Doctor of Philosophy Programs

Admission Requirements

The University's general admission requirements are discussed on the [Graduate Admission page](catalog.utdallas.edu/2013/graduate/admission). Application for admission to the PhD program should normally include (1) a GMAT test score of 600 that is advisable based on our experience with student success in the program, (2) an undergraduate degree with a good academic record from an accredited institution of higher learning, (3) letters of recommendation, and (4) a personal statement of goals in relation to seeking the degree. In the case of international students, TOEFL scores or other evidence of English proficiency are required. No student will be admitted without the approval of the concentration area to which the student applies. Financial support is often available to PhD students in the form of teaching assistantships and/or scholarships.

Degree Requirements

The University's general degree requirements are discussed on the [Graduate Policies and Procedures page](catalog.utdallas.edu/2013/graduate/policies/policy). Each doctoral candidate is required to complete a minimum of 75 semester credit hours of applicable graduate work in specific program areas beyond the baccalaureate and prerequisites. Throughout their programs, PhD students are encouraged to participate in ongoing research activities and to develop their own lines of research. Research activities include research seminars, directed reading courses, and research assistantships. Research supervision is available in the areas of Accounting, Finance and Economics, Information Systems, International Management Studies, Marketing, and Operations Management.

Doctor of Philosophy in International Management Studies

75 hours beyond the baccalaureate degree

Students may enter the International Management Studies (IMS) doctoral program after previous graduate training or directly from undergraduate programs. Desirable educational backgrounds include graduate training in any area of business and graduate or undergraduate degrees in areas such as economics, sociology, political science, mathematics, and engineering, although students from all areas are considered. The IMS PhD curriculum includes a business foundation, core courses, advanced seminars, a methodology requirement, directed readings and independent research courses, and the dissertation. All students must take the PhD courses that are offered in each of the first two years in the program. Students must pass the comprehensive qualifying examination, which is administered at the end of the second year of study when all the relevant course requirements (Core Courses, Advanced Seminars, Research Methods) have been satisfied. It is intended to assess the student's mastery of the basic theories and methodologies central to the program and to evaluate the student's potential to do original research in an area of specialization. After passing the comprehensive exam, each student writes a dissertation.
proposal. This must be completed within six months of the comprehensive exam. The proposal is defended before a faculty committee appointed in consultation with the student, dissertation chair, and PhD advisor. This committee also serves as the supervising committee for the dissertation after the proposal is approved.

Course Requirements

**Foundation Courses: minimum of 12 hours**
These courses provide a foundation in basic business topics such as economics, marketing, finance, and accounting. These courses may be waived for students with master's degrees in management or other academic backgrounds that provide an equivalent foundation.

**Core Courses: 21 hours**
- **OB 7300** Organization Theory
- **MAS 8V42** Seminar Series in Management Science - Organizational Behavior
- **IMS 7300** International Management
- **IMS 8V40** Seminar in International Business
- **BPS 7300** Advanced Strategic Management Seminar I
- **BPS 7303** Doctoral Teaching and Writing Seminar
- **MAS 8V51** Seminar Series in Management Science - Strategic Management

**Advanced Seminars: 9 hours**
Advanced seminars are offered on topics in international management, organizational behavior, organization theory, and strategic management. These courses are an opportunity for students to explore areas of study in greater depth, to develop short-term research projects, and to develop working relationships with faculty members with a view towards research publications and the dissertation.

**Research Methods: 15 hours**
- **OB 7303** Research Methodology in Behavioral Sciences
- **OPRE 6301** Quantitative Introduction to Risk and Uncertainty in Business
- **ECON 6309** Econometrics I
- **OB 7306** Macro-Organizational Empirical Investigation

Students are encouraged to take additional methods courses consistent with their research interests.

**Directed readings and independent research courses: 21 hours**
Students can take further courses with selected faculty members to develop more
specialized knowledge in areas of research interest before and after the comprehensive exam.

Dissertation: minimum of 15 hours
The PhD degree is conferred when the dissertation is successfully defended.

1. Students must pass the comprehensive qualifying examination, which is administered at the end of the second year of study when all these relevant course requirements have been satisfied
2. Students desiring a methods sequence with a greater emphasis on mathematical statistics may substitute OPRE 6303 or STAT 5351, STAT 5352, and MECO 6320 for these three courses.

Doctor of Philosophy in Management Science

75 hours beyond the baccalaureate degree

The PhD program in Management Science is characterized by a high ratio of research faculty to students, which fosters close working relationships. Core and elective courses provide the students with a thorough understanding of management principles. Coursework incorporates a broad business outlook into the study of theory and practice. A sequence of PhD seminars exposes students to traditional and emerging research issues. Students have the opportunity to be involved in ongoing research projects under the mentorship of experienced faculty. We emphasize involving students in research early in their graduate careers. The close interaction with faculty members enables students to learn to identify and develop research ideas and create their own research agenda. Students also develop their teaching competence under faculty mentorship by teaching organized classes.

The course of study for the PhD in Management Science consists of three phases. First is attaining a background in business concepts. Second are the requirements for doctoral proficiency. Third is the dissertation. Each area of study - Accounting, Finance, Information Systems, Marketing, and Operations Management - determines the specific requirements for the three phases. Details can be obtained from the Director of the PhD programs in the Jindal School of Management.

Students admitted into the program typically devote two years to the doctoral proficiency coursework and research projects. They then take a comprehensive qualifying exam, based on the coursework. Following passing the qualifying exam, each student develops his or her dissertation research area, which is usually completed over the next two years. Doctoral proficiency encompasses courses in research methods, electives or a specialization, doctoral seminars, and a written and oral qualifying examination.

Course Requirements

Required core courses

- **OPRE 7310** Probability and Stochastic Processes
- **MECO 6315** Approaches to Statistical Inference (or a similar course such as **STAT 5352**)
- **MAS 6V00** Special Topics in Management Science [Data Analysis and Software]
- **MECO 6320** Econometrics (or **ECON 6309** Econometrics I)
MECO 6345 Advanced Managerial Economics
OPRE 7320 Optimal Control Theory and Applications
MAS 8V00 Special Topics in Management Science [Teaching Practicum]

Secondary Core Courses: 6-12 hours

Students must take at least two of the following courses:

OPRE 6311 Game Theory
MECO 7320 Advanced Econometrics (or ECON 7309 Econometrics II)
OPRE 7311 Stochastic Models in Operations Research
OPRE 7330 Deterministic Models in Operations Research

Remaining requirements beyond the core consist of research courses, electives, independent study and seminars as approved by the program committee appointed to guide and evaluate each student. After completion of the coursework to achieve doctoral proficiency, the student will sit for a written qualifying exam which must be passed before formal admission to candidacy for the doctorate. The student must also orally defend the dissertation proposal before starting the dissertation. Written examination in the area of specialization may also be required. The focal point of the PhD program is the dissertation. The dissertation is written under the direction of the candidate's committee. Twelve to twenty-four semester hours may be granted for the dissertation toward the minimum 75 hour requirement for the degree. At a time mutually agreeable with the candidate and the members of the committee, the student will orally defend his or her dissertation to the satisfaction of the committee. A student must pass in order to have the PhD degree conferred.

Accounting Concentration

This program is for individuals seeking training in the most advanced issues, both theoretical and applied, in the field of Accounting. It is designed to prepare them primarily for teaching positions in research-oriented universities. Some students may be placed in senior positions in industry, government or consulting organizations. The program requires a hands-on training in accounting research, supported by work in the disciplines of economics, mathematics, psychology and statistics, culminating in a doctoral dissertation.

Finance Concentration

This program is for individuals seeking the most advanced academic degree with an emphasis in Finance. It is designed to prepare them for (1) teaching positions in research-oriented universities, (2) senior staff positions in industry or government, or (3) senior positions in consulting organizations; however, the emphasis is on (1). The program consists of coursework in financial management, investments, and money and capital markets, together with work in the supporting areas of economics, mathematics, and statistics; it culminates in a doctoral dissertation. The program is designed to be completed in three years of full-time study by a student entering with an appropriate master's degree.
Information Systems Concentration
This program is designed for individuals who seek training in advanced theoretical and applied issues in the field of information systems. The training prepares students for conducting leading edge research in topics ranging from the design of optimized systems to the effective use of such systems in organizations. Students undergo rigorous training in research methodologies as well as in the design of information systems. The research conducted is often interdisciplinary in nature, and is characterized by strong analytical modeling of new and emerging issues in information technology creation and management. The program prepares students mainly for academic positions in research universities; some students may be placed in research positions in industry, government or consulting organizations.

Marketing Concentration
The purpose of the PhD Program in Management Science with a marketing major is to train researchers capable of dealing with the most advanced issues, both theoretical and applied, in the field of marketing. Universities as well as major companies with marketing orientation aggressively recruit PhD's with strong theoretical and research training in marketing. Graduates will have rigorous training in disciplinary areas and research methodology. They will have knowledge of the various research streams in marketing, will have developed a research specialization and a clear perspective on management issues.

Operations Management Concentration
Operations Management emphasizes the development of models, methods, applications, and algorithms as they apply to problems in manufacturing and services. All students will be exposed to deterministic and stochastic modeling and will have the option of applying and/or developing these and new methods to solve problems in their selected topics. There will also be an option of combining a major in Finance, Information Systems or Marketing with one in Operations Management. The goal of the doctoral program in Operations Management is to educate future practitioners and researchers in the concepts and analytical techniques needed to understand and advance scientific solutions to the problems currently faced by operations managers.

Research
The faculty of the School makes intellectual contributions in two areas: fundamental scholarship that advances theory and practice, and applied scholarship focusing on practical issues. The fundamental work includes traditional basic research as well as applied research that defines new areas of practice and provides general frameworks that address a wide range of application problems. The applied scholarship provides "how to" frameworks for skilled practitioners, uses demonstration cases to show how theories can be applied, and defines new areas of application for existing tools and techniques.