

GRADUATE STUDENT HANDBOOK

**DEPARTMENT OF BUSINESS ANALYTICS
TIPPIE COLLEGE OF BUSINESS
UNIVERSITY OF IOWA**

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I. Introduction and Important Contacts

This document is a guide for students pursuing, or wishing to pursue, a Ph.D. degree in the Department of Business Analytics (the *Department*) in the Tippie College of Business (the *College of Business*) at the University of Iowa (the *University*). It describes degree requirements, departmental policies, and financial-aid opportunities. It supplements the [Manual of Rules and Regulations of the Graduate College](#) and the [General Catalog](#) of the University. Additional information about the Department, including the most recent version of this document, may be found at the [Department's site](#).

The policies and procedures outlined in this document are effective fall semester 2024. Continuing students may choose to follow the procedures that were in effect during their first year, if they were changed by this document.

Important Contacts:

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II. Admissions

Students seeking admission to the Ph.D. program in Business Analytics are subject to the both the minimum standards set by the Graduate College and specific departmental standards. The basic requirements include:

- an undergraduate degree, or equivalent;
- a minimum GPA of 3.0 on a 4.0 scale;
- completion of either the GRE or the GMAT;
- if applicable, a minimum TOEFL score of 600 on the paper-based test (250 on the computer-based test, 100 on the internet-based test).

Because the program is small (typically 10-15 students, with 2-4 new students admitted each year), the admissions process is extremely competitive. Therefore, while there is no specific minimum for GRE/GMAT scores, successful candidates will typically have very strong quantitative and analytical scores. Similarly, preference is given to applicants with a strong GPA, prior graduate work, and research experience in a relevant field. Applications are further evaluated based on the student's statement of purpose and reference letters.

Details of the application process can be found at the College of Business web site at <http://tippie.uiowa.edu/phd>. Applications are accepted only for the fall semester and are due by January 15 for fall admission. The Department does not offer deferred admission; an admitted student who does not matriculate in the academic year following admission must reapply for the following fall semester if they wish to be considered.

III. Support

Several forms of financial support are available through the Department and the Graduate College. These include graduate assistantships (both teaching and research assistantships), scholarships, and Graduate College fellowships. In general, every student admitted to the Department will be guaranteed five academic years of employment at the standard 50%-time support level, subject to qualification as a teaching assistant (see below). Support beyond the four-year period is subject to the student's progress toward the Ph.D. degree.

Specific terms and conditions of employment for graduate assistants are largely governed by the collective bargaining agreement between the University and the United Electrical, Radio and Machine Workers of America union, Local 896, more commonly known as COGS. The current COGS contract may be viewed from the [COGS web site](#).

In addition, departmental decisions and offers of support are guided by the College of Business Policies and Sources for Graduate Student Funding (last modified June 2023). More information regarding this College of Business policy may be requested from the DGS.

A. Teaching and Research Assistantships

Teaching assistantships (TAs) are a common form of financial aid. These assistantships serve two purposes: assistance in the instructional program of the University and the preparation of future college teachers. Generally, each student should be assigned as a TA for at most four non-summer semesters during the first five years of their Ph.D. program and should not be assigned as a primary instructor for more than two semesters.

In order to qualify for employment as a TA, students whose native language is not English are required to pass the Spoken Proficiency of English in the Classroom (SPEC) exam offered by the University. The Department will register students for these exams. More information on these exams can be found on [the University website](#). A student who fails to qualify as a TA will be expected to enroll in the suggested TA preparation courses to maintain their enrollment status in the Department. Any student who does not qualify as a TA before the start of their second year in the program may not be offered further financial aid by the Department.

Research Assistantships (RAs) are another common form of financial aid. Typically, these are offered by the College of Business, by the Department, or by individual faculty grants. Generally, each student should be assigned as an RA for at least six non-summer semesters during the first five years of their Ph.D. program. RA support may come from a variety of sources, e.g., the College or the Graduate College.

