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PhD Program

The Kellogg marketing doctoral program provides rigorous training in the skills required for success as a world-class marketing researcher. This is achieved via coursework, close collaboration with faculty, and intellectual exchange in a department known for its research culture. Kellogg's faculty and doctoral graduates have been among the most influential researchers in the field of marketing. Kellogg faculty actively publishes in the top marketing and business journals, as well as top journals in other disciplines such as economics, psychology, and statistics.

The Kellogg doctoral program offers two different tracks in training marketing scholars: a consumer behavior (sometimes called "CB") track, and a quantitative marketing (sometimes called "Quant") track. Both tracks focus on understanding the impact of marketing activity on consumers and firms. However, they differ in terms of the theories and methods used to analyze data.

Consumer behavior researchers tend to focus on psychological aspects of a consumer's decision-making process and analyze data collected through laboratory studies and field experiments. Quantitative marketing researchers often draw on theories of behavior from economics, use data from observational and archival sources and field experiments, and analyze the data using advanced statistical and econometric techniques.

Although many aspects of the Kellogg doctoral program are the same for both consumer behavior and quantitative marketing students, there are some important differences, so we have created separate sections that focus on each. Students must pass all course requirements, qualifying exams, and annual research papers in their chosen area of specialization. If a student is uncertain about his or her area, we recommend resolution of this issue by the end of the fall quarter in the first year. If a student changes his or her area of specialization, and because of that has not taken the course covered in the qualifying exam, a portion of the qualifying exam may be delayed until the course (or its substitute) has been completed.

Consumer Behavior Specialization

Consumer behavior researchers tend to focus on psychological aspects of a consumer's decision-making process and to collect data through laboratory studies and field experiments.

A Theory-Based Approach

Our program provides training in all the skills and perspectives necessary for success as a researcher in marketing and consumer behavior. Our program provides a unique emphasis on the fundamental building blocks of theory and how best to advance scientific knowledge via a principled, systematic approach. Students not only learn extant theories but work extensively in designing and refining cutting-edge conceptual tools. Students also gain deep experience in the identification, development, and implementation of research ideas that advance theory and practice. We empower our doctoral students to become the theoretical and empirical thought leaders of tomorrow.

A Diverse World-Class Faculty

The Kellogg behavioral faculty members are highly published in a wide range of research areas. This intellectual diversity provides doctoral students with the opportunity and guidance to pursue research that interests them. Behavioral faculty members work closely with doctoral students to develop and publish top research papers, adopting a mentorship model that familiarizes students with successful publishing strategies. To learn more about our current research interests, we encourage you to browse our faculty webpages:

- Ulf Bockenholt
- Galen Bodenhausen
- Bobby Calder
- Gregory Carpenter
- Moran Cerf
- Alexander Cherney
- Kelly Goldsmith
- Kent Grayson
- Aparna Labroo
- Angela Lee
- Neal Roese
- Derek Rucker
- Brian Sternthal
- Rima Toure-Tillery
- Alice Tybout

A Strong Research Culture

The development and publication of influential academic research is the top priority for the Kellogg marketing department. Kellogg's doctoral students are a critical and valued aspect of the research culture. Learning occurs not only in the classroom, but also from fellow students and faculty, whether in the hallway or in a research presentation. The Kellogg research culture emphasizes intellectual curiosity, hard work, and critical thinking in the context of a mutually supportive environment. <u>Click here</u> for some recent examples of published research co-authored by Kellogg faculty and doctoral students.

Kellogg welcomes speakers and visiting scholars on a regular basis, among them established and emerging thought leaders in marketing. This allows doctoral students to become acquainted with accomplished researchers beyond Northwestern. Visiting scholars present their research and meet with both faculty and doctoral students. Just prior to the start of the school year each fall, the faculty hosts a one-day "marketing camp" where several scholars from

outside Kellogg as well as members of the department present their research and interact with faculty and students.

The First Two Years

Behavioral doctoral students take a total of 24 classes (4 per quarter), including eight courses taught in the marketing department. Students also conceptualize, implement, and write up a substantial research project each year, which they develop under the mentorship of a Kellogg marketing faculty, and present to the department in the fall of their second and third years.

Year Three and Beyond

In the remaining years in the program, students focus almost entirely on research. During this time, students conceptualize, develop and implement a doctoral dissertation. They do so under the direction of a dissertation chair and committee (whom the student selects), and a student's progress in the program for these remaining years is supervised by the dissertation chair. Students also frequently work with other faculty on additional research projects that are targeted for publication in top peer-reviewed academic journals. Because additional coursework may prove helpful in accomplishing these research goals, students can take more classes as desired or needed after their first two years.

