

# DOCTOR OF PHILOSOPHY WITH A MAJOR IN MANAGEMENT

The PhD program in Management is designed to produce graduates who can make scholarly contributions to their chosen fields. Most graduates undertake careers as researchers, scholars, and teachers, in academic environments.

The doctoral program in the Scheller College of Business is intended for full-time students who will complete their entire doctoral program prior to leaving campus. Full-time residence in or near Atlanta is expected. The doctoral program is strongly research-oriented and emphasizes early and effective involvement in research, with students experiencing considerable personal attention and close interaction with faculty. The PhD program complements and reflects the technological emphasis of the Institute and places considerable weight on learning outside the classroom. The tutorial model is the basic educational approach employed throughout the program.

Applicants to the doctoral program in management should note that supplementary application materials are required by the College of Business in addition to those required by Georgia Tech's Office of Graduate Admissions and Enrollment Services.

Applications and viewbooks are available online at <https://www.scheller.gatech.edu/degree-programs/phd>

For more information, call the program office at 404.385.3896 or send an email to [renee.jamieson@scheller.gatech.edu](mailto:renee.jamieson@scheller.gatech.edu)

All PhD programs must incorporate a standard set of Requirements for the Doctoral Degree.

## Requirements

The central goal of the PhD program is to train students to perform original, independent research. The most important part of the curriculum is the successful defense of a PhD Dissertation, which demonstrates this research ability. The academic requirements are designed in service of this goal.

The curriculum for the PhD in Management offers seven concentration areas: Accounting, Finance, Marketing, Information Technology Management, Operations Management, Organizational Behavior, and Strategy & Innovation.

## **Summary of General Requirements for a PhD in Management**

- Core curriculum courses or approved alternatives. Management students will be required to complete foundational coursework in their assigned area.
- Electives
- Responsible Conduct of Research (RCR) (1 course, 1 hour, pass/fail). Georgia Tech requires that all PhD students complete an RCR requirement that consists of an online component and in-person training. The online component is completed during the student's first semester enrolled at Georgia Tech. The in-person training is satisfied by taking PHIL 6000 or their associated academic program's in-house RCR course.

- Qualifying examination (1 course, 3 hours). This consists of a one-semester independent literature review followed by an oral examination.
- Doctoral minor (2 courses, 6 hours).
- Research Proposal. The purpose of the proposal is to give the faculty an opportunity to give feedback on the student's research direction, and to make sure they are developing into able communicators.
- PhD Dissertation.
- We require all students to teach a minimum of two courses during their time in the PhD program. A student must take and successfully complete MGT 7610 prior to their first teaching assignment.
- The individual requirements of each area are listed below.

## Qualifying Examination

The student will be examined for knowledge in his/her field. The exam will be written and with the possibility of an additional oral component. The exam should be comprehensive in the student's field and may include a section on research methodology and quantitative methods.

## Minor

These courses are in addition to the other core and elective requirements.

The courses for the minor should form a cohesive program of study, outside the area of ML, that is approved by the Faculty Advisory Committee. Typical programs will consist of two courses from the same school (any school at the Institute) or two courses from the same elective area.

## Dissertation Proposal

The student will present a dissertation project proposal to a Thesis Advisory Committee

consisting of at least three persons, one of whom is the Thesis Advisor. The Thesis Advisory Committee provides advice and guidance during development of the research topic and conduct of the research and is charged with approving the thesis when the research is completed and presented as the doctoral thesis. There should be a written proposal to be approved by the thesis committee at least one semester before the defense. If the student pass and has completed all other requirements, he/she will be considered a "candidate" for the PhD degree. You will submit the *Request for Admission to PhD Candidacy* form.

## Doctoral Dissertation

The primary requirement of the PhD student is to do original and substantial research. This research is reported for review in the PhD dissertation, and presented at the final defense. When the Thesis Advisory Committee considers the thesis to be satisfactory, a recommendation

for a Final Doctoral Examination Committee is made by the student and the Thesis Advisory Committee. The Final Doctoral Examination Committee consists of at least five individuals. At least one member of the Final Doctoral Examination Committee must be from outside the College of Business. According to Institute rules, members of the Thesis Advisory Committee must be members of the Final Doctoral Examination Committee. Dissertation research should be of sufficient quality and scope that it is publishable in refereed journals in the student's field. The candidate will make an oral presentation of the project and its findings in a colloquium open to the public. You will submit the *Certificate of Thesis*

Approval for Doctoral Students form when you successfully defend your dissertation.