Whenever possible, the Department will attempt to implement the following schedule of TAs and RAs for each student in the Ph.D. program:

Year 1	Support as RA only; no TA support
Year 2	Support as TA only; no RA support
Year 3	Support as RA for one semester and as TA for one semester
Year 4	Support as RA for one semester and as TA for one semester
Year 5	Support as RA only; no TA support

The Department, however, recognizes that each student's case may require a different schedule of TA and RA support.

To receive TA or RA support in any given semester, a student must be physically located on campus in Iowa City for the entirety of the semester except for work-related travel and short spans of personal travel.

B. Tuition

The University does not waive tuition for graduate students. However, the Department does, in general, pay all tuition for students in good standing receiving fellowships or employed as either RAs or TAs. This funding is in addition to the stipend received by the student.

C. Fellowships

1. Graduate College Recruitment Fellowships

Exceptional applicants may be offered a recruitment fellowship. These fellowships are available to incoming students (not returning students) from the Graduate College and are awarded competitively based on applications submitted by the Department. They provide a stipend supplement for up to five years and summer support for up to four summer terms.

2. Summer Fellowships

Students who are post-comp (see Glossary of Terms in the Appendix) are eligible for the Graduate College's Summer Fellowship program. This pays more than a department award and includes tuition for up to 2 hours. All post-comp students must apply for the Graduate College Summer Fellowship before they can be considered for departmental summer support. Details on how to apply can be found at <https://grad.uiowa.edu/funding/fellowships/summer>.

The Department also offers a summer research fellowship to many continuing students. This award is typically in the range of \$3,000 - \$3,500 per summer. Details for applying for this award can be found in the Appendix. Results from summer research fellowships will be evaluated by the students' advisor(s) during the following fall semester. Students who do not make satisfactory progress during the period of the fellowship will not be offered future summer fellowships.

3. Graduate College Research Fellowships

Students who are post-comp are encouraged to apply for one-semester research fellowships offered by the Graduate College. There are currently two options:

- a. The post-comprehensive research award is for the semester after completing the comprehensive exam.
- b. The Ballard and Seashore dissertation fellowship is for students with a high likelihood of completion within one semester of the fellowship period.

D. Travel

The Department provides funds for graduate students to attend appropriate academic conferences for the purpose of presenting their research (e.g., giving a talk or presenting a poster). Awards of up to \$1,500 per academic year (pre-comprehensive exam) or \$2,500 (post-comp) are available. Students may use these funds to make multiple trips, but the Department will pay only up to this amount. Expenses are limited to travel, conference registration, lodging, and food. See Appendix for procedure.

IV. Ph.D. Degree Requirements

The Ph.D. program in Business Analytics prepares students for research, teaching, and other scholarly endeavors in an academic or industrial setting. The coursework requirements emphasize applied mathematics and applied computing, along with a grounding in business processes. The program also requires a series of written and oral examinations, culminating in the production and defense of a dissertation describing original research results. Generally, it is expected that a student will complete at least one paper and have a second paper in draft form based on their research results by the time of their defense. The requirements described here are in addition to the University-wide requirements for the Ph.D. degree.

A. Advising

Every Ph.D. student must have a faculty advisor from the Department. Upon admission, each student is assigned an initial, temporary academic advisor. During their first one to two years in the program, it is expected that the student will choose a faculty member whose research interests align with their own to serve as the permanent academic and research advisor and chair of the student's thesis committee.

The advisor/advisee relationship requires the consent of both parties and can be terminated by either. To change advisors, the student needs to complete the Change of Advisor Form (see Appendix) with appropriate signatures. The completed form must be submitted to the DGS and Ph.D. Program Coordinator before the change is made official.

Students wishing to pursue a Ph.D. with an advisor who is not a member of the Business Analytics faculty must submit a request to the DGS requesting that an external chair be appointed. A Business Analytics faculty member must be appointed as co-advisor. If a student has a committee member who leaves the University to work at another academic institution, then according to Graduate College rules, that faculty member is allowed to serve as a University-based committee member for up to one year after their departure.

B. Course Requirements

A minimum of 72 credit hours is required for the Ph.D. Degree.

