

## Program Change Request

Date Submitted: 01/19/23 2:42 pm

Viewing: **PHD 133BUS : Business**

Sub Plans: [Sub Plan Key 1387](#), [Sub Plan Key 1390](#), [Sub Plan Key 1392](#), [Sub Plan Key 1394](#), [Sub Plan Key 1396](#), [Sub Plan Key 1398](#), [Sub Plan Key 1400](#)

Last approved: 04/20/22 12:42 pm

Last edit: 01/31/23 9:49 am

Changes proposed by: douthouse

Catalog Pages Using [Business, Ph.D.](#)  
this Program

**In Workflow**

1. BUSINESS Dept. Approver
2. BUS School Admin Reviewer
3. BUS School Approver
4. APIR Admin
5. GFEC Approver
6. UAPC Approver
7. Registrar

Name of the school or college academic planner who you consulted with on this proposal.

Name
Dana Outhouse - BUS

Proposal Abstract/Summary:

In February 2022, GFEC was presented with the 10 year review of the Wisconsin School of Business (WSB) PhD program. One of the concerns noted in the review was a lack of core processes and assessments across the 7 specializations. There was confusion as to if this was one PhD program or seven separate programs. After internal review we noted that the specializations are being run as separate programs with some centralized functions and therefore, we would like to add named options to the PhD in Business. This structure will help us align with our peers and will ensure that information communicated to students is accurate based on the specific requirements for their specialization/named option. This proposal is to update the parent program: PHD 133 BUS: Business and push it through with the new named option proposals.

If approved, what term should the proposed change start? (usually the next fall term)

Fall 2023 (1242)

Is the change being proposed only a curricular change that would impact fewer than 50% of the credits in the program (i.e., plan or subplan) under consideration?

No

**Approval Path**

1. 01/19/23 2:44 pm  
Dana Outhouse (douthouse): Approved for BUSINESS Dept. Approver
2. 01/20/23 11:03 am  
Dana Outhouse (douthouse): Approved for BUS School Admin Reviewer

**History**

1. Sep 19, 2018 by clmig-kalatalo
2. Oct 8, 2018 by Nikki Wiessinger (wiessinger)
3. May 7, 2019 by Sharon Kahn (smkahn)
4. May 14, 2020 by Dana Outhouse (douthouse)
5. May 11, 2021 by Brigid Patterson (baclemens)
6. Apr 12, 2022 by Brigid Patterson (baclemens)
7. Apr 13, 2022 by Karen Mittelstadt (mittelstadt)
8. Apr 20, 2022 by Melissa Schultz (mrschultz3)

### Basic Information

Program State: Active

Type of Program: Degree/Major

Who is the audience? Graduate or professional

Home Department: School of Business (BUSINESS)

School/College: School of Business

The program will be governed by the home department/academic unit as specified. Will an additional coordinating or oversight committee be established for the program?  
No

Is this in the Graduate School? Yes

Award: Doctor of Philosophy

SIS Code: PHD 133BUS

SIS Description: Business PHD

Transcript Title: Business

Named Options: [Parent Plan 1387; No Title Found](#)  
[Parent Plan 1390; No Title Found](#)  
[Parent Plan 1392; No Title Found](#)  
[Parent Plan 1394; No Title Found](#)  
[Parent Plan 1396; No Title Found](#)  
[Parent Plan 1398; No Title Found](#)  
[Parent Plan 1400; No Title Found](#)

Will this be offered as an additional major as well? Yes

Explain the program's process for reviewing joint degree proposals from students.  
There is a joint PhD program in place between Finance and Economics which does not require further review. Any other joint degree proposals would be reviewed and approved by the WSB PhD and Research Committee.

Will a doctoral minor or graduate/professional certificate be required? No

Describe how you will inform current students in the program about this change. Also describe your for advising future students who are interested in completing a minor or graduate/professional certificate in addition to the major requirements.  
[Breadth will be See the attached memo for how breadth is addressed in each WSB PhD named option, pathway.](#)

Roles by Responsibility: List one person for each role in the drop down list. Use the green + to create additional boxes.

Role Type	Name (Last, First)	Email	Phone	Title
Primary Contact	Stevens, Patrick	ptstevens@wisc.edu	608/262-3749	Director, PhD/MS Programs and Research Administration
Primary Dean's Office Contact	Zehms, Karla	zehms2@wisc.edu	608/234-1052	Associate Dean of Doctoral Programs and Research

List the departments that have a vested interest in this proposal.

