee will consist of three faculty members, none of whom are from the reported student's department. The Committee will solicit the facts related to the case, listen to the views of the reported student, and make a recommendation to the Executive Director. The Executive Director will forward the recommendation to the Dean, along with his or her own recommendation. The Dean will make the final decision after reviewing the circumstances of the case.

Student Complaints & Grievances

This section outlines the formal mechanism for reviewing student grievances after all efforts among the parties involved have proven to be unsuccessful. The appeals procedure is usually concerned with academic matters related to unethical, unfair, or discriminatory treatment of, or intimidation of students.

If a student has a grievance against a faculty member (or members), he or she should first make every reasonable effort to discuss the complaint with the faculty member(s) involved. If this discussion is not satisfactory, the student should next discuss the matter with the Faculty Director or the Executive Director of the Doctoral Program. If the student is still unsatisfied, he or she should submit a written statement to the Dean requesting the appointment of an Appeals Committee. The written statement must describe the nature of the complaint, include the necessary documentation and detail the previous efforts made to discuss the complaint with the faculty member(s) involved. The statement must be submitted within sixty

(60) days after the end of the term in which the alleged cause for the grievance occurred.

The Dean will discuss the matter with the Faculty Director or Executive Director, and then form an ad hoc Appeals Committee, comprising three faculty members. The ad hoc Appeals Committee will solicit and review evidence related to the student's appeal and submit a report advising the Dean on the circumstances of the case, how the grievance may be resolved, or whether further action is warranted.

Grade Grievance Policy

Grading is the prerogative of the faculty and is based upon a student's performance against a clearly articulated set of assignments, expectations, and standards.

Arbitrary grades are defined as those:

- assigned to a student on some basis other than performance in the course; or,
- assigned to a student by resorting to unreasonable standards different from those which were applied to other students in that course or section of the course; or,
- assigned to a student on the basis of criteria that are a substantial, unreasonable, and unannounced departure from the instructor's previously articulated standards.

Issues that do not meet one or more of these criteria of arbitrariness are not appropriate bases for a grade appeal under this policy. Only final course grades may be formally appealed. Grades that are the result of academic misconduct are not appealable. All grievances must be made in a timely manner within six weeks of the official posting of the grade.

Before filing a formal appeal, a student is urged to resolve any grievance informally by meeting with the instructor responsible for the grading of the course to discuss the student's concerns. The student is responsible for bringing copies of all relevant information to the meeting (i.e., course syllabus, assignment sheet, graded work). The student should be prepared to show evidence of arbitrary grading. The instructor is expected to discuss the student's concerns and to explain the basis for determining the grade.

If the student and the instructor are unable to arrive at a mutually agreeable solution, the student may file a formal appeal with the department chair of the instructor. The written appeal must detail the basis for the allegation of arbitrary grading and present adequate evidence that supports the allegation. The chair may seek to informally resolve the matter between the instructor and student or determine a resolution after review of all materials.

If the student wishes to appeal the chair's decision, they may do so to the Faculty Director of the student's degree program. Finally, the student may appeal the chair and faculty director's decision to the dean, who will render a final decision.

Course Load

For each fall and spring semester after matriculation and until all degree requirements are completed, all PhD students must be registered for courses, or for dissertation course work (DS999), or be granted an official leave of absence. Prior to registration for each semester, all students are expected to make appointments to consult with their Faculty Mentor.

All PhD students must be registered for two credits of dissertation in the semester preceding graduation. Students graduating in May must be registered for dissertation in the spring semester, students graduating in January must be registered for dissertation in the fall semester, and students graduating in September must be registered for dissertation in the Summer 11 session.

If a student does not register for one semester, and is not on an approved leave of absence, the student is officially considered to be an "inactive student." A student who is inactive for more than one semester is subject to immediate withdrawal from the PhD Program. Inactive students who want to continue in the PhD Program must submit a petition for reinstatement with the rationale, have it approved by the department, and then submit it to the PhD Program Development Committee for approval.

Full-time Certification

BU students taking 12 or more credits per semester are considered to be full-time. If the student is fully engaged in ways recognized by the University as related to progress toward completion of the degree, and taking 2-11.5 credits, s/he may qualify for full-time certification. Students qualify by:

- Registering for less than a full-time course load, but making legitimate progress toward the degree through other academic work, for example, preparing for comprehensive examinations or working on the dissertation.
- Doctoral candidates who are certified full-time but are registered for less than 12 credits a semester are charged the full-time George Sherman Union Fee, and Student Activity Fee, in addition to their tuition.