Interdepartmental Core Requirement (3 hours):

One Ph.D. course from other College of Business departments 3
 Suggestions (but many others may be used):

Economics	Marketing	Finance
ECON:5100 Microeconomics I	MKTG:7850 Seminar in Marketing	FIN:7120 Seminar in Corp. Finance
ECON:5800 Econometrics		

Departmental Core Requirements (6 hours):

Management Information Systems 3
 BAIS:6480 Knowledge Discovery or
 BAIS:6800/CS:4440 Web Mining

Quantitative Methods/Operations Management 3
 BAIS:6600 Linear Programming or
 BAIS:7900 Supply Chain Management

Other courses in these areas may be substituted with departmental approval.

Research Methodology (9 hours):

STAT:3100 or STAT:4100 Mathematical Statistics I 3

Choose two of the following: 6

ECON:5100 Microeconomics I
 BIOS:6650 Causal Inference
 IE:6380 Deep Learning
 BAIS:4220 Advanced Database Management and Big Data
 BAIS:6600 Linear Programming
 BAIS:6900 Heuristic Search Methods
 BAIS:6700 Discrete Optimization
 MATH:4820 Optimization Techniques
 STAT:3101 or STAT:4101 Mathematical Statistics II
 STAT:5210 Applied Statistics I
 STAT:6300 Probability and Stochastic Processes I
 STAT:6301 Probability and Stochastic Processes II
 STAT:3210 Experimental Design and Analysis
 STAT:6540 Applied Multivariate Analysis
 CS:5350 Design and Analysis of Algorithms

Other applied mathematics or computing courses may be substituted with departmental approval.

Major area of study (12 hours)

A course taken as part of the departmental core or research methodology cannot be counted in the major area of study.

Suggested major area of study courses:

Information Systems	Operations Management	Quantitative Methods
BAIS:6480 Knowledge Discovery	BAIS:6300 Dynamic Programming	BAIS:6300 Dynamic Programming
BAIS:6500 Social Network Analytics-Models and Algorithms	BAIS:6700 Discrete Optimization	BAIS:6700 Discrete Optimization
BAIS:6800/CS:4440 Web Mining	BAIS:6900 Heuristic Search Methods	BAIS:6900 Heuristic Search Methods
BAIS:7000 Spatial Big Data	BAIS:7000 Convex Analysis and Optimization	BAIS:7000 Convex Analysis and Optimization I
BAIS:7000 Machine Learning	BAIS:7900 Supply Chain Management	IE:6720 Nonlinear Programming
	STAT:6300 Probability and Stochastic Processes I	IE:6750 Stochastic Optimization
		STAT:5200 Applied Statistics 1

Other courses may be added or substituted with departmental approval.

Minor area of study (9 hours)

Major and minor areas combined must total at least 21 hours. Minor areas outside the Department or even outside the College of Business are often appropriate. Examples of such areas are Finance, Computer Science, Statistics, and Industrial Engineering. Minor courses from MIS, OM or QM can be selected from the major and elective courses listed above.

Thesis and elective hours (33 hours)

In order to fulfill the 72-hour requirement for the Ph.D. degree, students must complete another 33 hours of coursework. These can be a combination of thesis hours (BAIS:7975), elective courses, directed readings, and approved transfer credits, subject to departmental approval. Note that a student is only eligible to take thesis hours once they are post-comp.

Suggested electives by major:

Information Systems	Operations Management	Quantitative Methods
BAIS:6700 Discrete Optimization	CS:5350 Design and Analysis of Algorithms	CS:5350 Design and Analysis of Algorithms
BAIS:6900 Heuristic Search Methods	MATH:4820 Optimization Techniques	CS:4700 High Performance and Parallel Computing
CS:5350 Design and Analysis of Algorithms	MATH:4010 Basic Analysis	MATH:4820 Optimization Techniques
STAT:4520 Bayesian Statistics	STAT:4510 Regression, Time Series, and Forecasting	MATH:4010 Basic Analysis
STAT:4510 Regression, Time Series, and Forecasting	IE:3610 Stochastic Models	MATH:5800 Numerical Analysis
STAT:3200 Applied Linear Regression	IE:3700 Operations Research	MATH:4050 Introduction to Discrete Mathematics
STAT:6560 Applied Time Series Analysis	IE:6770 Game Theory	MATH:4060 Discrete Mathematical Models
CS:4420 Artificial Intelligence	IE:6750 Stochastic Optimization	MATH:4610 Continuous Mathematical Models
STAT:6540 Applied Multivariate Statistics	IE:3750 Digital Systems Simulation	ECE:5330 Graph Algorithms and Combinatorial Optimization
CS:4980 Intro to Machine Learning or Big Data Technology	IE:6780 Financial Engineering and Optimization	IE:6780 Financial Engineering and Optimization
IE:4172 Big Data Analytics	IE:6720 Nonlinear Programming	BAIS:6480 Knowledge Discovery
BAIS:6600 Linear Programming		BAIS:7900 Supply Chain Management
STAT:4540 Statistical Learning		

Transfer Credits

Students with prior graduate coursework can request the transfer of some of these credits to reduce the semester hours required for the Ph.D. degree. Cases are considered individually, but a transfer of 9-15 hours for students with a master's degree in a technical area into "thesis and elective hours" is typical and usually granted *pro forma*. If a student wishes to transfer prior coursework for "core, research methodology, or minor hours," then specific permission must be granted by the DGS. Total transfer credits are limited to 15 hours.

C. Exams

The Ph.D. program requires a series of examinations with different goals and formats. Two failures on any exam will disqualify the student from the Ph.D. program. Deviations from the suggested timeline may be approved by the Graduate Committee.

1. Qualifying Exam

The qualifying exam is an oral examination on a research topic selected and studied by the student with faculty assistance during the summer of the first year. The exam is typically scheduled for a one-hour time slot. An examination committee of three

Department faculty in total (selected by the student and his/her advisor) will conduct the examination. The exam typically requires two components: (1) A written report detailing a literature review and research work completed by the student during the summer of the first year; and (2) an oral presentation of this work. The presented research shall constitute work done by the student with faculty at the University of Iowa while enrolled at the University of Iowa; an exception may be granted by the DGS in consultation with the faculty advisor. The committee will use the outcome of the oral examination and course grades earned during the first year to evaluate the student. This exam must be taken by the end of the fall semester of the second year. The written report should be given to the committee approximately two weeks before the exam date. Students failing the examination must retake it no later than the end of the spring semester of the second year. Students should bring a completed copy of their Plan of Study form and the qualifying-exam form to the exam; see Appendix. After completion of the exam, whether success or failure, the completed qualifying-exam form should be sent electronically to the DGS; see Appendix.

2. Comprehensive Exam

A written comprehensive examination will be given in the summer before the third year. The student, in consultation with his/her advisor and the DGS, chooses three courses over which to be tested. These should come from the list of major courses but may also be core courses or electives as approved by the advisor. The exam is scheduled for two days. On the first day, there is a 4-hour, closed-book exam containing questions from two of three courses. On the second day, there is a 2-hour, closed-book exam containing questions from the third course. Each course will contribute two questions to the exam, with the second question being more advanced than the first. Each question will be submitted and graded by the respective course instructor, and the results of the two questions will together be given a single final grade of *satisfactory*, *unsatisfactory*, or *reservations* by that instructor. A vote of *reservations* indicates that the instructor feels the deficiencies were modest and can be readily rectified.

The faculty committee for the comprehensive exam will consist of the three instructors for the courses, the student's advisor, and one member of the Graduate Committee to create a total of at least four members (as required by the Graduate College). The student's advisor will officially be the chair of the committee. In the rare situation where the union of these groups is less than four faculty members, another faculty member from the Department will be added. As required by the Graduate College, at least three of the committee members must be the members of the University tenure-track faculty, where at least two of them must be from the Department.

The committee will meet after the exam, and each member, including those who have not written an exam question, will vote *satisfactory*, *unsatisfactory*, or *reservations*. Based on these votes, a consensus for the entire exam (*satisfactory*, *unsatisfactory*, or *reservations*) will be reached by discussion with the following guidelines. Two or more unsatisfactory votes will necessarily make the overall report *unsatisfactory*. In addition, two or more votes of reservations (and at most one unsatisfactory vote), will necessarily make the overall report *reservations*.

