PhD Program
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Why study management at MIT Sloan?

Leadership. Innovation. Entrepreneurial spirit. These qualities stem from the Institute’s early engineering roots and cut across all of its many disciplines. The culture here is singularly dynamic and innovative, just as one would expect when in the company of the best minds in the world.

However, it is known that between the minds of engineers and the minds of managers, there is often a gap. MIT Sloan was established with the express purpose of bridging this gap, and with the objective of correlating the complex problems of management with science, engineering, and research. It is this inherent tie between science and management, academia and industry, that makes MIT Sloan distinctive within the top echelon of business schools worldwide.

Over the last century, the scope and depth of MIT Sloan’s educational focus have continued to grow in response to advances in the theory and practice of management and in the changing role of technology in business. Today the MIT Sloan School of Management is renowned as one of the world’s leading broad-based management schools, while continuing to maintain its inherent technology focus.
STEEPED IN THE TRADITION OF INNOVATION

When students arrive at MIT Sloan, they are immediately struck by the abundance of ideas generated here. Even more remarkable is how many of these ideas make their way into the mainstream of business, research, and industry.

Innovation permeates the halls of MIT Sloan. It presents itself in everything from the principles on which the School was founded to the teaching style, and to the research and theories that get put into practice. MIT Sloan faculty and alumni/ae have founded more than 650 companies. The disciplines of Organization Studies and System Dynamics were established here. Not to mention the numerous revolutionizing principles, such as Core Memory and the Black-Scholes-Merton valuation model for options pricing, invented by MIT Sloan faculty.

A number of business schools have followed MIT Sloan’s example, but the very idea of introducing academic- and research-oriented ideas into current professional practice was itself an MIT Sloan innovation.

A DISTINCTIVE RESEARCH CULTURE

Rigorous, discipline-based research is the hallmark of the MIT Sloan PhD Program. The program is committed to educating scholars who will lead in their fields of research—those with outstanding intellectual skills who will carry forward productive research on the complex organizational, financial, and technological issues that characterize an increasingly competitive and challenging business world.

PhD studies at MIT Sloan are intense and individual in nature, demanding a great deal of time, initiative, and discipline from every candidate. However, the rewards of such rigor are tremendous: MIT Sloan PhD graduates go on to teach for the world’s most prestigious universities.

“MIT Sloan PhD students represent diverse cultural and intellectual backgrounds but share a deep curiosity about the foundations of organizations and markets. They are immersed in our distinctive research culture, which blends detailed understanding of specific phenomena with basic disciplinary analysis, and, after graduation, they become our ambassadors at other top schools.”

Birger Wernerfelt
J.C. Penney Professor of Management
Chair, PhD Program
PhD PROGRAM CURRICULUM

MIT Sloan doctoral students design specific programs of study tailored to their particular interests within the context of MIT Sloan’s disciplinary academic offerings. These include the three broad categories of Management Science, Behavioral Policy Science, and Economics, Finance, Accounting, which are further broken down into 10 concentrations.

The categories are specifically broad because of the multidisciplinary nature of doctoral studies at MIT Sloan. There are numerous overlaps among concentrations, and methodologies and models are frequently borrowed from other disciplines. For example, both the Institute for Work & Employment Research (IWER) and the Organization Studies Group use social science as a base for much of their research. Students in both concentrations share courses such as Research Methods in Behavioral Science, and they reap the benefit of having faculty from each group. Operations Management and the Operations Research Center (ORC) similarly use statistics as a basis for inventory control subjects or for queuing and supply chains. And, both Accounting & Control and Financial Economics require an extensive background in economics.

It is possible to complete all program requirements, including the dissertation, within a four-year period, although individual variations in a student’s schedule may extend the length of study.

“Being a PhD student here is an ideal introduction to the life of an academic…. There is continuous learning, innovating, and communicating knowledge to others through working as a teaching assistant. ’Side’ benefits include interaction with world class faculty and brilliant fellow students, developing self-motivational skills and reduced sleep time!”

George Papadakis
Concentration: Accounting & Control
PROGRAM REQUIREMENTS

To earn a PhD at MIT Sloan, a student must complete a program of advanced course study, including General Examinations, and must orally defend a thesis on original research.

The course requirements of the MIT Sloan School PhD Program fall into four categories:

Breadth requirements aim at(66,68)(66,68),(584,467) guaranteeing the student familiarity with areas of research other than his or her own. These are often met by undergraduate courses or other degree programs that applicants have completed, and many students waive them based on prior work.

Foundation requirements aim at exposing the student to fundamental research methods in several disciplines. These are often met by taking introductory PhD-level courses in MIT Sloan or other departments at MIT.

Minor requirements aim at giving the student a strong mastery of a single discipline. These are often met by taking higher-level PhD courses in other departments at MIT, Harvard University, or other area universities.

Major requirements consist of PhD courses offered by the student’s research concentration at MIT Sloan.

The course requirements are not large, and many students graduate with enough courses to satisfy them twice. Within the three areas of MIT Sloan, the number of courses required in each of the four categories (Breadth/Foundation/Minor/Major) are 3/3/3/2 in Management Science, 1/3/3/2 in Behavioral Policy Science, and 0/4/4/3 in Economics, Finance, Accounting. The specific courses required by individual groups are compiled below.