Once completion of their dissertation is in sight, doctoral students turn their attention to applying and interviewing for employment as assistant professors. Initial interviews take place in August every year, followed by campus visits in the fall and winter (to start employment in the subsequent fall).

Requirements & Benchmarks

Consumer Behavior Students

Year One

- Enroll in and complete four courses per quarter
- Maintain a grade-point average (GPA) of 3.35
- <u>Start developing a research portfolio</u>
- Summer: take and pass qualifying exams
- Early September (just before start of second year): submit and present a first-year paper
- Early September (just before start of second year): receive annual feedback

Year Two

- Enroll in and complete four courses per guarter
- Maintain a grade-point average (GPA) of 3.35
- Continue developing a research portfolio
- Early September (just before start of third year): submit and present a second-year paper
- Early September (just before start of third year): receive annual feedback

Year Three

- Enroll in and complete no more than one course per quarter
- Continue developing a research portfolio
- By August 31st: successfully defend dissertation proposal
- Year Four and Beyond
 - Continue developing research portfolio
 - Complete and defend dissertation

Throughout the program, behavioral students are expected to follow department expectations, policies and rules listed <u>here</u>.

Coursework

Consumer Behavior Students

During the first two years of the program, behavioral doctoral students take a total of 24 classes (4 per quarter), including eight courses taught in the marketing department. This rigorous commitment to coursework gives students an opportunity to build their expertise in key social-science approaches and theories and allows students to take advantage of the instruction available via the many excellent Northwestern doctoral programs beyond marketing (for example, psychology, organizational behavior, and sociology). In addition to introducing students to theoretical areas of research, these courses provide students with training in research philosophy, experimental techniques, and statistical analysis.

Students in their third year and beyond can take additional courses as needed.

Marketing Department Courses: Behavioral

The marketing department offers four doctoral-level behavioral courses each year. First-year and second-year students take all four courses each year. More senior doctoral students are welcome to enroll.

Three courses serve as the core foundation for the behavioral doctoral curriculum. We offer a course on **Theory Building** in the fall quarter, **Methods & Data** in the winter quarter, and **Relevance & Applicability** in the spring. Each of these courses is typically co-taught by two marketing faculty members, and each course has a primary emphasis (or "lens"). However, because the skills (and thus the courses) are inter-related, the courses will touch on more than one core skill.

The general emphasis of the three core courses is described below. The primary purpose of these courses is to teach skills. In many cases, learning skills will involve reading and reviewing published research that reflects the different theoretical models, methodological perspectives, and research philosophies that are applied in marketing as well as in related fields. Thus, these courses also have a secondary but important learning objective to acquaint students with some of these paradigms.

Below is a sample of the kinds of questions that are addressed by each of the courses. (Individual courses may or may not address these particular questions—they are meant merely to help clarify the type of inquiry encouraged by each of the courses.)

Theory Building (fall quarter): The foundations of how theories are built.

- E.g., "What counts as 'theory' and how is it developed?"
- E.g., "How to build a nomological net?"
- E.g., "What influence does different kinds of evidence have on theory building?"

Methods and Data (winter quarter): Statistical methods for conducting research.

- E.g., "How is regression different from logistic regression or ANOVA?"
- E.g., "When should one use a within-participant versus between-participant design?"
- E.g., "How to graphically plot regression results?"

Relevance and Applicability (spring quarter): How to make theory tests relevant and applicable to current marketing issues and/or to public policy.

- E.g., "How does one bridge from theory to something practitioners or policy makers care about?"
- E.g., "How to run a field experiment?"

• E.g., "How to increase realism of laboratory experiments?"

The marketing department offers a fourth course each year, which varies from year to year. The objective is to provide flexibility in the set of skills taught in the standard three-course offering.

Marketing Department Courses: Quantitative

At Kellogg, we believe that behavioral students who graduate with a doctorate in marketing should have some familiarity with the kind of research done by the more "quantitative" side of marketing research. Therefore, in addition to taking the four behavioral courses described above during each of their first and second years, behavioral students are required to take one doctoral seminar offered by the quantitative marketing faculty at some point during their Kellogg graduate studies. Students often do this during their second year.

Additional Doctoral Courses at Northwestern

Beyond the required marketing courses, behavioral doctoral students fulfill their course requirements by taking courses in departments outside of marketing. These courses are typically those offered by the psychology and the organizational behavior (or "MORS") department at Northwestern. Students also find useful and relevant courses in departments such as sociology, statistics, anthropology, education, philosophy, communication studies, and economics.