Departments
<a href="#">College of Letters &amp; Science (L&amp;S)</a>
<a href="#">Col of Agricultural &amp; Life Sci (CALS)</a>
<a href="#">College of Engineering (ENGINEERG)</a>
<a href="#">School of Med &amp; Pub Hlth ADM (SMPH ADM)</a>
<a href="#">LaFollette Schl Public Affairs (PUB AFFR)</a>
<a href="#">School of Education (EDUCATION)</a>

Inst for Environmental Studies (ENVIR ST)

Are all program reviews in the home academic unit up to date?	Yes
Are all assessment plans in the home academic unit up to date?	Yes
Are all assessment reports in the home academic unit up to date?	Yes
Mode of Delivery:	Face-to-Face (majority face-to-face courses)
Will instruction take place at a location geographically separate from UW-Madison?	No
Will this program have outside accreditation?	Yes

Guide Accreditation tab

**Accreditation**ACSB International—The Association to Advance Collegiate Schools of Business

Accreditation status: Accredited. Next accreditation review: 2026–2027.

Will graduates of this program seek licensure or certification after graduation? No

Year of three year check-in to GFEC (3 years after first student enrollment):

Year of first program review (5 years after first student enrollment):

If this proposal is approved, describe the implementation plan and timeline.

If this proposal is approved, we will implement it with the start of the upcoming Fall semester. This change would result in minimal (or no) disruption in our current practices. It will simply change which plan code these students declare under. To address this we have already begun working with our ITS team on what is needed to update the code in our application to align with the new codes that will be in SIS. Our application runs a nightly upload to SIS to map applicants to the appropriate program they have applied for. The applicant/user will see no change in the application with this change.

**Rationale and Justifications**

What is the rationale for this change?

In February 2022, GFEC was presented with the 10 year review of the Wisconsin School of Business (WSB) PhD program. One of the concerns noted in the review was a lack of core processes and assessments across the 7 specializations. There was confusion as to if this was one PhD program or seven separate programs. After internal review we noted that the specializations are being run as separate programs with some centralized functions and therefore, we would like to add named options to the PhD in Business. This structure will help us align with our peers and will ensure that information communicated to students is accurate based on the specific requirements for their specialization/named option.

What evidence do you have that these changes will have the desired impact?

This structural change is being made to better align the structure of the program with how it actually operates. We do not have any actual evidence that this is a change that students need or want. However, making the change to the named option will result in the student receiving a transcript that denotes a PhD in the named option and this will be a more accurate representation of the student's work while at the Wisconsin School of Business. We did benchmark with other Big Ten institutions and learned that all of the responding institutions offer their PhD with named options. This change will better align our students with their peers.

**Diversity and Inclusion**

Describe how the proposed program curriculum and learning outcomes will advance inclusive excellence. Discuss specific components and requirements within the curriculum that will offer students opportunities and learning activities to engage in diversity with respect to perspectives, theories, practices, and populations different from themselves. If internships or clinical, practicum, or experiential learning experiences will be required, discuss how students will have access to diverse practice settings.

We look to accomplish this goal by taking a 360 approach that connects the learning outcomes from orientation through graduation and placement. Our learning outcome of understand and adhere to ethical and professional conduct in a diverse scholarly environment is in place to lay the foundation for developing an inclusive and global prospective of ideas before the students even set foot in the classroom. This foundational outcome is developed through completion of the Teaching Improvement program which educates our students on who to be aware of and confront their own bias within the classroom, how to create an environment that respects multiple perspectives, and how to behave ethically. This continues into the semester with the expectation that our student complete both the Graduate Assistant Equity Workshop as well as actively participate in Gen Bus 933 - Beginning a Research Career which explores life as a business PhD student, ethics, and a self-reflection of one's own experiences and how those relate to their journey to a PhD program as well as others journeys and how those experiences will inform future decision making.

The next step in the process is through the courses our students take and the outcomes of them (1) articulating frontiers, limits and challenges with respect to theory, knowledge and practice within the field of study, (2) developing a proficiency in methodology relevant to the field of study, and (3) creating research and scholarship that makes a substantive contribution within their field of study. Through the comprehensive set of foundational courses, our students will have the basis to explore and discuss the different perspectives, theories and practices of their field. With this background, our students will be equipped to explore and discuss how different perspectives, theories and practices impact different populations. The students are also encouraged to explore how certain populations may have been excluded when the theory or practice was development and to use the changing demographics of the population to make a substantive contribution within their field, considering all groups and populations.

Lastly, we expect that our students will be able to take aspects of the previous learning outcomes to articulate complex and ambiguous ideas in a clear and understandable manner through satisfactory presentation of research papers. A large part of their development will be to learn how to identify, organize and communicate, both in written and verbal form, material that is important to different audiences in a manner each particular audience can easily identify with and understand.

Discuss how the proposed program will actively pursue an equity in student recruitment, access, retention, and degree completion. Describe specific strategies to identify and recruit a diversified student population for programs that do direct admissions. Include evidence-based and effective practices. Provide examples of academic and student support services that will be implemented to support student learning success and completion.

Our goal is to admit applicants in each class from varying backgrounds and professional experiences in hopes of creating a collaborative community of students dedicated to research and teaching. The Wisconsin School of Business has been involved with the PhD Project since its inception to increase the participation of under-represented minorities in PhD business

to respond to increase the participation of other represented minorities in the business programs. The PhD Project was founded upon the premise that advancements in workplace diversity could be propelled forward by increasing the diversity of business school faculty. Today, their expansive network of supporters, sponsors and universities helps Black/African-Americans, Latin/Hispanic-American and Native Americans attain their business PhD and become the business professors who will mentor the next generation of leaders. Support is made available to all students who are looking for strategies on how to persist and be successful in the classroom (resources are made known and discussed on an individual basis).

Consider how the proposed program will ensure equity in recruiting and hiring of faculty, instructional staff, and staff who will oversee the program curriculum, professional/career development experiences, and research/scholarship where relevant.

The Human Resources team in the Wisconsin School of Business recently implemented significant new requirements in order to ensure fair practices and equity in recruiting and hiring of faculty and staff. Those practices include but are not limited to the development of a comprehensive guide to employment searches called Searching for Excellence & Diversity. The 100+ page document details best practices for running an effective and efficient search committee, how to recruit an excellent and diverse pool of applicants, how to recognize and eliminate unconscious bias during the candidate evaluation process, conducting a fair and thorough review, and ensuring a fair interview process. These steps are supported by staff members in HR, who attend the initial search kick-off meeting, and are proactively involved in the continuation of the process including conducting a review of search criteria prior to opening the pool of candidates. Additionally, they review interview questions prior to the start of interviews and conduct a salary review prior to an offer being extended.

Note any plans or strategic initiatives at the university that are closely linked with the development of the proposed program. Note how efforts will align with the appropriate and applicable accreditation standards that address diversity where relevant. To the extent that the response to questions related to diversity, equity, and inclusion are connected to plans at the department, school/college or university, make those connections explicit where relevant.

The University of Wisconsin-Madison Diversity Framework includes 5 goals. The WSB and PhD Program aligns closely with several of the goals identified by campus.

Specifically, UW Goal 2: Improve coordination of campus diversity planning is aligned closely with the WSB decision to create an Office of Diversity & Inclusion to enhance campus communication and coordination goals as well as improve climate and offer significant programming and mentoring. Binnu Palta Hill, Asst. Dean, WSB, leads those efforts. As a result, the WSB is more informed and so is campus. Programming developed and delivered in WSB has been shared with others on campus.

Finally, UW Goal 4: Improve institutional access through effective recruitment of diverse students, faculty, and staff. This alignment is explained more fully in answers above as well as our connection to the PhD Project.

Specifically, Roadmap 2025 identifies 3 key goals: deliver a Top 10 BBA Program; 2) deliver a market-driven graduate portfolio; 3) maximize research impact. In order to achieve our goals, there are several core initiatives needed to assure success. Among those are an increased focus on diversity and inclusion across students, faculty, and staff to develop our people and culture. To that end, recruitment and retention efforts, programming, curriculum, and climate efforts details in these questions are all important areas of focus.

## Faculty and Staff Resources

Confirm that the program advisor(s) or coordinator(s) have been consulted and reviewed this proposal. Yes

Select the Graduate Research Scholars Community for this program.

Business Graduate Research Scholars

## Resources, Budget, and Finance

Is this a revenue program? No

What is the tuition structure for this program?

Standard graduate, per-credit resident/MN/nonresident

Will segregated fees be charged?

Yes

Rationale for segregated fees.

Given considerations associated with the proposed change, describe the academic unit's fiscal capacity to support the instructional and curricular requirements, academic and career advising, student support services, technology needs, and relevant assessment of student learning and program review requirements. Is there sufficient capacity in the curricular and academic support services to meet the additional workload? For research graduate programs, include information on how the program will be administered and how student funding will be handled. For undergraduate programs, include information on academic advising, career advising, student support services.

No additional resources will be needed – this is a change in the way the program is presented at the university level (i.e., official named options vs unofficial tracks). No one in the program should see any difference in the way the program is administered.

Does the program or change require substantial new resources other than those just described? Describe the needs. Confirm that the dean is committed to providing the resources.

No

## Curriculum and Requirements

What percentage of the curriculum, if any, is being proposed to change via this proposal? 50% or more of the curriculum will change

Provide an explanation of the reasons for such a substantial curricular change, the potential impact on students, availability of courses, and plan for transition.

In February 2022, GFEC was presented with the 10 year review of the Wisconsin School of Business (WSB) PhD program. One of the concerns noted in the review was a lack of core processes and assessments across the 7 specializations. There was confusion as to if this was one PhD program or seven separate programs. After internal review we noted that the specializations are being run as separate programs with some centralized functions and therefore, we would like to add named options to the PhD in Business. This structure will help us align with our peers and will ensure that information communicated to students is accurate based on the specific requirements for their specialization/named option.

Guide Admissions/How to Get In tab

Admission consideration requires a four-year undergraduate degree or the equivalent, in any discipline, from an accredited institution. Work experience is not required. Applicants should have an undergraduate minimum grade point average (GPA) of 3.0 or higher on a 4.0 scale. In addition to academic credentials, test scores, personal achievements, motivation, communication skills (written and oral) and recommendation letters are considered in the admission process at both the master's and doctoral levels.

*Please note:* The Graduate Management Admission Test (GMAT) or the Graduate Record Exam (GRE), taken within five years of the starting term, is required of all applicants to the School of Business Ph.D. and M.S. programs. Also, all domestic (including Puerto Rico) and international applicants whose native language is not English must submit scores from the Test of English as a Foreign Language (TOEFL). A recommended minimum TOEFL score of 106 (New iBT) and 27 Speaking, obtained within two years of the intended starting term, is needed for admission consideration. International applicants who have completed a four-year bachelor's degree in a country where the official language is English may request a waiver of the TOEFL requirement. A master's degree from an English-speaking institution does not qualify for a waiver of the TOEFL, unless you have completed a minimum of 4 years of education (undergrad and graduate) in a country where English is the native language. The school accepts IELTS and Pearson Test of English as substitutes for TOEFL.

To learn more about the application and admissions process, visit [Ph.D. Admission Requirements](#).

## How to Apply

Students interested in business degrees do not apply through the Graduate School application system and should instead refer to the [School of Business Admissions page](#).

Those who are not familiar with using the html editor fields may upload a document with information about the curriculum for use by those who will format and edit the content that will appear in the Guide.

Guide Requirements tab

Approved Shared Content from /shared/graduate-minimum-degree-requirements-and-satisfactory-progress/

Last Approved: Apr 26, 2022 10:55am

## Minimum Graduate School Requirements

Review the Graduate School minimum [academic progress and degree requirements](#), in addition to the program requirements listed below.

## Major Requirements

### MODE OF INSTRUCTION

Face to Face	Evening/Weekend/Online	Hybrid	Accelerated
Yes	No	No	No

Mode of Instruction Definitions

Approved Shared Content from /shared/graduate-school-mode-instruction-definitions/

Last Approved: Dec 8, 2022 2:25pm

**Accelerated:** Accelerated programs are offered at a fast pace that condenses the time to completion. [Students typically take enough credits aimed at completing the program in a year or two.](#)

**Evening/Weekend:** Courses meet on the UW-Madison campus only in evenings and/or on weekends to accommodate typical business schedules. Students have the advantages of face-to-face courses with the flexibility to keep work and other life commitments.

**Face-to-Face:** Courses typically meet during weekdays on the UW-Madison Campus.

**Hybrid:** These programs combine face-to-face and online learning formats. Contact the program for more specific information.

**Online:** These programs are offered 100% online. Some programs may require an on-campus orientation or residency experience, but the courses will be facilitated in an online format.

### CURRICULAR REQUIREMENTS

Minimum Credit Requirement	51 credits
Minimum Residence Credit Requirement	32 credits
Minimum Graduate Coursework Requirement	26 credits must be graduate-level coursework. Details can be found in the Graduate School's Minimum Graduate Coursework (50%) policy ( <a href="https://policy.wisc.edu/library/UW-1244">https://policy.wisc.edu/library/UW-1244</a> ).
Overall Graduate GPA Requirement	See Named Options for this requirement.
Other Grade Requirements	n/a
Assessments and Examinations	See Named Options for this requirement.
Language Requirements	There are no curricular language requirements for Business Ph.D. students.
Breadth Requirement	A doctoral minor or Graduate/Professional certificate is not required; Breadth is achieved in other ways.

### Required Courses

[Select a Named Option for required coursework.](#)

[Business Ph.D.](#)

## NAMED OPTIONS

A named option is a formally documented sub-major within an academic major program. Students choose one of seven curricular pathways 1 to complete course requirements. In addition to pathway requirements, all Ph.D. students are required to participate in the Teaching Improvement Program and Graduate Assistant Equity Workshop. Accounting and Information Systems Pathway 1 Students in our program develop a basic research background in both archival and behavioral empirical research. [Named options appear on](#) the transcript with degree conferral. [Students pursuing the PhD](#) must select one of the following named options: the country in terms of support for different research methodologies and topics.