If the overall report is *reservations*, then a list of required actions by the student to correct the deficiencies, as well as deadlines to do so, must be recorded and communicated to the student. These actions may include the (re-)taking of a course, re-taking of one (or more) parts of the exam, etc. If the student satisfies the required actions in the specified period, the committee report will be changed to satisfactory. If the actions are not satisfied on time or if the actions are not of sufficient quality, the exam grade will be recorded as unsatisfactory.

If the student needs to re-take the exam, he or she must do so by the date specified by the committee but no sooner than four months after the first exam. A student may not do their proposal defense until a grade of satisfactory on the comprehensive exam is achieved. A student can take the comprehensive exam at most twice.

When a student has achieved a grade of satisfactory on the comprehensive exam and completed all required courses in research methodology and in the major area of study, the student is advanced to Ph.D. candidacy and is considered “post-comp.” Students preparing for this exam should consult the Comprehensive Exam Procedures document in the Appendix.

3. Proposal Defense

The student must prepare a written dissertation proposal and defend it in an oral examination, which is scheduled for a two-hour time slot. It is suggested that the committee of at least four faculty members for this examination consist of those most appropriate for supervising the dissertation and for administering the final oral dissertation-defense examination (which may be different than the comprehensive-exam committee). For details on the committee for the final defense, see below. The proposal defense may only occur once a student is advanced to Ph.D. candidacy, but it may occur within the same semester. Prior to the proposal defense, the student must have completed all required courses in the departmental core, research methodology, and the major area of study. The proposal defense must occur at least one semester prior to the final dissertation defense.

Students preparing for this exam should consult the Proposal Defense Procedures document in the Appendix. The student will distribute the written document to the committee a minimum of two weeks prior to the proposal date.

4. Final Dissertation Defense

The dissertation should be defended by the spring of the fifth year. The dissertation must describe original research performed by the Ph.D. candidate with faculty at the University of Iowa while enrolled at the University of Iowa. A committee of at least four faculty members is proposed by the student and his/her advisor and approved by the Department. The committee must simultaneously satisfy the following rules:

- (1) At least three of the committee members must be the members of the University tenure-track faculty, among whom at least two must be from the Department (required by the Graduate College);
- (2) The committee must have a majority of members from the Department (including both tenure-track and non-tenure-track faculty);
- (3) The committee must have at least one member from outside the College of Business.

The student, in consultation with the Ph.D. Program Coordinator and DGS, is responsible for knowing and meeting all deadlines set by the Graduate College for Ph.D. candidates. The student will determine a mutually agreeable time and location for the defense and arrange with the Ph.D. Program Coordinator to reserve a room for a two-hour time slot. The student will distribute the dissertation to the committee a minimum of two weeks prior to the defense.

D. Other Milestones

It is strongly recommended that students publish papers while pursuing the Ph.D. because published papers help with job placement upon graduation. In terms of milestones, it is recommended that students submit their first paper by the end of the fall semester of their third year. It is also recommended that students submit their second paper during the fall of the fourth year. At least one of these should be submitted to a peer-reviewed journal or a conference that is peer-reviewed with published proceedings. Students should complete a third paper near the time of their thesis defense. Since research may move faster or slower than expected, these are just guidelines.

E. Paper Award

The Department will provide an annual best-paper award for a paper written by a Ph.D. student. The paper must be based on work done at the University and may include co-authors, but the student must be the main contributor. The paper must be submitted to a

peer-reviewed journal or conference that is peer-reviewed with published proceedings. The paper must have either been accepted within the last calendar year or be in the review process at the time of application. The same paper cannot receive the award more than once. The papers will be reviewed by the Graduate Committee, and each finalist for the award will be invited and expected to present a short department seminar on his or her paper.

F. Typical Degree Plan

The above degree requirements are summarized in the following “typical degree plan”.