The requirements related to the thesis consist of several milestones. The first step for all students is to pass a General Examination in the major field, typically after two years in the program. Some groups also require students to write and get feedback on a Second-Year Paper, consisting of independent research of close to thesis quality. The thesis proposal, which may be orally presented, is then the last hurdle before the thesis itself is written, presented, and evaluated. The thesis may take the form of book-style chapters or a number of essays (often three). In the latter case, it is expected that at least two of the three essays will be solely authored by the student.

“Management research is often interdisciplinary, and the faculty members at MIT Sloan, and particularly those in BPS, exemplify this. One of the big strengths of our PhD Program is that students are exposed to varied disciplinary perspectives on an issue right from the start. I have benefited enormously from this diversity in thinking about my research, both through feedback in formal forums such as seminars and through informal conversations with numerous faculty members, who, without exception, have taken the time to provide detailed and thoughtful feedback on my work.”

Ramana Nanda
Concentration: Strategy & International Management
The Breadth courses are in behavioral science, economics, and management science modeling. Foundation courses have to be chosen from three different categories on the menu approved by the Management Science PhD Committee. A grade of “A” is normally required. Minor courses have to be three PhD-level courses in a single discipline. Examples are economic theory, econometrics, computer science, behavioral science, and statistics.

**Breadth Requirement**
This requirement may be satisfied by any one of the following. In the case of courses taken elsewhere, syllabi must be submitted to designated faculty.

**Management Science:** Either 15.057, 15.081J, 15.093, 15.825, 15.874, or courses taken elsewhere.

**Behavioral Policy Science:** 15.341 or 15.342, or courses taken elsewhere.

**Economics, Finance, Accounting:** Either some courses taken at MIT, or prior to arriving.

**Information Technologies**
15.575 Research Seminar in Information Technology and Organizations: Economic Perspectives
15.576 Research Seminar in Information Technology and Organizations: Social Perspectives

**Marketing**
15.838 Workshop in Marketing
15.839 Workshop in Marketing

**Operations Management**
15.799 Workshop in Operations Management
15.764 Theory of Operations Management (within first two years)
Other courses tailored to the needs of individual students after consultation with faculty.

**System Dynamics**
15.874 System Dynamics for Business Policy
15.875 Applications of System Dynamics
15.879 Seminar/Workshop in System Dynamics
Other courses tailored to the needs of individual students after consultation with faculty, including at least one course in control theory, nonlinear dynamics, or another related course.

**Foundation Requirement**
Each student should select three courses, with at most one course from each topic. (Students should not double-count the same course for both the Foundation and the Minor/Major.) The student should select three courses with input from the student’s faculty advisor.

**Optimization**
15.081J Introduction to Math Programming
15.082 Network Optimization
15.083J Combinatorial Optimizations
15.084J Nonlinear Programming

**Economics**
14.121 & 14.122 (half-semester courses on Microeconomics Theory and Game Theory)
14.451 & 14.452 (half-semester courses on Macroeconomics)

**Applied Psychology**
15.341 Individuals, Groups, and Organizations
15.342 Organizations and Environments

**Computing Methodology**
6.823 Computer System Architecture
6.836 Embodied Intelligence

**Stochastic Processes**
6.262 Discrete Stochastic Processes

**Dynamical Systems and Control**
2.151 Advanced System Dynamics and Control
6.231 Dynamic Programming and Stochastic Control
6.241 Dynamic Systems

**Political Science & Philosophy**
24.810 Topics in the Philosophy of Science

Courses may be added or deleted from this menu over time, as decided by the Management Science PhD Committee.
There is no Breadth requirement. The Foundation courses are 14.121, 14.122, 14.381, 14.382, 14.383, 14.384, and 15.416. The Minor courses are at least four courses, only one of which can be a masters’ level, chosen after consultation with faculty advisors.

Financial Economics
14.385 Nonlinear Econometric Analysis
15.402 Finance Theory II
15.440 Dynamic Asset Pricing Theory
15.441 Corporate Finance
15.442 Empirical Methods in Finance
15.433 Investments (or 15.408)

There are two customary tracks in Financial Economics: Asset Pricing and Corporate Finance, both of which require that students take additional courses. There is no formal requirement to choose one track, however, and students are free to take any of the electives. The particular set chosen may differ from student to student and should be chosen in consultation with her/his faculty advisors.

Asset Pricing
14.384 Time Series Analysis
14.453 and 14.454 Macroeconomics Theory III and IV
14.461 Adv. Macroeconomics I
14.462 Adv. Macroeconomics II
15.437 Options and Futures
18.125 Measure and Integration
18.175 Theory of Probability
18.177 Stochastic Processes

Corporate Finance
14.129 Contract Theory
14.281 Contract Economics
14.282 Organizational Economics
14.385 Nonlinear Econometric Analysis
14.661 Labor Economics I

Accounting & Control
15.539 Doctoral Seminar in Accounting (taught over 2 semesters)
15.549 Accounting Research Workshop
15.440 Dynamic Asset Pricing Theory
15.441 Corporate Finance
15.442 Empirical Methods in Finance

Richard Schmalensee is the John C Head III Dean of MIT Sloan and Professor of Management and Economics. He is an expert on regulation, antitrust, and environmental policy. He leads the formulation and implementation of MIT Sloan’s overall strategy for maintaining its leadership in management education and research, and plays a central role in the School’s resource development. He works with students, faculty, and staff across MIT, as well as business and university partners on a wide range of issues. Schmalensee serves on the MIT Academic Council and Education Committee under the president, provost, and chancellor.

Steven Eppinger is Deputy Dean of MIT Sloan and General Motors Leaders for Manufacturing Professor of Management. He is an expert in product development and project management whose research deals with how to understand and improve complex developmental processes, such as those for automobiles, airplanes, and computer systems, and how to organize development teams consisting of hundreds of people. He also examines design methods and practices for small and large projects alike. Eppinger is the coauthor of Product Design and Development, a widely used textbook on structured methods for product development.

Paul Osterman is Deputy Dean of MIT Sloan and Nanyang Technological University Professor of Management. His research concerns changes in work organization within companies, career patterns and processes within firms, economic development, urban poverty, and public policy surrounding skills training and employment programs. He has been a senior administrator of job training programs for the Commonwealth of Massachusetts and has consulted widely to government agencies, foundations, community groups, firms, and public-interest organizations. His most recent book is Gathering Power: The Future of Progressive Politics in America. He has written numerous academic journal articles and policy issue papers on topics such as labor market policy, the organization of work within firms, careers, job training programs, economic development, and anti-poverty programs.
INFORMATION TECHNOLOGIES

The Information Technologies (IT) concentration incorporates a range of computer software and hardware, networking, and telecommunications systems. IT is inherently multidisciplinary, drawing together faculty with diverse backgrounds in management science, computer science, organizational behavior, psychology, and economics.

Doctoral students are expected to develop a solid grasp of underlying computer technologies, along with the organizational and economic implications of these technologies. Doctoral students will learn how to research managers’ evolving information needs and how to evaluate computer-based information systems. Research centers at MIT Sloan and MIT—such as the Center for Information Systems Research (CISR), the Center for eBusiness at MIT (CeB), the Center for Coordination Science (CCS), and the Context Interchange Project (COIN)—provide doctoral students with opportunities and funds to conduct innovative IT research, both in Cambridge and at beta sites.

ASSOCIATED FACULTY

Erik Brynjolfsson
Benjamin Grosof
Stuart A. Madnick
Thomas Malone
Wanda J. Orlikowski

DISSERTATION TITLES & POSITIONS OF RECENT GRADUATES

Aykut Firat
Information Integration Using Contextual Knowledge and Ontology Merging
Northeastern University

David Fitoussi
Information Technology and Business Transformation: Work Location and the Allocation of Decision Rights
University of California, Irvine

Nils Olaya Fonstad
Understanding the Roles of Technology in Improvising
Massachusetts Institute of Technology
The Marketing discipline centers on measuring the realities of customer demand, mapping and measuring the possibilities, and, at the core, designing and implementing the competitive strategies.

The faculty who comprise MIT Sloan’s Marketing group have strong ties to science and engineering, and have achieved an international reputation for their pioneering work in building and implementing marketing models and decision support systems that enhance new product development. Other award-winning work focuses on customer satisfaction and “the voice of the customer,” as well as on the psychological underpinnings of economic and customer behavior.

PhD students are expected to acquire a solid grasp of behavior and management science theory and method through their coursework. Relevant disciplines include behavioral science, economics, operations research, and statistics. Through workshops, seminars, and applied and theoretical research with faculty, candidates gain experience that is the prerequisite for independent work.

ASSOCIATED FACULTY

Dan Ariely  
Shane Frederick  
John R. Hauser  
John D. C. Little  
Drazen Prelec  
Duncan Simester  
Catherine Tucker  
Glen L. Urban  
Birger Wernerfelt

DISSERTATION TITLES & POSITIONS OF RECENT GRADUATES

On Amir  
*Individual Decision Making: Pain, Rules, and Effort*  
Yale University

Dina Mayzlin  
*Word of Mouth and Marketing: Influencing and Learning from Consumer Conversations*  
Yale University

Robert Zeithammer  
*Auction-Driven Markets*  
University of Chicago

Wanda J. Orlikowski,  
Eaton Peabody Chair of Communication Sciences, Professor of Information Technologies and Organization Studies
OPERATIONS MANAGEMENT

Operations Management refers to the management of operations, of any form, that transform inputs into outputs, adding value along the way. It deals with the acquisition, development, and utilization of resources that firms need in order to deliver the goods and services their clients want.

Traditionally, Operations Management researchers applied Operations Research methodologies to manufacturing, distribution systems, and capacity management; but over the years, the discipline has evolved, and the methodologies are now also being applied to the design of service systems and product development.

Doctoral students in the Operations Management concentration study total quality management, manufacturing technology, the interface between product design and manufacturing, inventory control and materials management, logistics, performance evaluation of manufacturing systems, and production scheduling. An engineering background, although not required, is helpful. Operations Management faculty develop managerial models for planning, controlling, and streamlining the production of goods and services. Doctoral students participate in this research from the early stages of their studies, while acquiring a solid background in one or more relevant disciplines, such as operations research, statistics, and behavioral science.

Both faculty and students participate in MIT’s Leaders for Manufacturing Program, which is a joint research and education effort of MIT Sloan, MIT Engineering, and 13 large U.S. manufacturing firms. Students may also interact with members of the Operations Research Center, an interdepartmental center structured to take advantage of the expertise of faculty drawn from a variety of departments across MIT.

ASSOCIATED FACULTY

Gabriel R. Bitran
Steven D. Eppinger
Charles H. Fine
Jérémie Gallien
David Gamarnik
Stephen C. Graves
Thomas L. Magnanti

DISSERTATION TITLES & POSITIONS OF RECENT GRADUATES

Hasan Arslan
Two Essays in Commonality
Suffolk University

Opher Baron
Pricing and Admission Control for Shared Computer Services Using the Token Bucket
University of Toronto

Juan-Carlos O. Ferrer
Pricing Bundles of Products and Services in the High-Tech Industry
Pontificia Universidad Catolica de Chile
SYSTEM DYNAMICS

The discipline of System Dynamics was developed at MIT Sloan in 1960 by Professor Jay W. Forrester. System Dynamics incorporates components of human behavior into economic models, offering managers a framework for understanding complex situations and the dynamics those situations produce. These frameworks can be used to analyze the behavior of systems, not only in management, but also in fields such as environmental change, politics, economic behavior, medicine, and engineering.

The System Dynamics concentration draws on organizational studies, behavioral decision theory, and engineering to provide a common foundation for understanding and influencing how things change over time. Doctoral students study the principles of systems, economic and industrial dynamics, and policy analysis while doing additional work in economics, information systems, statistics, and political science.

Nelson Repenning’s work focuses on understanding the factors that contribute to the successful implementation, execution, and design of business processes. Current research interests include organizational change, process improvement applied to new product design, and the development of cross-disciplinary management theory. His work draws on a number of modeling methods including simulation, nonlinear dynamics, and game and contract theory.

ASSOCIATED FACULTY

Jay W. Forrester
Nelson Repenning
John D. Sterman

DISSERTATION TITLES & POSITIONS OF RECENT GRADUATES

Mila Getmansky
*What Drives Hedge Fund Return? Models of Flows, Autocorrelation, Optimal Size, Limits to Arbitrage and Fund Failures*
University of Massachusetts Amherst

Paulo Goncalves
*Demand Bubbles and Phantom Orders in Supply Chains*
University of Miami

J. Bradley Morrison
*Capturing the Co-Evolution of Process and Content: Explaining the Dynamics of Start and Fizzle in Organizational Change*
Brandeis University
INSTITUTE FOR WORK & EMPLOYMENT RESEARCH

For 60 years, the MIT Industrial Relations section has carried on research and a PhD program devoted to the full range of issues related to work, labor, and employment relations, including human resource management, labor market issues, and related public policies. In 1997, in recognition of the changing nature of the economy and workforce, the name was changed to the Institute for Work & Employment Research (IWER).

IWER is a multidisciplinary research group, drawing faculty from MIT’s Departments of Economics, Political Science, Urban Studies & Planning, and Engineering, in addition to MIT Sloan. IWER faculty and graduate students conduct research on the broad range of issues related to the role of work and employment in the contemporary economy and society. For the past several years, the IWER group has coordinated the Task Force on Reconstructing America’s Labor Market Institutions, a national network committed to the research and policy analysis needed to meet the needs of today’s workforce and workplaces. The group is also preparing to launch a new center devoted to the dual agenda of redesigning work to enable the achievement of high performance while building healthy working families.

Coursework in the IWER PhD concentration addresses industrial relations theory and research, labor economics, comparative systems of industrial relations, collective bargaining and labor management relations, management of human resources, labor law, and public policy. A weekly seminar brings together PhD students and faculty from Political Science, Economics, Urban Studies & Planning, and Engineering, as well as the MIT Sloan faculty to discuss current research.

ASSOCIATED FACULTY

Pasquale Baccaro
M. Diane Burton
Emilio Castillo
Thomas A. Kochan
Richard M. Locke
Paul Osterman

DISSERATION TITLES & POSITIONS OF RECENT GRADUATES

Matthew Bidwell
What Do Firm Boundaries Do? Employment Relationships and Transaction Governance in Internal and Outsourced IT Projects
INSEAD-Singapore

M. Isabel Fernandez-Mateo
How Free are Free Agents? The Relational Structure of High-End Contract Work
London Business School

Sean Safford
Why the Garden Club Couldn’t Save Youngstown: Social Embeddedness and the Transformation of the Rust Belt
London School of Economics
TECHNOLOGICAL INNOVATION & ENTREPRENEURSHIP

The Technological Innovation & Entrepreneurship (TIE) concentration studies the evolution of technological innovation in existing firms and new enterprises. This concentration embodies two streams of study, which students may approach either as distinct or integrated: (1) technology-based innovation within existing firms: the organization, development, and commercialization of technology-based innovation; and (2) technology-based new enterprises: their formation, development, and growth.

The teaching, research, and practice of entrepreneurship that exist today were pioneered at MIT, beginning with the first entrepreneurship course taught in the early 1960s. For 40 years, MIT Sloan faculty, and the graduate students working with them, have distinguished themselves for the breadth and depth of their managerial research and curricula on all aspects of the management of research, development, technology-based innovation, and technological entrepreneurship.

TIE doctoral studies are primarily supported by subjects in the social and behavioral sciences. Some TIE PhD students also do their underlying disciplinary preparation in economics, focusing their applied work on strategic issues linked to planning, selection, resource allocation, and the commercialization aspects of technology.

ASSOCIATED FACULTY

- Thomas J. Allen
- M. Diane Burton
- Michael A. Cusumano
- Rebecca M. Henderson
- Fiona E. Murray
- Edward B. Roberts
- James M. Utterback
- Eric A. von Hippel

DISSERTATION TITLES & POSITIONS OF RECENT GRADUATES

- Sarah Kaplan
  *Framing the Future: Cognitive Frames, Strategic Choice, and Firm Response to the Fiber-Optic Revolution*
  University of Pennsylvania, Wharton

- Sonali Shah
  *Community-based Innovation and Product Development: Findings from Open Source Software and Consumer Sporting Goods*
  University of Illinois

- Charles Weber
  *Rapid Learning in High Velocity Environments*
  Portland State University
**ORGANIZATION STUDIES GROUP**

It is a little known fact that much of the groundwork for the field of Organization Development was laid right here at MIT Sloan. The Organization Studies Group, as the discipline is now called, is a multidisciplinary group that pulls together the concepts and research methodology of social psychology, sociology, anthropology, and other social sciences, and also draws from, and contributes to, nearly all of the management disciplines.

MIT Sloan’s Organization Studies Group faculty have expertise in organizational behavior, change, communication, culture, design, and performance and learning. Two key areas in the Organization Studies Group are leadership training—the ability to make things happen, to create change or to get other people to create change, an iterative process that occurs at all levels of the organization and goes on all the time; and negotiation—the ability to achieve consensus, reach agreement, “close a deal,” listen well, communicate effectively, and sell personal credibility.

The Organizational Studies Group concentration focuses on the interaction across individuals, groups, organizations, and institutions as well as on the organizational processes themselves. Doctoral students learn how to think about research methods—clinical, experimental, and ethnographic—and to design field surveys that fit them. Working closely with faculty, they develop their own areas of interest and research preferences.

**ASSOCIATED FACULTY**

- Thomas J. Allen
- Deborah G. Ancona
- Lotte Bailyn
- John S. Carroll
- Jared R. Curhan
- Katherine C. Kellogg
- Denise Loyd
- Mark Mortensen
- Wanda J. Orlikowski
- John E. van Maanen
- D. Eleanor Westney
- Michele Williams
- Joanne Yates

**DISSERTATION TITLES & POSITIONS OF RECENT GRADUATES**

- Michael O’Leary
  *Geographic Dispersion in Teams: Its History, Experience, Measurement, and Change*
  Boston College

- Carsten Østerlund
  *Documenting Dreams: Patient-centered Records Versus Practice-centered Records*
  Syracuse University

- Julie Rennecker
  *The Myth of Spontaneous Connection: An Ethnographic Study of the Situated Nature of Virtual Teamwork*
  Case-Western Reserve University
STRAIGHT & INTERNATIONAL MANAGEMENT

MIT Sloan couples Strategy and International Management together into one concentration to enable students to get the full benefit of the overlapping strengths of these two research areas.

While MIT Sloan’s Strategy faculty conduct discipline-based research on competition, organizations, and the interplay between the two, International Management faculty are primarily concerned with the public and private management of international flows of funds, goods, information, technology, and people for commercial purposes, and with the management of enterprises operating within diverse national sovereignties. In both cases, different faculty members work from different disciplinary bases, and the doctoral program in Strategy & International Management parallels the faculty’s research.

The program is oriented towards developing systematic research skills and perspectives that will prepare its graduates for contribution to the fields. Students who choose this concentration are expected to gain expertise in an underlying discipline, such as economics and economic environments, sociology or psychology, or political science.

ASSOCIATED FACULTY

Michael A. Cusumano
John M. de Figueiredo
Robert S. Gibbons
Arnoldo C. Hax
Rebecca M. Henderson
Donald R. Lessard
Petra Moser
Jesper Sorensen
D. Eleanor Westney
Christopher Wheat
Ezra Zuckerman Sivan

DISSERTATION TITLES & POSITIONS OF RECENT GRADUATES

Jeffrey L. Furman  
*Essays on the Role of Location in Strategy*  
Boston University

Jordan Siegel  
*Essays on Global Strategy and Institutions*  
Harvard University

Andrew von Nordenflycht  
*Governing the Human Capitalists: Ownership and Authority in the Advertising and Airline Industries*  
Simon Fraser University, British Columbia
FINANCIAL ECONOMICS

Finance at MIT is most frequently associated with the Black-Scholes-Merton valuation model for options pricing, developed in 1970. In fact, finance has been a central strength in teaching and research for as long as MIT Sloan has been in existence. Financial theories developed at MIT Sloan have set the foundations of the modern field of financial economics, and the practical implications are widely recognized and implemented by Wall Street and corporate practitioners.

Financial economics is the study of markets for real and financial assets. MIT Sloan’s Financial Economics concentration provides students with an understanding of the underlying theory on which the field is based and with the tools they need to conduct theoretical and applied research within it. Required coursework includes subjects in microeconomic theory, macroeconomic theory, and econometrics, as well as subjects in finance theory and its applications.

ASSOCIATED FACULTY

Paul Asquith  Andrew W. Lo
Nittai Bergman  David McAdams
Ernst R. Berndt  Stewart C. Myers
John C. Cox  Jun Pan
Joseph Doyle  Robert S. Pindyck
Kristin J. Forbes  Roberto Rigobon
Bengt Holmstrom  Stephen Ross
Yasheng Huang  Richard Schmalensee
Dirk Jenter  Antoinette Schoar
Paul L. Joskow  Thomas M. Stoker
Mozaffar N. Khan  Lester C. Thurow
Leonid Kogan  Eric Van den Steen
S.P. Kothari  Jiang Wang
Ryan LaFond  Ross Watts

DISSENIATION TITLES & POSITIONS OF RECENT GRADUATES

Antti Petajisto  
*Essays on Index Premia and Demand Curves for Stocks*  
Yale University

Ioanid Rosu  
*Limit Order Markets, Liquidity, and Price Impact Information and Trading Patterns in Financial Markets*  
University of Chicago

Albert Wang  
*Information and Trading Patterns in Financial Markets*  
Cornell University
ACCOUNTING & CONTROL

When the MIT Sloan School of Management was founded, Dean Brooks declared that a thorough grounding in accounting as a control device represented one of the fundamental tools necessary for grappling with management problems. The doctoral concentration in Accounting & Control at MIT Sloan is unique in the field, in that it requires students to push beyond the “standard” boundaries of traditional accounting.

In addition to the doctoral seminars in accounting and finance, doctoral students acquire the economics depth required of MIT Sloan’s Financial Economics students through the study of contemporary issues in financial reporting, disclosure, and contracts using financial information. This depth includes the microeconomics, statistical methods, and econometrics classes taught in MIT’s Department of Economics. Doctoral courses and seminars in the Accounting & Control concentration allow students and faculty to discuss recent research, while giving students the opportunities to tap into faculty expertise on a wide range of topics of central interest to accounting academics, practitioners, and standard setters.

ASSOCIATED FACULTY

Paul Asquith
Richard Frankel
Peter Joos
S.P. Kothari
Sugata Roychowdhury
Ross Watts
Joseph Weber
Peter Wysocki

DISSERTATION TITLES & POSITIONS OF RECENT GRADUATES

Xu Li
Discretionary Current Accruals’ Effect on IPO Pricing: Evidence from 1926 to 1998
University of Texas at Dallas

Ying Li
Maintaining Optimal CEO Incentives and Subsequent Firm Investment Decisions
Columbia University

Yanfeng Xue
Essays on the Relation between Managers’ Incentives and Financial Accounting Information
University of Texas at Austin
MIT Sloan's many research centers represent a fertile meeting ground where industry and academia come together to develop research areas of mutual interest. The centers provide a venue for the faculty’s discipline-based research skills to be matched with the issue-based concerns of practicing managers, while also providing a rich resource for new teaching material. The faculty conduct their research in the field and disseminate their findings through electronic briefings, seminars, summer conferences, workshops, working papers, published articles, and executive education short courses.

The research centers also serve as a great vehicle for doctoral students to engage in close work with faculty as research assistants and for becoming familiar with companies that may serve as data sites for research papers or thesis projects.

**CENTER FOR COORDINATION SCIENCE**

The Center for Coordination Science studies new ways of organizing human activity in conjunction with new technologies that help people work together more effectively. Coordination theory draws upon a variety of fields, including economics, computer science, organizational theory, information systems, management science, and psychology.

The center conducts research within three primary areas: (1) organizational structures and information technology, (2) coordination technology, and (3) coordination theory.

Some of the research areas with which the center is currently involved include process knowledge management, supply chain visualization, automated exception handling, business models, new forms of employment, and internal markets.

**CENTER FOR ENERGY AND ENVIRONMENTAL POLICY RESEARCH**

Since the early 1970s, the Center for Energy and Environmental Policy Research (CEEPR) has been contributing to fundamental advances in energy-related policy research. The center conducts policy research that can improve domestic and international energy and environmental policy-making. This research draws from the MIT Sloan School of Management, the MIT Department of Economics, and the MIT Laboratory for Energy and the Environment.

The research conducted by CEEPR is primarily practical, rather than academic, in focus. It contributes to the solution of real problems facing industry and government through informing the policy process and developing the underlying concepts that will help define key policy issues. The center’s research is directed both to issues of public concern, such as climate change or energy security, and to issues of corporate concern, such as options valuation.
Professors Joanne Yates and Wanda J. Orlikowski have collaborated on several studies of groupware use in contemporary organizations.

**CENTER FOR eBUSINESS AT MIT**

The Center for eBusiness (CeB) at MIT was established to provide leadership for the faculty, students, and industry interested in better understanding the opportunities for radical change that the Internet introduces to business. The center draws from MIT’s wealth of diverse multidisciplinary resources, such as the World Wide Web Consortium, the MIT Lab for Computer Science, the eMarkets Group at the MIT Media Lab, the Internet and Telecoms Convergence Consortium, and the Integrated Supply Chain Management Program.

The CeB’s faculty select research topics and discuss them with industry sponsors, who in turn provide input and learn how to apply the research to their business strategy and plans.

Recent projects include a study of how the Internet has changed search and transaction costs; identification of key factors likely to shape eBusiness development in new global markets with dissimilar infrastructures, cultures, and regulations; an investigation of the roles of technology in organizational improvising at an eBusiness startup; a search for a novel method of measuring attribute preferences for products; and exploration of the impact of IT on product customization.

**CENTER FOR INFORMATION SYSTEMS RESEARCH**

For more than twenty-five years, the Center for Information Systems Research (CISR) has played an integral role in bringing together corporate sponsors with MIT Sloan faculty and doctoral students to study real-world issues related to the management and use of information technology in complex organizations, with the objective of uncovering how firms generate business value from IT.

Sponsor organizations, representing a broad range of industries, assist in defining and executing this research. Faculty and staff associated with the center have conducted pioneering research in such areas as decision support systems, strategic IS planning, management of the IT function, and the use of information by management, including executive support systems.

**THE MIT ENTREPRENEURSHIP CENTER**

The MIT Entrepreneurship Center is an interdisciplinary group that develops innovative educational programs designed to inspire, train, and coach new generations of entrepreneurs, while conducting research to enhance the understanding of the dynamic process of new venture development. Members of the MIT Entrepreneurship Center community create a global network to actively advise and assist each other for mutual benefit, enabling them to set and meet their highest expectations.

Research by faculty associated with the MIT Entrepreneurship Center is market driven. Examples of recent research in this area include Professor Steven D. Eppinger’s inquiry into understanding complex product development processes; Associate Professor Simon Johnson’s study of entrepreneurship in emerging markets and cooperative patterns of economic development; and Professor Drazen Prelec’s introduction of psychological reasoning into the study of economic and consumer behavior.
ADMISSIONS

Selection for the MIT Sloan PhD Program is based on a number of criteria, including evidence of outstanding intellectual ability, excellent academic records, previous work in disciplines related to the intended area of concentration, and a strong commitment to a career in research. Consideration is also given to letters of recommendation, especially those providing evidence of research potential, as well as to the applicant’s own written description of his or her background, interests, and career expectations.

Applicants must hold a four-year bachelor’s degree (or equivalent) from an accredited institution. Undergraduate preparation should include mathematics through differential and integral calculus, as well as principles of microeconomics and macroeconomics. Applicants to the Financial Economics concentration should have also mastered intermediate-level microeconomics and macroeconomics.

All applicants are required to submit GMAT or GRE scores (the Operations Management concentration accepts the GRE only). Please have the Educational Testing Service (ETS) report test results directly to the MIT Sloan PhD Program (GMAT code 3510; GRE code 3510-4201). Only official copies from ETS are considered; photocopies and faxes are not accepted.

There is no minimum required test score; however, the faculty are most interested in applicants with the highest quantitative scoring. Registration materials for the GMAT and GRE, as well as information about the location and testing dates, may be obtained at http://www.ets.org.

TOEFL is required of all non-native English speakers. Official test results must be sent directly from ETS to the MIT Sloan PhD Program (code 3514-02) and must be from within the past two years. For the old TOEFL, MIT requires a minimum score of 577 for the paper testing and 233 for the computer-based method. Registration information for the TOEFL may be obtained at http://www.toefl.org. For the new TOEFL IBT, the MIT minimum required score is to be determined.

Applications are submitted online only. The application is accessible at: http://mitsloan.mit.edu/phd/. The deadline for 2006 admissions is January 9, 2006.
EXPENSES

Tuition for the MIT Sloan PhD Program in 2005-2006 is $32,100. The additional costs of housing, food, medical insurance, books, and personal expenses are estimated to be another $24,440 (calculated for the nine-month academic year). However, these expenses may vary significantly depending on lifestyle and other individual considerations.

FINANCIAL AID

Students admitted into the program are typically offered financial aid for a period of four nine-month academic years (no summer months included). Financial aid is guaranteed for four years so long as the doctoral student remains in good standing. This funding consists of full tuition for the academic year plus a stipend of approximately $20,845 (before taxes). Medical insurance is also provided for each graduate student enrolled in the program. The funding is composed of a fellowship combined with a research or teaching assistantship, which encompasses graduated commitments of up to 20 hours per week; the precise distribution of each source is determined by the faculty committee for each research concentration. In addition, although financial support for June, July, and August of each year is not guaranteed, it is often available through individual faculty.

Students who are U.S. citizens or permanent residents may participate in the federally insured Guaranteed Student Loan Program (GSL), available through banks and other lending institutions in the state where the student is a legal resident. MIT administers a limited loan program as a last resort after all other sources of financial aid have been exhausted. Students who are not U.S. citizens or who do not have permanent resident status are not eligible for either state or federally guaranteed loans or for MIT loans during their first year of residence. Questions about loans should be directed to:

MIT Student Financial Aid Office
Building 11-120
77 Massachusetts Avenue
Cambridge, MA 02139-4307
Phone: (617) 253-9859
Fax: (617) 253-9859

HOUSING

MIT offers on-campus housing to over one-third of its graduate students. Single students live at Ashdown House, Tang Hall, Green Hall, 224 Albany (also known as NW30), Edgerton House, or 70 Pacific Street. Married students live in west campus (Westgate) units or in an apartment tower adjacent to MIT Sloan (Eastgate). Newly admitted students who would like to live on campus should apply immediately upon receiving the on-campus housing application enclosed with the letter of admission. Off-campus housing is available nearby in Cambridge and Somerville, and in some of the neighboring suburbs. Inquiries should be directed to:

Campus Housing Office
Building E32-200
77 Massachusetts Avenue
Cambridge, MA 02139
(617) 253-4148

Off-Campus Housing Office
Building E32-121
77 Massachusetts Avenue
Cambridge, MA 02139
(617) 253-1493
FREQUENTLY ASKED ADMISSIONS QUESTIONS

What is your application deadline?
Applications are usually due the beginning of January for September matriculation. For specific deadline information, please see http://mitsloan.mit.edu/phd/ad-application.php.

Do you have rolling admissions?
No, we do not offer rolling admissions.

Do you offer a distance learning degree or a part-time program?
No, we do not offer distance learning or a part-time program.

What tests do you require?
Either GMAT or GRE taken within the last five years (the Operations Management concentration accepts GRE only) is required. For non-native English speakers, TOEFL from within the last two years is also required. Self-waiver is not an option, and the possession of a degree from within the United States does not automatically exempt applicants from submitting this test score.

Do you have a minimum test score?
There is no minimum GMAT or GRE test score required, although the faculty are most interested in applicants with the highest quantitative scoring. For the old TOEFL, there is an MIT minimum requirement of 577 for the paper testing, and 233 for the computer-based test. For the new TOEFL IBT, the MIT required minimum is to be determined. Please do not contact the program regarding a TOEFL waiver, as the possibility of a waiver may only be discussed if the faculty expresses interest in your application after it has been reviewed.

What are the faculty looking for in applicants?
The faculty are looking for research skills and potential, and focus primarily on your research statement, recommendations, transcripts, and test scores.
Do I need an MBA or other master’s degree before applying?
No, a bachelor’s degree (or equivalent) is required.

Does the program offer financial aid? Are international students eligible?
Yes, financial aid is offered, and international students are eligible. Students admitted into the program are typically offered financial aid for a period of four nine-month academic years (no summer months included). This funding consists of full tuition for the academic year plus a research and teaching assistantship of approximately $20,845 (before taxes).

I’d like to interview before I apply. May I meet with faculty?
Interviews are not part of our application process. Faculty are occasionally available and may meet with prospective candidates prior to admission. However, we recommend attending a doctoral seminar during the regular term as a useful way to experience the program and meet doctoral students and faculty.

What is the average duration of the program?
It takes an average of five years to complete the program (even if you have an MBA)—two years coursework and approximately three years of research and writing of the dissertation.

Should I plan to do a doctorate if I want to work in industry when I graduate?
Our program prepares people for careers in research and teaching.

How do I apply to study part of the year in your program?
The MIT Sloan PhD Program administers to our full-time doctoral students. Part-time study is considered “special student status” by MIT, and is overseen by the Graduate Students Office. Please see http://web.mit.edu/gso/.
The Massachusetts Institute of Technology is committed to the principle of equal opportunity in education and employment. The Institute does not discriminate against individuals on the basis of race, color, sex, sexual orientation, religion, disability, age, veteran status, ancestry, or national or ethnic origin in the administration of its educational policies, admissions policies, employment policies, scholarship and loan programs, and other Institute administered programs and activities, but may favor U.S. citizens or residents in admissions and financial aid.*

The Vice President for Human Resources is designated as the Institute’s Equal Opportunity Officer and Title IX Coordinator. Inquiries concerning the Institute’s policies, compliance with applicable laws, statutes, and regulations (such as Title VI, Title IX, and Section 504), and complaints may be directed to Laura Avakian, Vice President for Human Resources, Room E19-291, 617 253-6512 or to Regina A. Caines, Director of Affirmative Action, Equal Opportunity and Diversity Programs, Room E19-226, 617 258-8718. Inquiries about the laws and about compliance may also be directed to the Assistant Secretary for Civil Rights, U.S. Department of Education.

*The ROTC programs located on the MIT campus are operated under Department of Defense policies and regulations, and do not comply fully with MIT’s policy of nondiscrimination with regard to sexual orientation. On the recommendation of the Faculty, MIT is working to develop a modified on-campus ROTC program open to all MIT students.