**INSERT TABLE WITH ALL OF THE NEW NAMED OPTIONS BEFORE GUIDE PUBLISH:**

Most students ultimately specialize in the research area and methodology that best suits their skills and research interests. Both behavioral (including experimental economics) and archival methods are strongly supported. Independent Research Students are required to present to the faculty an original research project (possibly co-authored with a faculty member or with another student) by the end of the student's third year in the program. Independent of the presentation requirement, students must have completed a draft of their dissertation proposal (approved by their advisor) prior to the preliminary oral examination. Actuarial Science, Risk Management, and Insurance Pathway 1 The course sequence for Ph.D. students in actuarial science, risk management, and insurance is customized to fit each student's unique research interests and background. During your first two years of study, you will work with a Ph.D. faculty advisor to set an appropriate course sequence, consisting of a combination of courses within the Wisconsin School of Business and a set of advanced courses that form a coherent package and enhance your research skills from outside of the Wisconsin School of Business. Finance Pathway 1 Finance Workshop and Brownbag Series Students are required to attend the weekly finance workshop and are strongly encouraged to attend the weekly brownbag seminar. Within two semesters of passing the PhD preliminary exam, doctoral students are required to make a presentation in either the workshop or the brownbag seminar of either a thesis proposal or a literature survey. In addition, students are required to give a workshop presentation of their dissertation research. Normally this presentation occurs shortly before the student begins their job search. Summer Paper During the first summer the students are required to complete a literature review paper on a topic approved by the PhD committee or by the student's advisor. During the second summer, students are required to complete a research paper that should be on a finance topic and contain elements of original research that extend the existing literature. The topic may be either theoretical or empirical and should be chosen in consultation with one or more of the finance faculty, who may also provide guidance during the paper's development. The written paper should be submitted no later than the first day of the fall semester. The student will make an oral presentation of the paper to the finance faculty early during that fall semester. In order to successfully complete this requirement, it is important for the student to choose a topic and begin data gathering and other preliminary work in the Spring semester. Management and Human Resources Pathway 1 The management and human resources department offers a slate of foundational Ph.D. seminars across the group's core areas of research, including human resource management (HR), organizational behavior (OB), organizational theory (OT), entrepreneurship (ENT), and strategy. The seminar offerings vary from year to year. Doctoral students are expected to take all Ph.D. seminars offered by the department, which consists of 17 credits. Preliminary exams are written at the end of the second year. The exam, which takes place over two days, consists of four questions. Two questions cover the student's primary concentration, one question covers the student's secondary concentration, and there is one methods question. (The concentrations are human resource management, organizational behavior, or strategy/ENT/OT.) The subsequent two years of study are allocated to developing and defending a dissertation. Marketing Pathway 1 Summer Paper Requirement Following students' first year in the program, they are required to complete a research project, typically in collaboration with a faculty member. The summer paper should be based on a student's research interests, and it may be empirical or conceptual in nature. The summer paper must be submitted to the doctoral committee no later than August 13. Students will receive written feedback from the committee, including specific comments that will be similar to what they can expect in reviews from journals. Students will present the research to the department during the fall speaker series and receive feedback from the doctoral committee on their progress. Operations and Information Management Pathway 1 The Operations and Information Management Pathway is designed to be customized by each student. Each student will work directly with their advisor to determine the appropriate courses to take to meet all of the requirements listed below. For a student entering the Ph.D. program with a master's degree in the major area, the required coursework is estimated to take two years. Students without a relevant master's degree may take an additional semester to complete the required coursework. Before becoming a dissertation Ph.D. students must both complete 32 credits of coursework and pass a preliminary exam. Proposal Examination An oral dissertation proposal exam is to be taken approximately one year after the successful passing of the preliminary exam. Two weeks prior to the exam, a dissertation proposal document should be submitted to the examination committee. This proposal should contain (1) a clear statement of and motivation for, the dissertation topic; (2) a thorough review of the literature; (3) an in-depth discussion of the research methodologies and analysis approaches that will be followed; (4) anticipated findings and contributions of the research; and (5) a time-phased plan of milestones to be reached during the remainder of the candidate's study. The proposal exam can only be taken twice. The second exam must be taken within one year of the first exam. Failure to pass the second time, as decided by the examination committee, will lead to the student's termination from the PhD program. Real Estate and Urban Land Economics Pathway 1 The Wisconsin PhD Program in Real Estate and Urban Land Economics prepares individuals for careers in research and teaching at the university level. The program is academically rigorous and highly quantitative, providing a strong foundation in financial and economic theory, as well as in mathematical and statistical techniques. Through a customized program of elective courses and dissertation research, students specialize in a particular area of real estate economics and finance. Summer Paper Requirement During the first summer, students are normally preparing for the Microeconomics preliminary exam. During subsequent summers they are involved with research activities or supplementary coursework. They may also be employed in assistantship positions or internships which enhance their knowledge and research skills. During the second summer, there is also a specific requirement to complete a research paper. This paper should be on a real estate economics or finance topic and contain elements of original research which extend the existing literature. The topic may be either theoretical or empirical and should be chosen in consultation with one or more of the real estate faculty, who may also provide guidance during the paper's development. The written paper should be submitted no later than the first day of the fall semester. The student will make an oral presentation of the paper to the real estate faculty early during that fall semester. In order to successfully complete this requirement, it is important for the students to choose a topic and begin data gathering and other preliminary work in the Spring semester. Examinations Students must take the Microeconomics Theory Exam at the end of their first year in the program.

<sup>1</sup>These pathways are internal to the program and represent different routes a student can follow to earn this degree. Pathway names do not appear in the Graduate School admissions application, and they will not appear on the transcript.<sup>2</sup>

Starting in the second semester, students take the real estate workshop. This workshop is designed to help students make progress toward completion of their second-year paper and their dissertation. Students are required to take this course 5 times for credit. Students are encouraged to audit this workshop during their first semester and while working on their dissertation.

<sup>3</sup>

At the beginning of the second year, each student proposes a set of three advanced courses that form a coherent package and enhance the student's research skills. Students are free to choose PhD level elective courses offered by the economics, finance, agricultural & applied economics, mathematics, or statistics departments. It may also be appropriate to choose courses in computer science, law, psychology, accounting, marketing, or other areas taught at UW-Madison.

<sup>5</sup>This could include the following courses: ECON 715%7C Code Title, ECON 899%7C Code Title, REAL EST 990%7C Code Title, REAL EST 999%7C Code Title, and other non-research coursework decided with their advisor.

Real Estate Courses			
REAL EST 870	Advanced Real Estate Finance Theory (Advanced Urban Land Economics)		3
REAL EST 875	Advanced Urban Land Economics (Advanced Real Estate Finance Theory)		3
REAL EST 978	Research Seminar in Real Estate and Urban Land Economics (Real Estate Workshop) <sup>2</sup>		5
Finance Courses			
FINANCE 930	Theory of Finance		3
FINANCE 970	Seminar: Investments (Ph.D.)		3
or FINANCE 971	Seminar: Corporate Finance (Ph.D.)		

or FINANCE 972	Topics Seminar-Finance Ph.D	
<b>Economics Courses</b>		
ECON 709	Economic Statistics and Econometrics I	3-4
ECON 710	Economic Statistics and Econometrics II	3-4
ECON 711	Economic Theory-Microeconomics-Sequence	3
ECON 712	Economic Theory-Macroeconomics-Sequence	3
ECON 713	Economic Theory-Microeconomics-Sequence	3
ECON 714	Economic Theory-Macroeconomics-Sequence	3
<b>Other Requirement</b>		
GEN-BUS 932	Beginning a Research Career in Business	1
<b>Breadth Requirement<sup>3</sup></b>		
9		
<b>Additional Coursework<sup>4</sup></b>		
4-6		
<b>Total Credits</b>		
51		
<p><sup>1</sup>These pathways are internal to the program and represent different routes a student can follow to earn this degree. Pathway names do not appear in the Graduate School admissions application, and they will not appear on the transcript. <sup>2</sup>This requirement can be met with MATH 340%7C Code Title or any MATH course numbered 500 or higher. <sup>3</sup>This requirement can be met with any STAT course numbered 300 or higher. <sup>4</sup>This requirement can be met with any ECON course numbered 400 or higher or any A.A.E course numbered 600 or higher. <sup>5</sup>Working with an advisor, each student chooses a minimum of four courses in the area of research methodology. While students are required to develop basic research background in multiple research areas, most students ultimately specialize in the research area and methodology that best suits their skills and research interests. These courses can be drawn from inside or outside the School of Business. <sup>6</sup>Students also develop specialization in a related field such as economics, psychology, or sociology. Finally, students build a foundation in statistics that supports their research interests. Methodology courses in economics, agricultural economics, or psychology will generally provide a strong foundation. <sup>7</sup>This could include the following courses: OTM 990%7C Code Title, OTM 999%7C Code Title, and other non-research coursework decided with their advisor.</p>		
<b>Mathematical Foundation<sup>2</sup></b>		
3		
<b>Statistical Foundation<sup>3</sup></b>		
2		
<b>Economics Foundation<sup>4</sup></b>		
2		
<b>Research Methodology</b>		
GEN-BUS 932	Beginning a Research Career in Business	1
<b>Research Electives<sup>5</sup></b>		
12		
<b>Breadth Requirement<sup>6</sup></b>		
9		
<b>Additional Coursework<sup>7</sup></b>		
20		
<b>Total Credits</b>		
0		
<b>2 Breadth Requirement</b>		
<p>Students complete four courses at the graduate level, either inside or outside the School of Business. These courses will form a coherent topic related to the student's specific research interest and will include at least one course in the methods of data collection and at least one in the methods of data analysis. Students will select these courses in consultation with their advisor. Courses that have fulfilled these requirements in the past include:</p>		
<b>Methods of Data Collection</b>		
ANTHR 909	Research Methods and Research Design in Cultural Anthropology	3
ART HIST/AFROAMER 801	Historiography, Theory and Methods in Visual Culture	3
COM-ARTS 763	Communication Research Methods	3
COMP-SCI/E-C-E 760	Machine Learning	3
COMP-SCI 766	Computer Vision	3
ED-PSYCH 762	Introduction to the Design of Educational Experiments	3
ED-PSYCH 861	Course ED-PSYCH 861 Not Found	3
PSYCH 610	Design and Analysis of Psychological Experiments I	4
PSYCH 710	Design and Analysis of Psychological Experiments II	4
MARKETING 710	Marketing Research	3
MARKETING 805	Qualitatively-Based Marketing Insights	2
MARKETING 815	Marketing Analytics	3
SOC 735	Ethnomethodology & Conversation Analysis	3
STAT 771	Statistical Computing	2
<b>Methods of Data Analysis</b>		
COMP-SCI/ISV-E 718	Stochastic Programming	2
COMP-SCI/ISV-E/MATH/STAT 726	Nonlinear Optimization I	3
COMP-SCI/E-C-E 761	Mathematical Foundations of Machine Learning	3
COMP-SCI/ED-PSYCH/PSYCH 770	Human-Computer Interaction	3
COMP-SCI/E-C-E/STAT 861	Theoretical Foundations of Machine Learning	3
ECON 700	Mathematics for Economists	3
ECON 701	Microeconomics I	3
ECON 702	Macroeconomics I	3
ECON 704	Econometrics I	3
ECON 705	Econometrics II	3
ECON 706	Econometrics III	3
ECON 708	Microeconomics II	3
ECON 709	Economic Statistics and Econometrics I	3-4
ECON 710	Economic Statistics and Econometrics II	3-4
ECON 711	Economic Theory-Microeconomics-Sequence	3
ECON 713	Economic Theory-Microeconomics-Sequence	3
ECON 717	Applied Econometrics	3
ECON 761	Industrial Organization Theory	3
ECON 762	Empirical Analysis of Industrial Organization and Public Policy	3
ECON 809	Topics in Microeconomic Theory	1-3
ECON 899	Recent Advances in Economics	1-3
ED-PSYCH 711	Current Topics in Educational Psychology	1-3
ED-PSYCH 760	Statistical Methods Applied to Education I	3
ED-PSYCH 761	Statistical Methods Applied to Education II	3
ED-PSYCH 762	Research Models in Education	3

ED.PSYCH.765	Regression Models in Education	3
ED.PSYCH.773	Factor Analysis, Multidimensional Scaling and Cluster Analysis	3
ED.PSYCH.960	Structural Equation Modeling	3
ED.PSYCH.964	Hierarchical Linear Modeling	3
POLI.SCI.818	Maximum Likelihood Estimation	3
POLI.SCI.919	Seminar: Advanced Methodology	3
SOC.952	Seminar: Mathematical and Statistical Applications in Sociology	3
STAT.609	Mathematical Statistics I	3
STAT.610	Introduction to Statistical Inference	4
STAT/ECON/GEN.BUS.775	Introduction to Bayesian Decision and Control I	3
STAT.849	Theory and Application of Regression and Analysis of Variance I	3
<sup>1</sup> These pathways are internal to the program and represent different routes a student can follow to earn this degree. Pathway names do not appear in the Graduate School admissions application, and they will not appear on the transcript. <sup>2</sup> Students take each of these seminars twice.		
<b>Seminar Requirement</b>		
MARKETNG.971	Seminar: Marketing PhD, Contemporary Topics in Marketing <sup>2</sup>	6
MARKETNG.972	Seminar: Marketing PhD, Research Methods in Marketing <sup>2</sup>	6
GEN.BUS.933	Beginning a Research Career in Business	1-6
<b>Breadth Requirement<sup>2</sup> (see list below for possible course options)</b>		<b>12-16</b>
<b>Additional Coursework</b>		<b>22-26</b>
Students will take additional credits of coursework, decided in consultation with their advisor.		
<b>Total Credits</b>		<b>51</b>
<b><sup>2</sup>Advanced Research Methods and Statistics</b>		
Required coursework in advanced research methods and statistics includes a minimum of 18 credits, consisting of two courses in statistics, two in research methodology, and two depth courses. Courses are selected in consultation with the student's advisor. Examples of courses that have fulfilled these requirements in the past include:		
A.A.E./M.H.R. 540	Intellectual Property Rights, Innovation and Technology	3
A.A.E. 636	Applied Econometric Analysis I	3
A.A.E. 637	Applied Econometric Analysis II	4
A.A.E. 737	Applied Econometric Analysis III	3
COMP.SCI.838	Topics in Computing	1-3
ECON.533	Law and Economics	3-4
ECON.700	Mathematics for Economists	3
ECON.701	Microeconomics I	3
ECON.702	Macroeconomics I	3
ECON.704	Econometrics I	3
ECON.705	Econometrics II	3
ECON.706	Econometrics III	3
ECON.708	Microeconomics II	3
ECON.709	Economic Statistics and Econometrics I	3-4
ECON.710	Economic Statistics and Econometrics II	3-4
ECON.711	Economic Theory: Microeconomics Sequence	3
ECON.712	Economic Theory: Macroeconomics Sequence	3
ECON.717	Applied Econometrics	3
ECON.750	Labor Economics	3
ECON.751	Survey of Institutional Aspects of Labor Economics	3
ECON.873	Seminar: International Economics	2-3
ED.PSYCH.711	Current Topics in Educational Psychology	1-3
ED.PSYCH/COUN.PSW/CURRIC/ED.POL/ELPA/RP.&SE.719	Introduction to Qualitative Research	3
ED.PSYCH.760	Statistical Methods Applied to Education I	3
ED.PSYCH.761	Statistical Methods Applied to Education II	3
ED.PSYCH.762	Introduction to the Design of Educational Experiments	3
ED.PSYCH.763	Regression Models in Education	3
ED.PSYCH/ELDA.827	Surveys and Other Quantitative Data Collection Strategies	3
ED.PSYCH.960	Structural Equation Modeling	3
ED.PSYCH.963	Design & Analysis of Quasi-Experiments for Causal Inference	3
ED.PSYCH.964	Hierarchical Linear Modeling	3
ELPA/ED.PSYCH.827	Surveys and Other Quantitative Data Collection Strategies	3
MARKETNG.971	Seminar: Marketing PhD, Contemporary Topics in Marketing	3
MATH/STAT.431	Introduction to the Theory of Probability	3
MATH.521	Analysis I	3
POLI.SCI.813	Introduction to Statistical Methods in Political Science	3
POLI.SCI.813	Multivariable Statistical Inference for Political Research	3
POLI.SCI.818	Maximum Likelihood Estimation	3
POLI.SCI/A.A.E.825	Game Theory and Political Analysis	3
POLI.SCI.919	Seminar: Advanced Methodology	3
PSYCH.610	Design and Analysis of Psychological Experiments I	4
PSYCH.710	Design and Analysis of Psychological Experiments II	4
PSYCH.711	Current Topics in Psychology	2-3
R.M.I.930	Seminar in Actuarial Science, Risk Management & Insurance II	3
SOC/C&E.SOC.360	Statistics for Sociologists I	4
SOC/C&E.SOC.361	Statistics for Sociologists II	4
SOC.362	Statistics for Sociologists III	4
SOC.375	Introduction to Mathematical Sociology	3