Semester	Courses	Typical Milestones
Year 1, fall semester	Usually 3 from department core, research methodology, and major courses	Identify and hold introductory meetings with 6 faculty
Year 1, spring semester	Usually 3 from department core, research methodology, and major courses	Write and submit summary of faculty meetings. Devise and present summer research plan
Year 1, summer		Research with advisor
Year 2, fall semester	Usually 3	Qualifying exam report and presentation
Year 2, spring	Usually 2-3	Research with advisor
Year 2, summer		Research with advisor and take comprehensive exam
Year 3, fall	Usually 1-2	Submit first paper, apply for grad college fellowship
Year 3, spring	Usually 1-2, 0 if fellowship (must register for at least 1 hour)	Research with advisor
Year 3, summer		Research with advisor
Year 4	Usually 1	Do thesis proposal and submit second paper in fall
Year 5	Usually 0 (must register for at least 1 hour)	Give department seminar, apply for final year graduate college fellowship, work on third paper, do thesis defense

G. Academic Review and Dismissal

The faculty of the Department will meet each fall to review all aspects of each student's progress, with student standing ultimately determined by the faculty. Any student deemed to be making unsatisfactory progress will be placed on departmental probation and shall be given a written explanation of the reasons for this action, along with a period (typically one year) within which the student must take corrective action. Failure to correct the reasons for the probationary action shall result in the student being dismissed from the program.

H. Milestone Report

In the spring of their second and subsequent years in the programs, students must submit a milestone report. This requires a meeting with the advisor to discuss what milestones have been accomplished and which they are planning to accomplish soon. It also allows the student and their advisor to discuss what would help them make progress. Part of this milestone report is the application for Summer Merit Fellowships. Details are in the Appendix.

I. Seminar Attendance

Students should attend the department seminars unless they are in class or teaching at that time. Attendance at these seminars may be considered in the decision process for department awards such as travel funding, summer fellowships, and RAs.

V. M.A. Degree

In addition to the Ph.D. the Department also awards Master of Arts degrees in Business Administration. This degree does not have a separate program and is awarded only to students who fail to complete the Ph.D. The M.A. is a coursework-only degree and is subject to the requirements of the Graduate College. The major requirement is the completion of 35 semester hours of graduate coursework beyond the bachelor's degree. In addition, the Department requires that the student complete at least one course from each of the three Business Analytics functional areas: Information Systems, Operations Management, and Quantitative Methods.

VI. Appendix

The following pages contain forms, checklists, and information relevant to the Ph.D. program in Business Analytics:

1. Ph.D. plan of study checklist
2. Requirements for first-year students
3. Report of qualifying exam form
4. Comprehensive exam procedures
5. Proposal defense procedures
6. Travel funds request procedure
7. Annual milestone report
8. Application procedures for summer merit fellowships
9. Change of advisor form

PH.D. PLAN OF STUDY CHECKLIST

Last Name _____ First Name _____ Advisor _____

<u>COURSE NO.</u>	<u>COURSE TITLE</u>	<u>SEMESTER/YEAR</u>	<u>GRADE</u>	<u>S.H.</u>
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1. Interdepartmental Core Requirements (3 hours)

	Ph.D. course from Marketing, Econ, Finance, Mgmt & Org, or Accounting			3 s.h.
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2. Departmental Core Requirements* (6 hours)

	<u>Information Systems 3 s.h.</u> BAIS:6480 or BAIS:6800/CS:4440 Other MIS course with departmental approval			3 s.h.
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	<u>Quant Methods/Operations Mgmt 3 s.h.</u> BAIS:6600 or BAIS:7900 Other OM or quant course with departmental approval			3 s.h.
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3. Research Methodology** (9 hours):

STAT:3100 or 4100 Mathematical Statistics I			3 s.h
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Choose two of the following courses:

ECON:5100	Microeconomics I			3 s.h.
IE:6380	Deep Learning			3 s.h.
BAIS:4220	Adv Database Mgmt and Big Data			3 s.h.
BAIS:6600	Linear Programming			3 s.h.
BAIS:6900	Heuristic Search Methods			3 s.h.
BAIS:6700	Discrete Optimization			3 s.h.
MATH:4820	Optimization Techniques			3 s.h.
STAT:6300	Applied Stochastic Process I			3 s.h
STAT:6301	Applied Stochastic Process II			3 s.h
STAT:3210	Experimental Design & Anal			3 s.h
STAT:3101/4101	Mathematical Statistics II			3 s.h
STAT:5210	Applied Statistics I			3 s.h.
STAT:6540	Applied Multivariate Analysis			3 s.h
CS:5350	Design & Analysis of Algorithms			3 s.h.