Payment of the tuition (equivalent to two credits per semester+ any applicable fees) entitles the student to appropriate University benefits, to consult with faculty, and to use the libraries, research laboratories, academic services, and other academic facilities for the purpose of completing such requirements as examinations and dissertation work.

Course Overload

Students must have their faculty mentor's permission to register for more than 18 credits in a given semester. Every additional credit above 18 will incur per-credit charges.

Charges for the course overload up to 20 credits are waived **if at least one of the following** conditions is met:

- The student's cumulative grade point average is 3.70 or higher
- The student wants to register for a fifth course (up to 20 credits) in his or her last semester of required PhD courses.

Academic Standing & Course Overload

Doctoral students who are not in good academic standing may not register for more than 18 credit hours per semester. There are implications for continuation of financial aid for students who are not in good academic standing.

COURSE INFORMATION

Course Identification

School	Minhwa	ai44iMi	Title	Credits	Day/Time	Instructor
QST	AC900	Al	Contemporary	4	T 6:00-9:00	Menon HAR 615

School or College

On the Student Link, the course number is preceded by a school or college designation. **All courses at the school are represented by "QST."**

Course Number

Two letters are used to represent the area of study and are followed by a 3-digit number to represent the specific course. The areas of study are:

Code	Course
AC	Accounting
DS	Doctoral Seminar
ES	Executive Skills
FE	Finance
HM	Health Sector Management
IM	International Management
IS	Information Systems
MF	Mathematical Finance
MK	Marketing
MG	General Management
MO	Management & Organizations
OM	Operations and Technology Management
PL	Markets, Public Policy and Law
QM	Quantitative Methods
SI	Strategy and Innovation

The numbers for graduate-level courses are in the 700s and 800s. Course numbers in the 900s are doctoral level.

Credits

Doctoral students who take BU MBA courses must take them as four credit courses. Most BU MBA elective courses are three credits; however, a credit hour adjustment must be done by the Graduate Academic & Career Development Center's Student Support Coordinator. This should be done at the start of the semester; credits cannot be altered after the course is complete. More information is available in the registration packet published each semester and from the Master's & PhD Center's Student Support Coordinator.

Prerequisites

Many courses have prerequisite courses that must be successfully completed prior to taking a specific course. Prerequisites are listed in the University Class Schedule on Student Link.

Evaluation of Instructors & Courses

During the last two weeks of each semester, students evaluate each course and instructor using a standard evaluation form. The forms are collected by a student, placed in an envelope, and turned in to the Master's & PhD Center. The professor is not in the classroom when the evaluations are done and results are not made available to the instructor until after grades are submitted. Evaluations are compiled after the instructors submit final grades. Copies of the summaries are available to students in the Master's & PhD Center.

REGISTRATION PROCEDURES

Registration

Each semester, the Master's & PhD Center compiles a schedule of all Questrom PhD course offerings. PhD students are required to have course selections approved by their Faculty Mentors. Students must register for their courses using the Registration section, found under the Academics tab, of the Student Link. Students can review the courses for which they have registered through the Student Link, <http://www.bu.edu/student-link>.

Adding a Course

Prior to the beginning of a semester and through the second week of classes, students may add courses by using the WebReg registration system on the Student Link. Students are required to notify the Master's & PhD Center's Student Support Coordinator of any changes to their schedule.

Dropping a Course

Students may drop courses using the Student Link's WebReg system until the end of the drop period. A full-semester course dropped by the end of the first five weeks of the semester will not appear on the student's record. Full-semester courses dropped after the fifth week of the semester, or the first week of a summer session, will be indicated on the transcript with a "W" grade and the student will be charged for the course. Courses may not be dropped later than ten full weeks after the start of the semester.

Overcharges result when part-time students drop a course within the first five weeks of the semester, but are still registered for at least one other course or when full-time students change to part-time status because they are registered for fewer than 12 credits. Any extra amount that has already been paid will be credited to the student's account. The balance will be **refunded upon request** in person, or in writing, to the Comptroller's Office within Student Accounting Services. If students have received any financial aid, however, the refund must be requested through the Financial Aid Officer in the Graduate Academic & Career Development Center ***To be eligible for student loans, students must be registered for at least 6 credits in a semester.***

Students may withdraw from a course in either of the two summer sessions using the Student Link until the first day the summer session begins. If the drop is processed prior to the first day of either term, full tuition and fees will be credited or refunded. If the drop is processed on or after the first day of either summer session, the student is responsible for the registration fee only. If the drop is processed after the date published by the Master's & PhD Center, the student is responsible for the full tuition and fees and will receive a "W" for the course.