SOC 632	Sociology of Organizations	3-4
SOC/C&E SOC 652	Sociology of Economic Institutions	3
SOC 952	Seminar: Mathematical and Statistical Applications in Sociology	3
STAT 849	Theory and Application of Regression and Analysis of Variance <sup>1</sup>	3
<sup>1</sup> These pathways are internal to the program and represent different routes a student can follow to earn this degree. Pathway names do not appear in the Graduate School admissions application, and they will not appear on the transcript.		
<b>Ph.D. Seminars</b>		
M.H.R. 974	Seminar: Personnel Management	2
M.H.R. 973	Seminar in Organizational Behavior and Design	2
M.H.R. 972	Doctoral Research Seminar in Business Strategy	2
M.H.R. 975	Doctoral Research Seminar in Management	2
M.H.R. 976	Doctoral Research Seminar in Management	2
M.H.R. 977	Emerging Entrepreneurship Theory and Research	2
<b>Other Requirements</b>		
GEN BUS 993	Beginning a Research Career in Business	1
<b>Advanced Research Methods and Statistics<sup>2</sup> (see list below for possible course options)</b>		
<b>Breadth</b>		15
Students are required to take an additional 15 credits of coursework, level 700 or higher, from any department. A substantial share of coursework may be undertaken outside of the Wisconsin School of Business. Students take a diverse array of seminars in the economics, sociology, psychology, statistics, and computer science departments, depending on their specific research interests. These may be theory or methods courses.		
<b>Total Credits</b>		0
<sup>1</sup> These pathways are internal to the program and represent different routes a student can follow to earn this degree. Pathway names do not appear in the Graduate School admissions application, and they will not appear on the transcript. <sup>2</sup>		
These courses are taught in the lecture format. <sup>3</sup> Students are required to take this course 4 times for credit. This course is taught in the seminar format. <sup>4</sup>		
At the beginning of the second year, each student proposes a set of three advanced courses that form a coherent package and enhance the student's research skills. Students are free to choose elective courses offered by the economics, mathematics, or statistics departments. If applicable, students should work with their advisor to determine if courses in other areas are appropriate.		
<sup>5</sup> This could include the following courses: FINANCE 990%7C Code Title, FINANCE 999%7C Code Title, and other non-research coursework decided with their advisor.		
<b>Finance Requirements</b>		
FINANCE 920	Theory of Finance <sup>2</sup>	3
FINANCE 970	Seminar: Investments (Ph.D.) <sup>2</sup>	3