It’s easy to spot business challenges, but it takes advanced skills to develop truly innovative solutions, especially in high-profile, high-growth areas such as finance and operations. The IIT Stuart School of Business Ph.D. in Management Science offers an academically rigorous education, teaching students to successfully analyze business problems and devise innovative solutions. With knowledge in the application of quantitative methods, analytical tools, and computer models for decision making, graduates can successfully maneuver the complex fields of business, finance, and management. Through rigorous dissertation work, they will learn how to structure a problem, gather data when appropriate, and generate solutions with confidence.

A One-of-a-Kind Educational Experience

IIT Stuart’s Ph.D. in Management Science is the only post-graduate business program in the Chicago area that offers both part-time and full-time degree options. Whether students are interested in pursuing an academic career or taking their business, government or consulting careers to the next level, they develop the skills needed to meet their professional goals. About half of the program’s graduates have chosen academic careers.

Enrollment (based on fall 2014 data):
44 students
30 male, 14 female
35 full-time, 9 part-time

DOCTOR OF PHILOSOPHY IN MANAGEMENT SCIENCE

Coursework in the Ph.D. program must begin in the fall semester. Spring admissions are not offered. Students must complete 18 credits of core coursework (six courses) and take a qualifying exam. Upon completion of 18 additional credits (six additional courses), including two foundation courses and four electives, a comprehensive exam is given. Following the completion of 12 credits (four courses) of advisor-approved electives, students register for 16 credits of dissertation research. Students are required to submit a dissertation and complete an oral defense of the dissertation.

For students pursuing the Ph.D. on a part-time basis, at least two semesters of study must be completed on a full-time schedule.

CONCENTRATIONS

FINANCE

The Ph.D. concentration in Finance emphasizes application of the techniques of management science to the area of finance. Candidates in this program learn how techniques such as simulation, optimization, and data analysis are used productively to promote corporate objectives and manage risk.

OPERATIONS

The Ph.D. concentration in Operations emphasizes application of the techniques of management science to the area of operations. Candidates in the program learn to understand how to effectively optimize resources (people, technology, finance, and information) for a competitive advantage.

RESEARCH ACTIVITIES

Research opportunities at IIT Stuart allow students to work alongside faculty experts and gain relevant, cross-disciplinary experience that prepares them to be business innovators. Following are just a few examples of the types of research available to Ph.D. students.

FINANCE

• Deregulation and privatization of energy markets (in partnership with IIT’s Department of Electrical and Computer Engineering)
• New product research (derivative products for the insurance industry, the development of contracts relating to weather, rainfall, and industrial pollution)
• Risk management (the application of Value at Risk methodology to quantify market risk exposure, the development of new techniques to measure credit exposure)
• Investment and trading (new developments in portfolio selection, financial forecasting, and valuation analysis)

OPERATIONS

• Design of quality systems, forecasting, materials management, scheduling,
information systems, manufacturing strategy, and optimization

• How to conduct research in queuing to show how plants, distribution centers, and stores can determine the optimal number of reusable inventory items to have available in their facilities

• How to model and solve non-linear complex decision problems that can be applied to many functional areas

• The application of quality-management principles to systematic trading and investment

SELECTED MANAGEMENT SCIENCE FACULTY MEMBERS

Siva K. Balasubramanian (M.B.A., Osmania University; Ph.D., State University of New York at Buffalo), Harold L. Stuart Professor of Marketing and Associate Dean, and Director of Ph.D. Program. Balasubramanian’s research emphasizes marketing communications, diffusion of new product innovations, and advanced research/measurement tools.

John F. O. Bilson (M. Econ, Monash University; Ph.D., University of Chicago), Associate Dean and Professor of Finance. Bilson’s professional experience includes senior positions at trading groups including The Chicago Corporation and Trading Development Corporation, along with academic and research appointments at Northwestern University, University of Chicago, and Stanford University.

Smriti Anand (M.B.A., Northwestern University; M.S. and Ph.D., University of Illinois at Chicago), Assistant Professor of Management. Her current research focuses on leadership, customized work arrangements, and diversity. She teaches courses including organizational behavior and philosophy of management.

Rick Cooper (M.B.A. and Ph.D., Vanderbilt University), Assistant Professor of Finance. Cooper’s career includes positions with State Street Global Advisors, Harris Investment Management, CTS Strategic Investments, LLC, and Xambala, Inc. He has taught all aspects of corporate finance, investments, and financial theory at Wayne State, Harvard, and Vanderbilt universities.

Navid Sabbaghi (Ph.D. and M.S., Massachusetts Institute of Technology), Assistant Professor of Management Science. Sabbaghi focuses his research on mathematical modeling and optimization, incentives and supply contracts, green supply chain, and energy and emissions management.

Haizhi Wang (Ph.D. in Finance, Rensselaer Polytechnic Institute), Assistant Professor of Finance. Wang’s research focuses on corporate finance, entrepreneurial finance, financial institutions, the new-business formation process, and various financial factors in the United States. He teaches Entrepreneurial Finance and Statistical Methods.

ADMISSION REQUIREMENTS

• GMAT or GRE score within five years of testing date, 316 GRE or 650 GMAT. Test waivers are not available for the Ph.D. program.
• Official TOEFL or IELTS score, if required

Admissions decisions are made based on a collective appraisal of prior academic work, field of study, GMAT or GRE score, letters of recommendation, and personal essays.

Admission requires the completion of a business-related master’s degree. Students are required to complete 64 semester credits beyond the master’s degree, with 16 credits devoted to dissertation research. In some cases, the program director will require courses to be taken at the master’s level before a student is allowed to begin Ph.D. coursework.

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Questions?
Alexandra Arnone
Director of Student Recruitment
aarnone@stuart.iit.edu | 312.906.4842
bit.ly/stuartconnect