During the summer sessions, students can drop all of their courses, up until the first day of classes, using the Student Link's WebReg.

Dropping All Courses

It is not possible for students to drop all of their classes via the Student Link's WebReg during the academic year. Students who wish to drop **all** of their courses during an academic year semester must meet with the

Graduate Academic & Career Development Center's Director of Special Programs and Initiatives to complete a Leave of Absence/Withdrawal form. **Signed and dated** requests to drop all courses can also be mailed or faxed to the Master's & PhD Center's Student Support Coordinator in the Master's & PhD Center. The effective date that the courses are dropped will be the date that the student completes the Leave of Absence/Withdrawal form. **Please note that forms received after 5pm or on weekends will be processed the next business day.** Refunds are determined as follows for spring and fall semesters:

Deadline	Refund Amount
Prior to First Day of Classes _____	100% Tuition and Fees
First Two Weeks of Classes _____	80% Tuition _____
Third Week of Classes _____	60% Tuition _____
Fourth Week of Classes _____	40% Tuition _____
Fifth Week of Classes _____	20% Tuition _____
After the Fifth Week of Classes	0% Tuition

Auditing Courses

Students who wish to audit a course must have the written consent via a course adjustment form of the instructor for the audit to be approved. The course adjustment form must be returned to the Master's & PhD Center. The tuition charge is the same as taking the course for credit; however, students do not receive grades or credits for audited courses nor can they be used to fulfill PhD degree requirements. Students cannot audit a Questrom course and then re-take the course for academic credit.

DIRECTED STUDY

Investigation of Area of Interest

Students who wish to conduct research in a specific area of interest under the guidance of a faculty member may apply for directed study. Directed study is the equivalent of a two- or four-credit course. It may not substitute for a required course or duplicate an elective course. Upon completion of the directed study, the student receives a grade from the sponsoring faculty member.

Procedure for Directed Study

To arrange a directed study, the student should:

- Obtain a PhD directed study application from the Master's & PhD Center
- Discuss plans for directed study with an appropriate faculty member;
- Negotiate area of investigation, requirements, and evaluation criteria with the faculty member;
- Complete the application for directed study and have it signed by the faculty member, Faculty Mentor and Department Chairperson, and
- Return the directed study application to the Master's & PhD Center's Student Support Coordinator (Suite 115) for approval no more than two weeks after the start of the semester. Upon approval, the Graduate Academic & Career Development Center's Student Support Coordinator will have the registrar assign a course number for the class and process the registration.

LEAVES OF ABSENCE & WITHDRAWALS

Students should contact the Master's & PhD Center's Student Support Coordinator to discuss all options before making a final decision regarding Voluntary Withdrawal and Leaves of Absence.

When a student is matriculated in the PhD Program, it is expected that s/he will make progress toward the degree without interruption. However, should it become necessary, the student should request from the department Executive Director/Faculty Mentor a leave of absence for the shortest time needed. If the leave is approved by the Executive Director, the student must meet with the Master's & PhD Center's Student Support Coordinator to complete a leave of absence request form. If the student is unable to meet with the Graduate Academic & Career Development Center's Student Support Coordinator, s/he can mail or fax a signed request for the leave of absence, which will be effective on the business date (before 5pm) that the Master's & PhD Center receives the official request. If a student has submitted the Withdrawal/Leave of Absence form or signed request for a leave of absence prior to the start of a semester for which s/he had previously registered, the charges for that semester will be canceled. If the semester has already started, the student may be entitled to a partial refund (see section on dropping all courses). A leave of absence cannot extend beyond four semesters and does **not** extend the six-year time limit for degree completion. If students do not return after four semesters, they will be withdrawn from the program.

Leave of Absence for Medical Reasons

University policy requires that a student “seeking to re-enroll after a medical leave must demonstrate to the University that the student’s health permits the successful completion of studies.” This link (<http://www.bu.edu/shs/files/2017/06/loa-instructions.pdf>) outlines the information students must provide to the University prior to re-enrolling and the timeline for submitting the required documentation.

Childbirth & Adoption Accommodation for Full-Time PhD Students

The Boston University childbirth and adoption accommodation policy for full-time or certified full-time PhD students in good academic standing provides for extensions for academic coursework and other requirements to the primary caregiver of an infant or adopted child. It also provides for a continuation of stipend support for funded students during the accommodation period. If you will be taking a leave for childbirth or adoption, please set up an appointment with the Director of Special Programs and Initiatives in advance, if possible, to discuss the details and logistics of the impending leave. The details of this policy can be found here: <http://www.bu.edu/academics/policies/childbirth-and-adoption-accommodation/>

The student is expected to return to the program when the leave of absence expires and must notify the Graduate Academic & Career Development Center’s Director of Special Programs and Initiatives at least four weeks prior to resuming his or her studies or if he or she decides not to return to the PhD Program.

If a student does not return to the program when the leave of absence expires, the head of the Doctoral Program Committee will send a certified letter to the student. The student must respond to the letter within 15 working days or s/he will be withdrawn from the PhD Program.

A student who wishes to be reinstated after being withdrawn must submit a petition for reinstatement with the rationale, approved by his or her department, to the Doctoral Program Development Committee for approval.

Voluntary Withdrawal

A student who wishes to withdraw from the PhD Program must meet with the Graduate Academic & Career Development Center’s Director of Special Programs and Initiatives to complete the Withdrawal/Leave of Absence Form. If a student is unable to meet with the Graduate Academic & Career Development Center’s Director of Special Programs and Initiatives, s/he can mail or fax a signed request for withdrawal, which will be effective on the business date (before 5pm) that the Graduate Academic & Career Development Center receives the form. If a student has submitted the Withdrawal/Leave of Absence form or signed request for withdrawal prior to the start of a semester for which s/he had previously registered, the charges for that semester will be canceled. If the semester has already started, the student may be entitled to a partial refund (see section on dropping all courses). Students who are interested in rejoining the program after they have been withdrawn will need to contact Admissions about reapplying to the program.

Withdrawal for Non-Payment

Students who have not settled their student accounts by the fifth week of classes during the semester, or by the first week of summer sessions, have a hold placed on their accounts and may be withdrawn for non-payment by the Comptroller's Office. Students who wish to settle their accounts in order to be officially registered must do so through Student Accounting Services.

Academic Withdrawal

To be in good academic standing, a PhD student must maintain a cumulative grade point average of 3.30 or above in all coursework taken at Boston University, at Consortium schools through the Cross Registration process, and in directed studies and a cumulative grade point average of 3.30 or above in his or her major courses. The PhD Program Development Committee regularly reviews the records of all doctoral students. Students may be academically withdrawn at the discretion of the Committee.

Withdrawal for Academic or Professional Misconduct

While matriculated in the PhD Program, all students are expected to exhibit appropriate behavior. Any student who exhibits behavior that violates the rights of others and/or the standards of academic life will be brought before the Questrom Academic Conduct Committee, as outlined in the Academic Conduct Code, or the University's Office of Judicial Affairs, as outlined in the University's Code of Student Responsibilities, or a special Review Committee constituted by the Executive Director of the Doctoral Program, as described earlier, for appropriate action. Students may be suspended or expelled as an outcome of these processes.

ADVANCED STANDING AND COURSES OUTSIDE OF QUESTROM: WAIVERS, TRANSFER OF CREDIT, & CROSS-ENROLLMENT

A student must receive approval from his or her Faculty Mentor to request a transfer of credit and then complete application forms, which are available in the Master's & PhD Center. Regardless of the number of credits transferred, all students are required to meet the residency requirement of 32 credits completed at Boston University in order to earn the PhD degree.

Transfer of Academic Credit for Previously Completed Coursework for New Students

Students may petition for transfer of credit for previously completed, graduate-level coursework if:

- The course was completed within the past five calendar years.
- A grade of B- or better was earned in the course.
- The course was completed at an MBA or PhD program accredited by the International Association to Advance Collegiate Schools of Business (AACSB). Member schools are listed at <http://www.aacsb.edu/accreditation/AccreditedMembers.asp>.
- The course was taken for credit and was not used toward the completion of another degree.

Pre-Approval for Transfer of Academic Credit for Current Students

In addition to the requirements outlined in the "New Students" section above, current students wishing to take classes at other colleges or universities (outside of the Questrom and Boston University) must abide by the following guidelines:

- Students must submit their Transfer of Credit Petition at least one month **before** the first class meeting.
- Except under extenuating circumstances, current students cannot petition for transfer of credit for courses offered at Questrom.
- Students interested in taking courses through the University Consortium should refer to the section titled "Taking Courses at Colleges/Universities in Consortium."