Independent Study

In rare cases, students in their first and second years may sign up for an independent study with a faculty member as one of the four courses. A marketing Director of Graduate Studies (DGS) must approve independent studies and no more than one independent study may be taken in a quarter. Independent studies are approved only to the extent that the proposed course reflects a level of rigor and expectations similar to a typical doctoral seminar, and only to the extent that the work is not explicitly focused on the development of a first-year or second-year paper. Students should work closely with the faculty member to develop a syllabus for the independent study that clearly documents the course's aims and expectations. Students should take care that registering for an independent study does not preclude them from taking a course that is critical for their doctoral studies.

Qualifying Exams

Consumer Behavior Students

The prelim (or qualifying) exam serves a dual purpose: (1) to assess the skills of the student and (2) to motivate the student to productively assemble and organize the wealth of knowledge accumulated throughout the first year of the Ph.D. program.

The qualifying exams are administered during June of the first year. The exam normally takes place over two days.

The prelim exam is comprised of several questions. Each question corresponds to one of the marketing doctoral seminars that a student takes during his/her first year. Each question may be comprised of several parts. Students earn one of four marks for each question: High Pass (HP), Pass (P), Low Pass (LP), or Fail (F).

To continue in the doctoral program, a student must not earn a Fail on any question, and must earn a minimum of Pass on at least 75% of the questions.

A student who does not achieve the above standard will be given one opportunity to re-take any question for which

s/he received a Low Pass or Fail. Students who opt to re-take should be prepared to answer different questions than were posed as part of their first prelim exam.

First & Second Year Papers

Consumer Behavior Students

First and second year students are required to submit a research paper to the Marketing Directors of Graduate Studies (DGSs) by August 31 of each year. These papers demonstrate a student's ability to identify a quality research topic, to rigorously implement the necessary research activities for bringing the idea to fruition, and to write up the project as a manuscript that might be submitted to a journal. Students are also required to present a summary of their first or second year paper to the faculty and Ph.D. students in early September.

These papers (and the associated presentations) are important benchmarks in the Kellogg doctoral program. Students must pass the research paper requirement to continue in the program. In some cases, students who fail this requirement may be allowed to revise and resubmit the paper based on discussion and approval by the Marketing DGSs and the department.

When To Start Working On Your Summer Research Paper

Students may start on their summer research papers at any time. Indeed, students are strongly encouraged to start thinking about paper topics as early as possible. An optimal timeline is to develop a proposal and identify a faculty advisor by the start of the winter quarter and complete data collection (if applicable) before the start of the summer. Students are expected to spend most of the summer devoted to working on their research

Summer Paper Advisors and Readers

Students are expected to identify a Kellogg faculty member whom they think is well suited as a supervisor and to request that he or she serve as the paper advisor. If the faculty member agrees, he or she may serve primarily as an advisor or may take a more active role in the conceptualization and implementation of the work. In any case, the student must make clear and significant contributions to all phases of the project.

The summer paper advisor (in consultation with the student) will identify two faculty members—a primary and a secondary reader—who will evaluate the final research paper. Usually the first reader is the student's advisor for the paper.

Core Competencies That a Behavioral Summer Paper and Presentation Should Demonstrate

Below is a list of core competencies that students are expected to demonstrate when developing, writing, and presenting their summer papers. The competencies listed below are the same for first-year and for second-year papers, but second-year students are expected to demonstrate these core competencies more strongly and clearly. In addition to demonstrating these competencies, students are expected to adhere to the **Kellogg Honor Code** when developing any projects or research.

Conceptual and Theoretical Competencies

The Capacity for Intellectual Leadership: Students are expected to independently identify and develop a highquality research idea for the paper. Although this development can and should occur under the mentorship of a faculty member, students are expected to commit significant energy to idea generation and development. (Note: this skill is less critical for a first-year paper, where it is acceptable for faculty members to play a more directive role in identifying a topic.)

Expertise in the Relevant Literature: Students are expected to demonstrate an expert's knowledge of the relevant prior research, which may include research across more than one domain. This includes demonstrating the ability to critically evaluate prior research, and showing an understanding of the research at a construct level. *The Ability to Develop and Tell a Theoretical Story:* A summer paper should tell a theoretical story that uses prior findings to generate hypotheses of theoretical interest. Taken together, the studies presented in the paper should show some theoretical progress. This theoretical progress can involve connecting disparate literatures,

testing a new theoretical deduction, challenging existing theory and/or developing new theory. The studies should also demonstrate robustness (for example, via conceptual replication) and/or address alternative explanations. Students are expected to be able to clearly link study results to the theoretical story. Note: it is acceptable for results to be unsupportive of the theoretical story. In such cases, students should be able to link to theory by discussing what pattern of results would have supported the story and what can be learned from the results collected.

Technical Competencies

The Skills Necessary to Collect and Analyze Data Effectively and Appropriately: Students should take primary responsibility for collecting and analyzing data for their summer paper. This includes demonstrating an ability to design effective studies, to implement the studies, and to use the appropriate statistical techniques. Although there are no specific expectations for how many studies should be implemented and reported, it can be challenging to tell a theoretical story (see above) without presenting and discussing at least two studies. *Project Management Skills:* Students are expected to be the main motivator behind the paper's progress. This includes being pro-active about setting up an appropriate meeting schedule with the paper's faculty supervisor (and, if appropriate, with other faculty). It also includes establishing and following a research timeline that ensures the paper's completion by the deadline.

Communication Competencies

The Ability to Write a Clear Academic Paper: A student's development of the paper can and should occur under the mentorship of a faculty member. However, students are expected to take primary responsibility for writing the first draft, and should show an ability to communicate ideas clearly in writing. This includes writing clear hypotheses and abstracts, creating clear tables and figures, and following formatting similar to the formats expected at top journals like the *Journal of Consumer Research* or the *Journal of Marketing Research*. *The Ability to Make a Persuasive Academic Presentation:* A student's development of the presentation can and should occur under the mentorship of a faculty member. However, students are expected to take primary responsibility for putting together the presentation and for finding opportunities to practice presenting. On presentation day, students are expected to show that they can answer questions effectively, discuss research problems and flaws, and manage their allotted time effectively during a live presentation.

Developing Your Research Portfolio

The primary purpose of our program is to train students to produce world-class research and to help students develop publishable and influential research papers. A student's success on the job market as well as in his or her first few years as a professor is strongly influenced by the number of solid research projects (and/or publications) that the student has developed as a doctoral student.

We therefore strongly encourage students to get involved in research from the very beginning of the program. For students in their first two years, the most important research projects are the first-year and second-year papers. For more senior doctoral students, the most important research project is their dissertation.

However, just as faculty members are typically working on several research projects at the same time, students are also expected to develop a portfolio of research projects beyond the required papers. Students can certainly pursue these projects independently or with fellow doctoral students, but they frequently do so in partnership with faculty whom they have identified as having a knowledge base or a skill set that is relevant to the project.

Quantitative Marketing Specialization

Quantitative marketing researchers often draw on theories of behavior from economics, use data from observational sources and field experiments, and analyze data using advanced statistical and econometric techniques.

Academic Rigor, Real-World Relevance

Our program provides excellent training in all the skills and perspectives necessary for success as an academic researcher. Starting with a rigorous foundation in economics and statistics, students learn how to identify, develop, and implement research ideas that advance theory and practice. The goal is to empower doctoral students to become successful and independent quantitative researchers.

A Diverse World-Class Faculty

The Kellogg quantitative faculty study a number of different areas and embrace a range of theoretical and methodological perspectives. Our faculty publish in the top marketing and business journals, in addition to top journals in economics, statistics, and psychology. This diversity provides doctoral students with the guidance necessary for pursuing the research that interests them. To learn more about our current research interests, we encourage you to browse our webpages:

- Eric Anderson
- James Anderson
- Ulf Bockenholt
- Greg Carpenter
- Anne Coughlan
- Jennifer Cutler
- Brett Gordon
- Lakshman Krishnamurthi
- Blake McShane
- Anna Tuchman
- Song Yao
- Florian Zettelmeyer

Quantitative faculty members work closely with doctoral students to help them develop their research intuition and methodological skills at all stages of the doctoral program.

A Strong Research Culture

The development of influential academic research is a top priority for the Kellogg marketing department, and Kellogg's doctoral students take part in, and contribute to, the research culture. Learning occurs not only in courses, but also from fellow students and faculty, whether in the hallway or in a research presentation. The Kellogg research culture encourages intellectual curiosity, hard work, and critical thinking in the context of a mutually supportive environment. **Click here** for some recent examples of published research co-authored by Kellogg faculty and doctoral students.

The Kellogg marketing faculty hosts leading and emerging scholars on a regular basis. This allows doctoral students to become acquainted with accomplished researchers beyond Northwestern. Visiting scholars present their research and meet with both faculty and doctoral students. Just prior to the start of the school year each fall, the faculty hosts a one-day "marketing camp" where several scholars from outside Kellogg as well as members of the department present their research.

Brief Overview of the Program

During the first two years of the program, quantitative doctoral students take a mix of courses in marketing, economics, and statistics. In addition to four quantitative PhD courses in the marketing department, students receive rigorous theoretical and empirical training through the Microeconomic Theory, Econometrics, and Industrial Organization sequences. Elective courses allow students to develop specialized skills to advance their specific research interests. To this end, students also conceptualize, implement, and write up a substantial research project each year, which they develop under the mentorship of a Kellogg marketing professor, and which they present to the department in the fall of their second and third years.

In the remaining years in the program, students focus almost entirely on research. During this time, students conceptualize, develop and implement a doctoral dissertation. They do so under the direction of a dissertation chair and committee (whom the student selects) and a student's progress in the program for these remaining years is supervised by the dissertation chair. Students also frequently work with other faculty members on additional research projects that are aimed for publication in peer-reviewed academic journals. Because additional coursework may be needed or prove helpful in accomplishing these research goals, students can take more classes as needed or desired after their first two years

Once completion of their dissertation is in sight, doctoral students turn their attention to applying and interviewing for employment as assistant professors. Initial interviews take place in August every year, followed by campus visits in the fall and winter (to start employment in the subsequent fall).

- <u>Requirements and Benchmarks</u>
- <u>Coursework</u>
- Qualifying Exams
- First and Second Year Papers

Requirements & Benchmarks

Quantitative Marketing Students

Year One

- Enroll in and complete three to four courses per quarter
- Maintain a grade-point average (GPA) of 3.35
- Summer: take and pass qualifying exams
- Early September (just before start of second year): submit and present a first-year paper
- <u>Early September (just before start of second year): receive annual feedback from the directors of graduate studies</u>

Year Two

- Enroll in and complete two to four courses per quarter
- Maintain a grade-point average (GPA) of 3.35
- Early September (just before start of third year): submit and present a second-year paper
- Early September (just before start of third year): receive annual feedback from the directors of graduate studies

Year Three

- Enroll in additional courses as necessary to further your research agenda
- By August 31st: successfully defend dissertation proposal

Year Four and Beyond

• Complete and defend dissertation

Throughout the program, quantitative students are expected to follow the department expectations, policies and rules listed **here**.

Coursework

Quantitative Marketing Students

During the first two years of the program, quantitative doctoral students take a mix of courses in marketing, economics, and statistics. In addition to four quantitative PhD courses in the marketing department, students receive rigorous theoretical and empirical training through the Microeconomic Theory, Econometrics, and Industrial Organization sequences from the economics department. Elective courses allow students to develop specialized skills to advance their specific research interests.

This rigorous commitment to coursework gives students an opportunity to build their expertise in key approaches and theories and allows students to take advantage of the instruction available via the many excellent Northwestern doctoral programs beyond marketing (for example, economics, statistics, operations research, and computer science). In addition to introducing students to theoretical areas of research, these courses provide students with training in research philosophy and empirical analysis.

Students in their third year and beyond may take additional classes as needed.

Below is an example of a typical course plan for the first two years in the program.

Year 1 Pre-term: Micro and Econometrics boot camps

Fall	Winter	Spring
Quantitative Marketing: Introduction to Theory and Empirical Methods (MKTG 551-0)	Quantitative Marketing: Statistical Modeling (MKTG 552-0)	Quantitative Marketing: Structural Modeling (MKTG 553-0)
Microeconomic Theory (ECON 410-1)	Microeconomic Theory (ECON 410-2)	Microeconomic Theory (ECON 410-3)
Introduction to Econometrics (ECON 480-1)	Introduction to Econometrics (ECON 480-2)	Introduction to Econometrics (ECON 480-3)
[Optional class]	[Optional class]	[Optional class]

Year 2

Fall	Winter	Spring	
Topics in Quantitative Marketing	Industrial Organization (ECON 450-2)	Industrial Organization (ECON 450-3)	
[Elective class]	[Elective class]	[Elective class]	
Industrial Organization (ECON 450-1)	[Optional class]	[Optional class]	
	[Optional class]	[Optional class]	
[Optional class]			

Marketing Department Courses: Quantitative

The marketing department offers four doctoral-level quantitative courses each year. Students take four of these courses in their first year and one course in their second year. More senior doctoral students are welcome to enroll.

Three courses serve as the core foundation for the quantitative doctoral curriculum. Students start with an Introduction to Theory and Empirics in the fall quarter, which introduces a range of concepts and methodological techniques. In the winter students take Statistical Modeling to learn fundamental tools involved in Bayesian and statistical analysis. In the spring, students enroll in Structural Modeling and Analytical Modeling, which discuss the empirical and theoretical application of models grounded in economics to problems in marketing, respectively.

The marketing department offers a fourth course with topics that vary each year, and which allows us to flexibly extend the skills taught in our standard three-course offering.

Marketing Department Courses: Behavioral

At Kellogg, we believe that quantitative students who graduate with a doctorate in marketing should have some familiarity with the kind of research done by those who study consumer behavior. Therefore, in addition to taking the quantitative marketing courses described, quantitative students are encouraged, but not required, to take one doctoral seminar offered by the behavioral marketing faculty at some point during their Kellogg graduate studies. Students often do this during their second year.

Additional Doctoral Courses at Northwestern

Beyond the required marketing and economics courses, quantitative doctoral students can take additional courses as they see fit to achieve their academic goals. Within Kellogg, this might include courses offered in <u>Strategy</u>, <u>Operations</u>, Managerial Economics and Decision Making (<u>MEDS</u>), or Management and Organizations (<u>MORS</u>). Beyond Kellogg, students may take courses in <u>economics</u>, <u>statistics</u>, <u>mathematics</u>, <u>computer science</u>, or any other department if the student feels the course will benefit his or her research agenda.

Below are examples of additional doctoral classes that might be relevant:

Kellogg Structural Estimation in Operations (OPNS 523) Foundations of Managerial Economics I: Static Decision Models (MECS 460-1) Foundations of Managerial Economics II: Dynamic Decision Models (MECS 460-2) Foundations of Managerial Economics III: Game Theory (MECS 460-3) Contract Theory and Mechanism Design (MECS 465-1) The Economics of Organizations (MECS 475-0) Economics of Innovation (MECS 449-1) Economics, Social Psychology, and their Experiments (MORS 522)

Economics Applied Econometrics: Time Series (ECON 482) Applied Econometrics: Cross-Section (ECON 483) Statistics and Computer science Nonparametric methods (STAT 352) Generalized Linear Models (STAT 456-0) Topics in Statistics - Data Mining (STAT 359) Multivariate methods (STAT 448) Machine Learning (EECS 349, 395, 495) Social Media Mining (EECS 510)

Independent Study

In rare cases, students in their first and second years may sign up for an independent study with a faculty member as one of the four courses. A Director of Graduate Studies (DGS) must approve independent studies and no more than one independent study may be taken in a quarter. Independent studies are approved only to the extent that the proposed course reflects a level of rigor and expectations similar to a typical doctoral seminar, and only to the extent that the work is not explicitly focused on the development of a first-year or second-year paper. Students should work closely with the faculty member to develop a syllabus for the independent study that clearly documents the course's aims and expectations. Students should take care that registering for an independent study does not preclude them from taking a course that is critical for their doctoral studies.

Qualifying Exams

Quantitative Marketing Students

The prelim (or qualifying) exam serves a dual purpose: (1) to assess the skills of the student and (2) to motivate the student to productively assemble and organize the wealth of knowledge accumulated throughout the first year of the Ph.D. program.

The qualifying exams are administered near the end of June in the first year. The exam normally takes place over two days. Students are expected to answer a series of questions, which are typically written by the marketing faculty who taught the students during their first year. The format of the questions is not constrained and may include open-book, closed-book and/or oral questions.

In addition to the prelim exam in marketing, quantitative marketing students take the microeconomics and econometrics prelim exams from the economics department. These are normally given in mid-July.

The marketing faculty provides feedback on student performance on these exams and in cases where performance is unsatisfactory students may be allowed to re-take part or the entire exam. Students must pass both the marketing and two economics exams to continue in the doctoral program.

First & Second Year Papers

Quantitative Marketing Students

First and second year students are required to submit a research paper to the Marketing Directors of Graduate Studies (DGSs) by August 31 of each year. These papers demonstrate a student's ability to identify a quality research topic, to rigorously implement the necessary research activities for bringing the idea to fruition, and to write up the project as a manuscript that might be submitted to a journal. Students are also required to present a summary of their first or second year paper to the faculty and Ph.D. students in early September.

These papers (and the associated presentations) are important benchmarks in the Kellogg doctoral program. Students must pass the research paper requirement to continue in the program. In some cases, students who fail this requirement may be allowed to revise and resubmit the paper based on discussion and approval by the Marketing DGSs and the department. It is expected that the first and second year papers (as well as the associated data collection and analysis) will be the student's original work. However, students are also expected to identify a Kellogg faculty member whom they believe is well-suited to supervise the research paper to serve as the paper advisor. If the faculty member agrees, he or she may serve primarily as an advisor or may take a more active role in the conceptualization and implementation of the work. In any case, the student must make clear and significant contributions to all phases of the project.

Students may start on their summer research papers at any time. Indeed, students are strongly encouraged to start thinking about paper topics as early as possible. It is preferable for students to develop a proposal and identify a faculty advisor by the start of winter quarter and to complete data collection before the start of the summer. Students are expected to spend most of the summer devoted to working on their research.

Students must identify two faculty members—a primary and a secondary reader—who will evaluate the final research paper. Usually the first reader is the summer paper advisor.

Dissertation Proposal & Defense

After passing the qualifying examination and completing most of the coursework, a student should form a dissertation committee and begin formulating a dissertation proposal.

Dissertation Committee

A student's dissertation committee must be composed of at least four faculty members, no fewer than three of whom are on the Kellogg School faculty. At least one member of the committee must be from outside the student's program. From this committee, the student will choose a dissertation chair (or two co-chairs). The committee chair and at least one other member must hold appointments in the student's program to ensure that half of the committee members represent the student's program. Once the committee is formed, the dissertation committee (and not the Directors of Graduate Study) monitors progress and provides feedback, led primarily by the dissertation chair (or co-chairs).

Dissertation Proposal

The dissertation proposal outlines and specifies a substantive research project, discusses its significance to the development of knowledge, and explains the research methods to be used. Reporting some results is encouraged, but the proposal should be defended before a substantial part of the dissertation research is conducted.

A student's failure to form a dissertation committee and to successfully defend the proposal by August 31st of his/her third year is grounds for exclusion from the Ph.D. program. Students should be aware that faculty members travel more frequently during the summer months, which can create challenges for scheduling a defense. Thus, students planning to defend during the summer are strongly encouraged to start discussing potential defense dates with committee members **in the early spring**.

Once students form their dissertation committee and schedule a proposal date, they should notify the Marketing Directors of Graduate Studies (DGSs) and the Kellogg Doctoral Program Coordinator in writing.

Students must provide their dissertation committee with a written copy of their dissertation proposal at least two weeks before the scheduled defense (or earlier, if the committee needs more time). This is a firm requirement, which ensures that committee members have sufficient time to thoroughly review the document. Dissertation documents must be circulated to the entire dissertation committee and should be in their final draft form (e.g., including the general discussion and references). This requirement is in addition to any University or Kellogg requirements, which can be found <u>here</u>.

The chair(s) of the Dissertation Committee should announce the defense of the proposal to the marketing faculty and Ph.D. students at least two weeks in advance.

Dissertation Defense

A doctoral dissertation is a written document that describes a substantive research project, describes the methods used, presents empirical and/or analytical results, and discusses the significance of the conclusions for the development of knowledge. After submitting their completed dissertation to the dissertation committee, students defend their research during a presentation to the committee. The dissertation should be written up according to University guidelines, which can be found <u>here</u>.

Students must provide their dissertation committee with a written copy of their dissertation at least two weeks before the scheduled defense (or earlier, if the committee needs more time). This is a firm requirement, which ensures that committee members have sufficient time to thoroughly review the document. Dissertation documents must be circulated to the entire dissertation committee and should be in their final draft form (e.g., including the general discussion and references).

The chair(s) of the Dissertation Committee should announce the defense of the proposal to the marketing faculty and Ph.D. students at least two weeks in advance.

Students are strongly advised **not** to schedule their dissertation defense close to the expected deadline for graduation. This is because it is not uncommon for a dissertation committee to ask for revisions to the dissertation as a condition for approving the dissertation. For example, because students wishing to graduate in June of a given year are usually required to submit all approved materials by May of that year, the dissertation defense should be scheduled well in advance of that deadline.

Once all committee members have approved the dissertation, students submit the document to The Graduate School.

Additional Expectations & Policies

Physical Presence

Being in the Kellogg Ph.D. program is a full-time job. It is crucial that students maintain a physical presence at the department, including during the summer months. On days when students choose to work at home or in the library, they are expected to be available for meetings with faculty during normal office hours.

Each year the Marketing Department invites eminent scholars from peer research institutions to present their research at seminars. Students are expected to attend all seminars, even if the topic is not related to their own research interests. By attending these seminars, students gain important general skills and an understanding of the communication norms that are critical for improving their own research presentations. Mastering the Ph.D. is not the result of one or two activities, but an accumulation of hours of varied activities.

When scholars visit from other institutions, time is usually set aside in their schedule to meet with doctoral students. Students are expected to take advantage of these opportunities—they offer an excellent chance to get advice about everything from choosing a dissertation topic to publishing in top journals.