4. Major Area of Study* (12 hours) _____

PHD PLAN OF STUDY CHECKLIST (continued)

<u>COURSE NO.</u>	<u>COURSE TITLE</u>	<u>SEMESTER/YEAR</u>	<u>GRADE</u>	<u>S.H.</u>
5. Minor Area of Study (9 hours) _____				
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

6. Electives/Thesis Hours (BAIS:7975) (33 hours)

_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Qualifying Exam Date (typically fall 2nd year): _____
Committee: _____

Written Comp Exam Date (typically fall 3rd year): _____
(requires completion of courses in all areas with + to be admitted to Ph.D. candidacy)

Committee: _____

Dissertation Proposal Date (typically spring 3rd year – spring 4th year): _____
(requires completion of courses in all areas with *)

Final Defense Date: (typically fall 5th year – spring 5th year) _____

Committee: _____

Requirements for First-Year Students

Department of Business Analytics

First-year Ph.D. students in the Department shall dedicate time to learning about faculty research and identifying potential research projects. The following milestones are expected for all first-year students:

Deadline	Milestone
October 1	Student must submit to the Department <u>a list of no less than six faculty members</u> whose research is relevant to areas of interest. This list, constructed in consultation with the student's initially assigned first-year advisor, should consist primarily of Business Analytics faculty, but may include faculty from other University departments.
End of Fall Semester	Student <u>must have met with each faculty member</u> on her/his list to discuss research and assign introductory readings.
Feb 1	Student must submit to the Department <u>a report summarizing the findings</u> from her/his meetings with faculty and the associated readings. For the format of the report, please include: your name, a title, an introductory paragraph, and six sections, one for each professor you spoke with. Each section should have a section title with the name of the professor, and the section should describe the faculty's research area, along with brief summaries and thoughts about each of the assigned papers. Each section should be about 0.5 pages (single-spaced), so that the overall report is 2-3 pages.
End of Spring Semester	Student must give a <u>short presentation (15 – 20 minutes) detailing: (a) what she/he has learned in meetings with faculty</u> , and/or (b) what topic they have decided to pursue at this juncture and how it relates to the research of the various departmental faculty. You may email the DGS for copies of old presentations.

Report of Qualifying Exam: Business Analytics Ph.D.

The examining committee reports as follows on _____
Name
the qualifying exam in Business Analytics.

Committee Members	Satisfactory	Unsatisfactory
Chair: _____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Place, date and hour of examination _____

First Failure _____ (date) Second Failure _____ (date)

Date of Report _____ Signed _____

Comprehensive Exam Procedures

- 1) Schedule a date for your two-part exam with the DGS. Exams are typically given in late summer. Every attempt is made to coordinate the date of all students taking the exam each year.
- 2) Determine, in consultation with your advisor and DGS, the three courses that will serve as your Major as well as any additional comprehensive-exam committee members.
- 3) Contact the instructor from each of the three courses and get their informal agreement to write and grade two questions for the exam.
- 4) Contact the additional comprehensive-exam committee members to see if they are willing to serve on your committee.
- 5) **At least six weeks before the exam**, send the DGS and Department Administrator the following information:
 - a) The numbers and names of the three courses
 - b) The name, campus address, and email address of each instructor
 - c) The semester and year in which you took the course
 - d) The names of the additional comprehensive-exam committee members
 - e) A Plan of Study showing that you completed the required courses in research methodology and the major area of study (or indicating when the student plans to complete them)

Proposal Defense Procedures

- 1) Obtain the following materials from the Ph.D. Program Coordinator:
 - