OPERATIONS MANAGEMENT (PHD)

Department Website (https://www.stern.nyu.edu/experience-stern/about/departments-centers-initiatives/academic-departments/ioms-dept/)

NYSED: 27940 **HEGIS:** 0599.00 **CIP:** 52.1301

Program Description

Stern's Operations Management (OM) group works on problems in managing operations in today's economy. OM research at Stern uses a combination of analytical, empirical, and theory-building methodologies to understand how to design contracts and quality systems for the management of decentralized supply chains; best practices in retailing; revenue management applications; health care operations; call center management; task and workforce scheduling; Internet business models and strategies; and how to forecast new product sales. Research topics are drawn from several disciplines, including operations research, management and organizational behavior, economics and information systems, and banking and finance.

Admissions

All applicants to the NYU Stern School of Business PhD program are required to submit a complete application for admission. A complete application includes the online application (https://apply.stern.nyu.edu/apply/?sr=6bdbb033-1d1f-4adb-9cb4-102d7e899dc2), statement of purpose (https://www.stern.nyu.edu/programs-admissions/phd/admissions/how-to-apply/#statement), optional essay (https://www.stern.nyu.edu/programs-admissions/phd/admissions/how-to-apply/#optional), educational history and resume or CV (https://www.stern.nyu.edu/programs-admissions/phd/admissions/how-to-apply/#resume), letters of recommendation (https://www.stern.nyu.edu/programs-admissions/phd/admissions/how-to-apply/#recommendationletters), test scores (https://www.stern.nyu.edu/programs-admissions/phd/admissions/how-to-apply/#testscores), academic transcripts (https://www.stern.nyu.edu/programs-admissions/phd/admissions/how-to-apply/#transcripts), and an application fee (https://www.stern.nyu.edu/programs-admissions/phd/admissions/how-to-apply/#fee).

See How to Apply (https://www.stern.nyu.edu/programs-admissions/phd/admissions/how-to-apply/) for admission requirements and instructions specific to this program.

Program Requirements

The program requires the completion of at least 36-54 credits, comprised of the following:

Course	Title	Credits
Major Requirements		
OPMG-GB 4334	Convex Optimization	3
OPMG-GB 4337	Theoretical Foundations of Machine Learning and Sequential Decision Making	3
OPMG-GB 3321	Stochastic Processes	3
Required Practica		
OPMG-GB 4101	Research Practicum-Ops I	1
OPMG-GB 4102	Research Practicum-Ops 2	1
OPMG-GB 4103	Research Practicum-OM	1
OPMG-GB 4104	Research Practicum-Ops 4	1
OPMG-GB 4105	Research Practicum-Ops 5	1
OPMG-GB 4150	Teaching Practicum-Ops	1
Electives		
Other Elective Credits		21-39
Total Credits		**36-54**

Curriculum Details

Although every doctoral student must satisfy general requirements, each student designs and completes an individual program of study.

Each new doctoral student begins a program of study, which requires approval from the Area Coordinator and the Doctoral Office. Any unusual features or revisions of an approved program of study requires permission from both the department Area Coordinator and the Doctoral Office. Unless specifically approved in advance by the Area Coordinator and the Doctoral Office, MBA courses will not be eligible for tuition remission.

The general PhD degree requirement for students entering the program with a Master's degree or equivalent is to successfully complete a minimum of 36 credits. The requirement for students entering the program with only a Bachelor's degree is to successfully complete a minimum of 54 credits. If the Doctoral Office and the department Area Coordinator approve, a program of study may include previous graduate work at NYU or other universities. In all cases, students must complete at least 33 credits of coursework at NYU.

An approved program of study becomes part of the student's permanent academic file and represents a formal commitment by both the student and the school. Any approved program can be modified as appropriate.

A complete program of study must include:

- **Prerequisites:** Every student must satisfy the prerequisites in calculus, linear algebra, basic probability and statistics, and economics before starting doctoral study. This can be accomplished by taking courses in these subjects for a grade.
- **Basic Research Skills Methodology Courses:** Every student must complete four research methodology courses, including three courses in probability and statistics, and one course in microeconomics.
- **Major Specialization & Elective Courses:** Every student must complete the prescribed program of courses in their major specialization, as well as elective courses.

Additional Program Requirements

Program of Study

Successfully complete a program of study, including completion of prerequisite coursework, basic research skills methodology courses, and major field of study and elective courses.

Comprehensive Examination

Successfully pass the comprehensive examination(s) required in the student's area of study.

Teaching Workshop

Attend the Teaching Workshop and receive certification to teach an undergraduate course.

Teaching Preparations

Successful completion of the teaching practica as described in the PhD Handbook.

Teach an Undergraduate Course

Teach one undergraduate course or the equivalent during the 4th year of study.

Dissertation Proposal

Initiate a major piece of original research and present it for faculty approval.

Dissertation Defense

Complete a satisfactory dissertation and defend it successfully at the defense presentation. The research is the extension and completion of the research presented at the dissertation proposal.

Sample Plan of Study

Course	Title	Credits
1st Semester/Term		
OPMG-GB 4334	Convex Optimization	3
OPMG-GB 4101	Research Practicum-Ops I	1
Electives		9
	Credits	**13**
2nd Semester/Term		
OPMG-GB 4321	Choice Models in Operations	3
OPMG-GB 4333	Advanced Topics in Data-Driven Decision Making	3
Elective		3
OPMG-GB 4101	Research Practicum-Ops I (continued from Fall)	1
	Credits	**9**
3rd Semester/Term		
OPMG-GB 4337	Theoretical Foundations of Machine Learning and Sequential Decision Making	3
OPMG-GB 3321	Stochastic Processes	3
OPMG-GB 4102	Research Practicum-Ops 2	1
OPMG-GB 4103	Research Practicum-OM	1
	Credits	**8**
4th Semester/Term		
Electives		6
OPMG-GB 4102	Research Practicum-Ops 2 (continued from Fall)	1
OPMG-GB 4103	Research Practicum-OM (continued from Fall)	1
	Credits	**6**
5th Semester/Term		
OPMG-GB 4104	Research Practicum-Ops 4	1
OPMG-GB 4105	Research Practicum-Ops 5	1
Elective		3
	Credits	**5**
6th Semester/Term		
OPMG-GB 4104	Research Practicum-Ops 4 (continued from Fall)	1
OPMG-GB 4105	Research Practicum-Ops 5 (continued from Fall)	1
Electives		6
	Credits	**6**
7th Semester/Term		
OPMG-GB 4150	Teaching Practicum-Ops	1
Electives		6
	Credits	**7**
	Total Credits	**54**

Learning Outcomes

Upon successful completion of the program, graduates will:

1. Acquire a broad working knowledge of their field of study.
2. Acquire advanced knowledge in a specific field of research.
3. Conduct independent research.
4. Be skilled presenters of academic research.
5. Be skilled teachers.

Policies

NYU Policies

University-wide policies can be found on the New York University Policy pages (https://bulletins.nyu.edu/nyu/policies/).

Stern Policies

Additional academic policies can be found on the Stern Graduate Academic Policies page (https://bulletins.nyu.edu/graduate/business/academic-policies/).