Process for Petitioning for Transfer of Academic Credit

Students must request a Petition for Transfer of Academic Credit form from the Master's & PhD Center, complete it, and return it to the Master's & PhD Center for review. A separate Petition must be submitted for each course for which credit is sought. The following materials must accompany each Petition:

- An official course description.
- A course syllabus (current students should obtain the most current syllabus available for a course they hope to take; new students should provide the actual syllabus for a course they have taken in the past) including a list of textbooks and supplementary readings and a course-meeting schedule indicating number of class meetings, exam dates and start/stop time of each class.
- New students should submit an official transcript (unless this is already part of your admission file) and current students will submit a transcript once the course has been completed.

Each Petition will be evaluated by a faculty member to ensure that the course contains a level of academic content deemed appropriate for the BU PhD Program. If the course content is approved, credit will be awarded in the amount of four credits per transferred course.

The Graduate Academic & Career Development Center will notify students of the disposition of each petition by e-mail. Approved transfer credits will be noted on the student's transcript but will not be a factor in the computation of the Questrom grade point average, nor will grades received in transfer courses appear on students' BU transcripts.

Cross Enrollment (Taking Courses at Colleges/Universities in Consortium)

Boston University, Boston College, Brandeis University, Tufts University, and Hebrew College are members of a consortium that permits matriculated students from one Consortium institution to enroll in a course at another Consortium institution. According to consortium arrangements, tuition for approved courses will be paid to Boston University. All courses taken through the cross enrollment process must be approved by the department PhD Liaison.

Taking Graduate Electives at Other BU Schools/ Colleges

With prior approval from the Faculty Director, PhD students may take related electives at other graduate schools and colleges within Boston University. Students should start by contacting the school/college in which they wish to take the course to determine that school's enrollment policies and deadlines. The student then finalizes the process by contacting the other school/college to formally register for the course. Credit for the course will not be applied toward the PhD degree unless the student earns a grade of C- or better. The grade will appear on the Boston University transcript and will be a factor in the computation of the PhD grade point average.

PHD STUDENT RECORDS & TRANSCRIPTS

Official Student Records

Official records of PhD students are housed in the Master's & PhD Center, where the files are accessible only to the students, appropriate faculty, members of the PhD Program Development Committee (PDC) and authorized members of the Questrom staff. Access to the student record by any individual other than those previously mentioned requires the written consent of the student.

Access to Student Records

To inspect education records, a student must submit an Access Form identifying the records to be inspected to the appropriate University official. The form is available on the Graduate Academic & Career Development Center's website and should be submitted to J.P. Matychak, Associate Dean of Student Experience at the Questrom School of Business. The form is also available in Office of the University Registrar.

Requests to access records will receive a response within forty-five days of submission. A University official will arrange for access and will notify the student of the time and place where the records may be inspected. The University may charge a fee for copies of requested education records

Unofficial Transcripts

Unofficial transcripts may be requested in person from the Transcript Office at the Office of the University Registrar, 881 Commonwealth Avenue, 2nd floor. They may also be obtained via the Student Link <http://www.bu.edu/studentlink>.

Official Transcripts

Official transcripts, which bear the seal of the University, may be requested from the Transcript Office at the Office of the University Registrar, 881 Commonwealth Avenue, 2nd floor, for a nominal fee. Requests must be made in writing or in person; telephone requests will not be accepted. Transcripts may be mailed express delivery for an additional charge. Official transcripts may also be requested via the Student Link (<http://www.bu.edu/studentlink>). Please call the Transcript Office (617/353-3616) for more information or view their website at: <http://www.bu.edu/reg/grades/index.html>.

GRADUATION/DEGREE COMPLETION

Recommendation for Degree

Once all PhD requirements have been successfully completed, the degree is recommended by the faculty of the Questrom School of Business to the President and Trustees of Boston University.

Submission of Dissertation to Mugar Library

The University requires that all doctoral candidates, regardless of their field of study or degree, follow certain requirements in the processing and preparation of the dissertation. Please see the most recent Guide for the

Writers of Dissertation and Theses, prepared by Mugar Library, for all-University requirements and for charges for microfilming and binding.

Two copies of the approved dissertation must be submitted to Mugar Library with the permission form, which is obtained from the Master’s & PhD Center’s Student Support Coordinator.