Expected Grade-Point Average (GPA)

The Marketing Department requires that students maintain a minimum grade point average of 3.35. In addition to the University's rules and requirements on incomplete grades, the Marketing Department strongly discourages doctoral students from taking incomplete grades in their courses. Note that the Marketing Department's minimum grade point average requirement is higher than, and thus supersedes, the Graduate School's (TGS) guidelines that each student maintains a minimum grade point average of 3.0 in graduate courses.

Annual Feedback

In September of each year, the faculty meet to discuss the progress of each doctoral student. This includes discussion of the student's class grades, research projects, work as an RA or TA, and contributions to the department's research culture. First-year and second-year students also receive written feedback summarizing the faculty's perspective on the student's progress, and includes discussion of the student's strengths as well as the most significant opportunities for improvement. Students who have made satisfactory progress will advance to the next stage of the doctoral program. In cases where a student's performance is unsatisfactory, the student may be placed on probation or dismissed from the program, as determined by the faculty's assessment of the aforementioned factors.

Research and Teaching Assistantships

A critical part of the doctoral program is forming relationships with faculty members and obtaining firsthand experience about the research and teaching processes. Throughout their tenure in the Ph.D. program, students are involved in research and teaching assistantships. The Marketing Directors of Graduate Studies (DGSs) will schedule TA and RA assignments before the start of the academic year. First-year students are not required to work as teaching or research assistants, but are encouraged to get involved in research activities early. Fifth-year students are also excused from all teaching or research assistant work. Often students split this year off from these duties between their fourth and fifth years, due to the timing of the academic job market in the summer.

The faculty has high expectations for TA and RA performance. Students should approach their assignments in a professional manner. It is strongly recommended that students schedule a meeting with their assigned faculty prior to TA and RA work at the beginning of each quarter to discuss faculty expectations. Students are to keep an accurate account of the hours spent on TA and RA assignments each week.

General Advising for First-Year and Second-Year Students

The Marketing Directors of Graduate Study (DGSs) are available and willing to advise all doctoral students regarding their academic performance and progress, to answer questions about school or department policy, and to provide advice on other matters related to the doctoral program. At the same time, the DGSs are often not experts in the area of research that students wish to pursue. Students are therefore generally expected to seek out and establish research partnerships with faculty who better match their areas of interest; these faculty members often become the student's key advisor or mentor.

The DGSs are the primary advisors for first-year students when they arrive, and this advisory relationship can continue into the second year if the student has not identified alternative primary advisors. The DGSs assist first-year and second-year students in course selection and provide annual feedback on their performance.

Obtaining a Master of Science (MS) In Marketing

Students who have completed the first year of study may be eligible for a Master of Science (MS) degree in Marketing. The requirements include the following:

- 1. Complete 10 graded doctoral courses and maintain an overall 3.35 GPA from the list of approved Ph.D. courses.
- 2. Complete and present a satisfactory first-year paper (minimum MS pass). The paper and presentation to faculty must be completed by mid-September and/or before the start of their second year.
- 3. Approval by the student's MS committee consisting of three faculty members. Unless otherwise approved by the department, this committee will consist of the department chair and the two Directors of Graduate studies. Students must receive a "MS pass" from the committee to be awarded the Master of Science.

Childbirth Accommodation Policy

The Northwestern Graduate School childbirth accommodation policy applies to Kellogg doctoral students. <u>More</u> <u>information</u> can be found at the Northwestern Graduate School website.

Research and Academic Support

The Marketing Department strives to provide Ph.D. students with the resources necessary for a successful academic career. Each Ph.D. student is given a workspace, a personal computer with office software and access to the university mainframe, library access, online academic journal access and an e-mail account. Throughout the Ph.D. program we encourage students to attend academic conferences in their area.

Beyond the stipend provided by the school, the marketing department provides each student with a budget for research and academic expenses such as textbooks, research software, conference expenses, etc. Student budgets are determined on an annual basis by the Marketing Department. Requests for reimbursement from this budget must be submitted with original receipts to the Departmental Assistant within 90 days of incurring the expense. Only legitimate expenses are approved—for example, conference travel must be relevant to the student's research and career objectives.

Additional Work

As a general guideline, Ph.D. students are discouraged from performing extra work beyond the assigned TA/RA responsibilities. The generous research support is designed to provide Ph.D. students with sufficient financial resources. A limited amount of extra work on grading, Dean's Office surveys, etc. may be acceptable, provided that it does not interfere with research progress. Extra work such as consulting and non-Kellogg activities is strongly discouraged and may impact both future funding and status in the Ph.D. program.

Students must receive approval of the DGSs BEFORE engaging in any additional work. In all cases, hours of

extra work must be reported to the DGSs and they will evaluate whether this work is affecting progress in the Ph.D. program.