Code	Title	Credit Hours
<b>Accounting</b>		
<b>Seminar requirements</b>		<b>12</b>
MGT 7601	Financial Accounting & Reporting Research Seminar	3
MGT 7602	Management Accounting Research Seminar	3
MGT 7603	PhD Seminar in Auditing Research	3
MGT 7604	Seminar in Modern Capital Markets Research	3
<b>Research Methods</b>		<b>15</b>
ECON 6140	Econometrics I	3
ECON 6160	Econometrics II	3
ECON 7004	Mathematics for Economists	3
ECON 7012	Microeconomic Theory I	3
PSYC 6018	Principles of Research Design	3
PSYC 6019	Statistical Analysis of Psychological Data I	5
PSYC 6020	Statistical Analysis of Psychological Data II	5
PSYC 7301	Introduction to Multivariate Statistics	3
PUBP 6116	Microeconomics for Policy Analysis	3
PUBP 8200	Advanced Research Methods I	3
PUBP 8205	Advanced Research Methods II	3
<b>Independent Study and Other Selected Courses</b> <sup>1</sup>		
<b>Minor</b> <sup>2</sup>		<b>6</b>

<sup>1</sup> A student should select independent study and other courses (MGT 8803 and 8903 PhD courses) to support his/her career objectives. Typically, a student should register for an independent study course with a particular faculty while undertaking research that involves direct and substantial guidance and interaction from that faculty. In addition, a student may take an independent study course in support of his/her research interests in other units. The particular set of courses chosen in this category should be determined jointly by the student and the major advisor or PhD coordinator.

<sup>2</sup> Students must complete 6 credit hours in one of two possible minors:

- Minor in Psychology
- Minor in Economics

Code	Title	Credit Hours
<b>Finance</b>		
<b>Seminar Requirements</b> <sup>1</sup>		
MGT 8803	Special Topics in Management (Financial Theory)	3
MGT 8803	Special Topics in Management (Corporate Finance)	3
MGT 8803	Special Topics in Management (Investment)	3
MGT 8803	Special Topics in Management (International Finance)	3
MGT 8803	Special Topics in Management (Empirical Methods in Finance)	3
MGT 8803	Special Topics in Management (Corporate Restructuring)	3

MGT 8803	Special Topics in Management (Financial Institutions)	3
MGT 8803	Special Topics in Management (Topics in Finance)	3
MGT 7060	Theory of Finance	3
<b>Research Methods Requirements</b>		<b>12</b>
ISYE 6401	Statistical Modeling and Design of Experiments	3
ISYE 6411	Fundamentals of Statistics with Applications	3
ISYE 6402	Time Series Analysis	3
ISYE 6664	Stochastic Optimization	3
ISYE 6739	Basic Statistical Methods	3
ISYE 6761	Stochastic Processes I	3
PSYC 7301	Introduction to Multivariate Statistics	3
PSYC 7302	Structural Equation Modeling	3
ECON 6161	Econometric Modeling and Forecasting	3
<b>Finance Graduate Electives</b> <sup>2</sup>		
MGT 6060	Financial Management	3
MGT 6066	Mergers and Acquisitions	3
MGT 6070	International Finance	3
MGT 6080	Investments	3
MGT 6081	Derivative Securities	3
MGT 6090	Management of Financial Institutions	3
<b>Graduate Economics Courses</b> <sup>3</sup>		
ECON 7012	Microeconomic Theory I	3
ECON 7022	Econometrics I	3
<b>In Addition</b> <sup>4</sup>		
ECON 7013	Microeconomic Theory II	3
ECON 7023	Econometrics II	3
ECON 6105	Macroeconomics	3
<b>Independent Study and Other Selected Courses</b> <sup>5</sup>		
<b>Minor</b> <sup>6</sup>		<b>6</b>

<sup>1</sup> Finance Doctoral Seminars: Students are required to take at least four doctoral level seminars for letter grade, earning B or better. Generally, students are expected to take two doctoral seminars a year, with four seminars courses completed by the end of the second year.

<sup>2</sup> Students with an insufficient background in finance and business may take the following elective finance courses for credit. In general, students should not take more than four of the courses. A grade of B or better is required for each course taken.

<sup>3</sup> Students are required to take the following course for credits and earn a grade of B or better in the course.

<sup>4</sup> students are required to take at least one of the following courses for credits, earning a grade of B or better

<sup>5</sup> A student should select independent study and other courses to support his/her career objectives. Typically, a student should register for an independent study course with a particular faculty while undertaking research that involves direct and substantial guidance and interaction from that faculty. In addition, a student may take an independent study course in support of his/her research interests in other units. The particular set of courses chosen in this category should be determined jointly by the student, the advisor, and the PhD coordinator.

<sup>6</sup> Students must complete 6 credit hours in one of the possible minors below:

- Minor in Economics
- Minor in CS/CSE
- Minor in Organizational Behavior
- Minor in Industrial and Systems Engineering
- Minor in Accounting

Code	Title	Credit Hours
<b>Information Technology Management</b>		
<b>Seminar Requirements</b>		
MGT 7609	Observational Studies in IS	4.5
MGT 7606	Analytical Modeling Foundations for IS	1.5
MGT 7608	Experimental Research in Information Systems	1.5
MGT 7607	Economics of Artificial Intelligence, and Machine Learning	1.5
MGT 8803	Special Topics in Management (Research)	1.5
Select one:		1.5
MGT 7605	Advanced Empirical Methods for Information Systems	1.5
MGT 8803	Special Topics in Management (Personalization and Deep Learning)	3
<b>Additional Course Requirements</b>		<b>12</b>
ECON 7004	Mathematics for Economists	3
CS 7641	Machine Learning	3
At least one:		
ECON 7012	Microeconomic Theory I	3
ISYE 6501	Intro Analytics Modeling	3
At least one:		
ECON 7022	Econometrics I	3
PSYC 7301	Introduction to Multivariate Statistics	3
ISYE 6414	Statistical Modeling and Regression Analysis	3
<b>Independent Study and Other Selected Courses <sup>1</sup></b>		
<b>Minor</b>		<b>6</b>

<sup>1</sup> A student should select independent study and other courses to support his/her career objectives. Typically, a student should register for an independent study course with a particular faculty while undertaking research that involves direct and substantial guidance and interaction from that faculty. In addition, a student may take an independent study course in support of his/her research interests in other units. The particular set of courses chosen in this category should be determined jointly by the student, the advisor, and the PhD coordinator.

Code	Title	Credit Hours
<b>Marketing</b>		
<b>Seminar Requirements <sup>1</sup></b>		
MGT 8803	Special Topics in Management (Consumer Behavior)	3
MGT 8803	Special Topics in Management (Empirical Models)	3
MGT 8803	Special Topics in Management (Marketing Strategy)	3

MGT 8803	Special Topics in Management (Theory Construction)	3
<b>Research Methods Requirements <sup>2</sup></b>		
ISYE 6414	Statistical Modeling and Regression Analysis	3
ISYE 6413	Design and Analysis of Experiments	3
PSYC 7301	Introduction to Multivariate Statistics	3
	or ISYE 740 Multivariate Data Analysis	
MGT 7102	Organization Behavior Research Methods	3
	or PSYC 6010 Principles of Research Design	
	or PSYC 8015 Seminar in Cognitive Psychology	
	or ECON 6124 Research Methods	
	or ISYE 6739 Basic Statistical Methods	
<b>Depth Courses <sup>3</sup></b>		
PSYC 6011	Cognitive Psychology	3
PSYC 6012	Social Psychology	3
PSYC 6019	Statistical Analysis of Psychological Data I	5
PSYC 6795	Introduction to Cognitive Science	3
ISYE 6401	Statistical Modeling and Design of Experiments	3
ISYE 6411	Fundamentals of Statistics with Applications	3
ISYE 6739	Basic Statistical Methods	3
PSYC 6012	Social Psychology	3
MGT 7064	Microeconomics Theory for Management	3
ISYE 6420	Introduction to Theory and Practice of Bayesian Statistics	3
PSYC 7201	Industrial/Organizational Psychology	3
PSYC 8060	Seminar in Quantitative Psychology	3
MGT 7105	Individual Behavior in Organizations	3
MGT 7107	Organizational Theory	3
MGT 7400	PhD Strategic Management Research I	3
MGT 7064	Microeconomics Theory for Management	3
ECON 6161	Econometric Modeling and Forecasting	3
<b>Recommended Courses for Strategy Track <sup>4</sup></b>		
PSYC 6012	Social Psychology	3
MGT 7064	Microeconomics Theory for Management	3
HS 8813	Special Topics	3
ISYE 6420	Introduction to Theory and Practice of Bayesian Statistics	3
PSYC 7201	Industrial/Organizational Psychology	3
PSYC 8060	Seminar in Quantitative Psychology	3
MGT 7105	Individual Behavior in Organizations	3
PSYC 7303	Psychometric Theory	3
MGT 7107	Organizational Theory	3
MGT 7400	PhD Strategic Management Research I	3
<b>Recommended Courses for Strategy Track <sup>5</sup></b>		
MGT 7064	Microeconomics Theory for Management	3
ECON 6162	Discrete Choice Econometrics	3
ECON 6161	Econometric Modeling and Forecasting	3
<b>Recommended Courses for All Tracks <sup>6</sup></b>		
<b>Additional Courses (Methods) <sup>7</sup></b>		
PSYC 8050	Seminar in Industrial/Organizational Psychology	3
ISYE 6404	Nonparametric Data Analysis	3

ISYE 7400	Advanced Design of Experiments	3
ISYE 7401	Advanced Statistical Modeling	3
ISYE 7441	Linear Statistical Models I	3
MATH 4262	Mathematical Statistics II	3
PUBP 8200	Advanced Research Methods I	3
PUBP 8205	Advanced Research Methods II	3
<b>Additional Courses (Substantive)<sup>8</sup></b>		
MGT 7107	Organizational Theory	3
MGT 7400	PhD Strategic Management Research I	3
MGT 8803	Special Topics in Management	3
PSYC 6013	Biopsychology	3
PSYC 6014	Sensation and Perception	3
PSYC 6021	Personality Theories	3
PSYC 7203	Motivation and Job Attitudes	3
PSYC 7790	Cognitive Modeling	4
PSYC 8000	Seminar in Experimental Psychology	3
PSYC 8010	Seminar in Cognitive Psychology	3
PSYC 8060	Seminar in Quantitative Psychology	3
MATH 6338	Real Analysis II	3
<b>Independent Study and Other Selected Courses<sup>8</sup></b>		
<b>Minor</b>		<b>6</b>

- <sup>1</sup>
- Consumer Behavior (at Georgia Tech or Emory)
  - Empirical Models (at Georgia Tech or Emory)
  - Marketing Strategy (at Georgia Tech or Emory)
  - Theory Construction (at Georgia Tech)
- <sup>2</sup>
- ISYE 6414 Statistical Modeling and Regression Analysis
  - ISYE 6413 Design and Analysis of Experiments or PSYC 504 Experimental Analysis of Behavior (Emory)
  - PSYC 7301 Introduction to Multivariate Statistics or ISYE 7405 (Multivariate Data Analysis) or equivalent course
  - MGT 7102 Organizational Behavior Research Methods or PSYC 6018 Research Design or PSYC 8010 Research Methods in Psychology (GA State) or ECON 6121 Research Methods or ISYE 6739 Statistical Methods or BUS 701 Survey of Research Methods (Emory)
- <sup>3</sup>
- 8 must be completed
  - The following are “recommended” and “additional” depth courses for students in different tracks.
  - Recommended Courses for Consumer Behavior Track:
    - PSYC 505 Core Seminar in Perceptual Cognition (Emory)
    - PSYC 507 Core Seminar in Knowledge and Conceptual Processes (Emory)
    - PSYC 770 Core Seminar in Emotion and Social Cognition (Emory)
    - PSYC 770 Core Seminar in Memory (Emory)
    - or any of the above list
- <sup>4</sup>
- MK 9200 Structural Equations Modeling (GA State)
  - ECON 8760 Advanced Econometrics (GA State)
  - BUS 742 Perspectives on Marketing Strategy II (Emory)
  - MK 8710 Customer Relationship Management (GA State)
  - PSYC 533 Structural Aspects of Social Interaction (GA State)

- <sup>5</sup> Students are strongly encouraged to take the core econometrics and core microeconomics sequence either at Georgia State or at Emory University during the first two years. In order of importance, empirical modeling students should study firm and consumer behavior, game theory, and general equilibrium theory.
- ECON 501 Microeconomic Theory II (Emory)
  - ECON 6161 Econometric Modeling and Forecasting or ECON 722 Time Series Econometrics (Emory) or ECON 8790 Time Series Econometrics (GA State)
  - ECON 721 Advanced Microeconometrics (Emory) or ECON 8740 Applied Statistics and Econometrics (GA State)
  - ECON 723 Topics in Econometrics (Emory) or ECON 8750 Econometrics (GA State)
  - ECON 724 Applied Econometrics (Emory) or ECON 8760 Advanced Econometrics (GA State)
  - ECON 8840 Applied Statistics and Econometrics II (GA State)
  - ECON 8440 Industrial Organization (GA State) or equivalent (Emory)
- <sup>6</sup>
- MGT 8811 Best Practices in Teaching (take semester before teaching)
  - CETL 8721 or CETL 8722 Academic Writing
- <sup>7</sup>
- UCGA 6010 Multivariate Social Data Analysis (GA State)
  - ECON 9340 Experimental Economics (GA State)
  - Others (subject to approval)
- <sup>8</sup>
- PhD Seminars in Marketing at Georgia Tech, Emory, or GA State
  - Any MGT 7000 courses offered in COM
  - ISYE 6230 Economic Decision Analysis (Game theory) or ECON 706 Game Theory (Emory)
  - ECON 761 Market Structure and Imperfect Competition (Emory)
  - ECON 762 Theory of the Firm (Emory)
  - SOC 552 Structural Aspects of Social Interaction
  - Others (subject to approval)
- <sup>8</sup> A student should select independent study and other courses to support his/her career objectives. Typically, a student should register for an independent study course with a particular faculty while undertaking research that involves direct and substantial guidance and interaction from that faculty. In addition, a student may take an independent study course in support of his/her research interests in other units. The particular set of courses chosen in this category should be determined jointly by the student, the advisor, and the PhD coordinator.

Code	Title	Credit Hours
<b>Operations Management</b>		
<b>Seminar Requirements<sup>1</sup></b>		<b>15</b>
<b>Research Methods Requirements<sup>2</sup></b>		
ECON 7004	Mathematics for Economists	3
ISYE 6650	Probabilistic Models and Their Applications	3
ISYE 6669	Deterministic Optimization	3
ISYE 6230	Economic Decision Analysis	3
OR		
ECON 7013	Microeconomic Theory II	3
PSYC 7301	Introduction to Multivariate Statistics	3



OR

ISYE 7405	Multivariate Data Analysis	3
ECON 7022	Econometrics I	3
Two from the following list:		
ISYE 6404	Nonparametric Data Analysis	3
ISYE 6644	Simulation	3
ISYE 6656	Queuing Theory	3
ISYE 6661	Linear Optimization <sup>2</sup>	3
ISYE 6662	Discrete Optimization	3
ISYE 6663	Nonlinear Optimization	3
ISYE 6761	Stochastic Processes I <sup>3</sup>	3
ISYE 6762	Stochastic Processes II	3
ISYE 6831	Advanced Simulation	3
ISYE 7400	Advanced Design of Experiments	3
ISYE 7441	Linear Statistical Models I	3
PSYC 6019	Statistical Analysis of Psychological Data I	5
PSYC 6020	Statistical Analysis of Psychological Data II	5
PSYC 7302	Structural Equation Modeling	3
ECON 7111	Industrial Organization I	3
ISYE 6412	Theoretical Statistics	3
ISYE 6416	Computational Statistics	3
ISYE 7401	Advanced Statistical Modeling	3
ISYE 7201	Production and Service Systems Engineering	3
ECON 7013	Microeconomic Theory II	3
ECON 7023	Econometrics II	3
ECON 7112	Industrial Organization II	3
<b>MBA Course Requirements <sup>4</sup></b>		
<b>Independent Study and Other Selected Courses <sup>5</sup></b>		
Minor		6

<sup>1</sup> Four Ph.D. level Operations Management seminars and the Dynamic Programming OM Ph.D. course are required for letter grade, earning a B or better. These courses must be completed in the first two years of the program, if offered.

<sup>2</sup> consider first auditing/taking MATH 4317 or ISYE 8803 Math of OR

<sup>3</sup> consider first auditing/taking MATH 4317 or ISYE 8803 Math of OR

<sup>4</sup> Students who already have an MBA will be required to take one MBA course (audit or credit), preferably within OM. Otherwise, students must complete two MBA courses (one for credit, one for audit or credit) – one or two of which should be outside OM to satisfy the breadth requirement. Students must earn an average grade of B or better.

- Operations Strategy
- Global Operations and Supply Chain Management
- Managing Resources of the Technological Firm
- Supply Chain Modeling
- Pricing Analytics and Revenue Management
- Service Operations Management
- Collaborative Product Development
- Business Strategies for Sustainability

<sup>5</sup> A student should select independent study and other courses to support his/her career objectives. Typically, a student should register for an independent study course with a particular faculty while undertaking research that involves direct and substantial guidance and interaction from that faculty. In addition, a student may take an independent study course in support of his/her research interests

in other units. The particular set of courses chosen in this category should be determined jointly by the student, the advisor, and the PhD coordinator.

Code	Title	Credit Hours
<b>Organizational Behavior</b>		
<b>Seminar Requirements</b>		<b>12</b>
MGT 7102	Organization Behavior Research Methods	3
MGT 7105	Individual Behavior in Organizations	3
MGT 7106	Group Dynamics	3
MGT 7107	Organizational Theory	3
<b>Quantitative Courses or Approved Equivalent <sup>1</sup></b>		<b>18</b>
PSYC 6019	Statistical Analysis of Psychological Data I	5
PSYC 6020	Statistical Analysis of Psychological Data II	5
PSYC 6018	Principles of Research Design	3
PSYC 7301	Introduction to Multivariate Statistics	3
<b>Independent Study and Other Selected Courses <sup>2</sup></b>		
<b>Minor</b>		<b>6</b>

<sup>1</sup> Students are also required to take a course in structural equation modeling and multi-level data analysis.

<sup>2</sup> A student should select independent study and other courses to support his/her career objectives. Typically, a student should register for an independent study course with a particular faculty while undertaking research that involves direct and substantial guidance and interaction from that faculty. In addition, a student may take an independent study course in support of his/her research interests in other units. The particular set of courses chosen in this category should be determined jointly by the student, the advisor, and the PhD coordinator.

Code	Title	Credit Hours
<b>Strategy and Innovation</b>		
<b>Seminar Requirements <sup>1</sup></b>		
MGT 8803	Special Topics in Management (Industrial Organization & Innovation)	
MGT 8803	Special Topics in Management (Economics and Sociology of Science)	
MGT 7611	PhD Seminar in Entrepreneurship	
Other MGT 8803 Strategy & Innovation courses		
<b>Research Methods Requirements <sup>2</sup></b>		<b>15</b>
ECON 7022	Econometrics I	3
ECON 7023	Econometrics II	3
MGT 8803	Special Topics in Management	3
MGT 7102	Organization Behavior Research Methods <sup>3</sup>	3
<b>Major Requirements <sup>4</sup></b>		<b>18</b>
ECON 7012	Microeconomic Theory I	3
MGT 7107	Organizational Theory	3
or PUBP 60 Organization Theory		
MGT 7400	PhD Strategic Management Research I	3
ECON 6105	Macroeconomics	3
ECON 6140	Econometrics I	3
ECON 6160	Econometrics II	3

ECON 6161	Econometric Modeling and Forecasting	3	ISYE 7201	Production and Service Systems Engineering	3
ECON 7004	Mathematics for Economists	3	ISYE 7400	Advanced Design of Experiments	3
ECON 7013	Microeconomic Theory II	3	ISYE 7401	Advanced Statistical Modeling	3
ECON 7111	Industrial Organization I	3	ISYE 7405	Multivariate Data Analysis	3
ECON 7112	Industrial Organization II	3	MATH 6338	Real Analysis II	3
MGT 6070	International Finance	3	MGT 6066	Mergers and Acquisitions	3
MGT 7064	Microeconomics Theory for Management	3	MGT 6080	Investments	3
MGT 7105	Individual Behavior in Organizations	3	MGT 6081	Derivative Securities	3
MGT 7106	Group Dynamics	3	MGT 6090	Management of Financial Institutions	3
MGT 7601	Financial Accounting & Reporting Research Seminar	3	PSYC 6011	Cognitive Psychology	3
MGT 7602	Management Accounting Research Seminar	3	PSYC 6013	Biopsychology	3
MGT 7603	PhD Seminar in Auditing Research	3	PSYC 6012	Social Psychology	3
MGT 7604	Seminar in Modern Capital Markets Research	3	PSYC 6014	Sensation and Perception	3
MGT 7605	Advanced Empirical Methods for Information Systems	1.5	PSYC 7201	Industrial/Organizational Psychology	3
MGT 7606	Analytical Modeling Foundations for IS	1.5	PSYC 7301	Introduction to Multivariate Statistics	3
MGT 7607	Economics of Artificial Intelligence, and Machine Learning	1.5	PSYC 7302	Structural Equation Modeling	3
MGT 7608	Experimental Research in Information Systems	1.5	PSYC 8000	Seminar in Experimental Psychology	3
MGT 7609	Observational Studies in IS	1.5	<b>Independent Study and Other Selected Courses <sup>7</sup></b>		
PSYC 6018	Principles of Research Design	3	<b>Minor <sup>8</sup></b>		<b>6</b>
PSYC 6019	Statistical Analysis of Psychological Data I	5	<sup>1</sup> At least three of the following courses are required		
PSYC 6020	Statistical Analysis of Psychological Data II	5	To complete the methods requirements, students can choose from a		
PSYC 6021	Personality Theories	3	wide range of methods courses based on their research interests and		
PSYC 6795	Introduction to Cognitive Science	3	dissertation topics.		
PSYC 7790	Cognitive Modeling	4	<sup>3</sup> or BUS 701: Survey of Business Research Methods (Emory)		
PSYC 8010	Seminar in Cognitive Psychology	3	<sup>4</sup> The following courses are required (with a letter grade of "B" or better)		
PSYC 8060	Seminar in Quantitative Psychology	3	Other courses can be used to fulfill the major requirement upon		
CS 7641	Machine Learning	3	approval by the advisor and PhD coordinator.		
ISYE 6230	Economic Decision Analysis	3	<sup>5</sup> If this course is not offered, students will take ECON 7012		
ISYE 6401	Statistical Modeling and Design of Experiments	3	Microeconomic Theory		
ISYE 6402	Time Series Analysis	3	<sup>6</sup> or BUS 732 Organization and Management I (Emory)		
ISYE 6404	Nonparametric Data Analysis	3	<sup>7</sup> A student should select independent study and other courses to		
ISYE 6411	Fundamentals of Statistics with Applications	3	support his/her career objectives. Typically, a student should register		
ISYE 6412	Theoretical Statistics	3	for an independent study course with a particular faculty while		
ISYE 6414	Statistical Modeling and Regression Analysis	3	undertaking research that involves direct and substantial guidance		
ISYE 6420	Introduction to Theory and Practice of Bayesian Statistics	3	and interaction from that faculty. In addition, a student may take an		
ISYE 6501	Intro Analytics Modeling	3	independent study course in support of his/her research interests		
ISYE 6644	Simulation	3	in other units. The particular set of courses chosen in this category		
ISYE 6650	Probabilistic Models and Their Applications	3	should be determined jointly by the student, the advisor, and the PhD		
ISYE 6656	Queueing Theory	3	coordinator.		
ISYE 6661	Linear Optimization	3	<sup>8</sup> Students must complete 6 credit hours in one of three possible minors:		
ISYE 6662	Discrete Optimization	3	• Minor in Economics		
ISYE 6663	Nonlinear Optimization	3	• Minor in Sociology		
ISYE 6664	Stochastic Optimization	3	• Minor in Science and Technology Policy		
ISYE 6669	Deterministic Optimization	3			
ISYE 6739	Basic Statistical Methods	3			
ISYE 6761	Stochastic Processes I	3			
ISYE 6762	Stochastic Processes II	3			
ISYE 6831	Advanced Simulation	3			