Graduation Application

Students must submit a graduation application at least seven months before the date they expect to complete degree requirements. It is the student's responsibility to initiate the process for graduation. The application is available on the Master’s & PhD Center's website and should be submitted for graduation in September, January, or May. If graduation must be postponed beyond the semester for which the application is submitted, please contact the Master’s & PhD Center's Student Support Coordinator to defer the date. If students wish to postpone their graduation date past the six year time limit for completion, they must formally petition the PhD Program Development Committee (PDC) for an extension. The petition, which must include the reason(s) for the extension as well as a detailed timetable for completion, is subject to departmental and PDC approval.

PhD degree requirements are complete only when copies of the dissertation have been certified as meeting the standards of the Questrom School of Business and are accepted by Mugar Library.

Graduation Dates

Boston University awards degrees three times during the year, depending upon when degree requirements are completed.

Graduation	Courses Completed
September 25	Summer Session I or 11
January 25	Fall Semester
_____ May (main ceremony)	_____ Spring Semester _____

All graduates of the previous September and January graduations, May graduates, and tentative graduates for the following September are invited to attend the Questrom graduate commencement ceremony in May. The school does not hold any other event for September and January graduates. Information about the ceremony is mailed in the spring to all eligible graduates (September previous, January, May and tentative September following.)

Diplomas

The Diploma Office at the Office of the University Registrar prepares diplomas. Students who do not plan to attend the May Questrom Graduate Commencement ceremony must complete a diploma dispersal form. The form indicates if the student wishes to have the diploma mailed or if s/he wishes to pick it up in person at the Diploma Office (in October for September graduates, in February for January graduates, and in June for May graduates who do not attend the Questrom Graduate Commencement ceremony). The form is available through Student Link [http:// www.bu.edu/ student link](http://www.bu.edu/student link).

APPENDIX 1: PROFESSIONAL BEHAVIOR

Students are expected to demonstrate professional conduct at a level appropriate for doctoral students. Doctoral student professional conduct is characterized by:

- Student's interactions with students, colleagues, faculty or staff are appropriate, positive, and respectful of differing opinions.
- Student treats others with courtesy, respect and open-mindedness. Student listens to and shows interest in the ideas and opinions of others.
- Student displays the ability to work with diverse individuals and seeks opportunities to include or show appreciation for those excluded.
- Student seeks solutions independently and/or identifies the faculty or staff member who can assist; follows through with recommendations.
- Student is receptive to constructive comments, implements changes, and seeks feedback from others.
- Student models appropriate emotional and behavioral responses in difficult situations.
- Student consistently evaluates the effects of choices and actions on self and others.

APPENDIX 2: DISSERTATION PROPOSAL OUTLINE

A graduate student embarking on the doctoral dissertation must present a proposal of the plans to the members of his/her Dissertation Committee for approval. This document represents a general guide to what a dissertation proposal should contain. It should be emphasized that research topics and procedures vary so widely that no general guide can be precisely applicable to every proposal. These guidelines are primarily applicable to the kind of research problem that deals with empirical data (particularly survey research studies) and may need some modification for other kinds of research problems. The typical proposal will consist of the following sections:

Title Page

This page should contain the full title of your proposal followed by your name, the names of your dissertation committee, and the date of submission.

Research Question

This section should include:

- A statement of the broad research question.
- A description of how that question will be studied in this particular research project.
- Why the question is important managerially: the magnitude of the problem or challenge.
- Why the statement is important academically.
 - Why the question is important from an academic perspective.
 - A critical summary of the pertinent literature, appropriately citing prior work and identifying the student's own perspectives/opinions.
 - What has been written to date, including the general state of agreement or disagreement of previous investigations.
 - What still needs to be done, either to fill in gaps in theory or to clear up inconsistencies.

Theoretical Framework/Conceptual Model

- Identify the constructs that will be studied in the research.
- State how the constructs will be operationalized.
- Show how the hypothesized relationship between constructs, possibly in graphic form. If the purpose of the study is to test a theory, the more specific the hypotheses will be.
- Demonstrate the connection between the general question and the hypotheses or specific questions.

Research Design and Methodology

- Identify where data will be collected and why (as appropriate). If primary data will not be collected, explain why the use of others' data is appropriate.
 - Include description of unit of analysis.
 - Describe measurement instruments.
- Explain how data will be analyzed and why this approach was chosen over other alternatives.
 - Explain scales to be used.
 - Discuss reliability and validity of data.
 - Describe specific methods to be used to analyze the data.

Anticipated Findings:

Describe potential contributions to theory and practice.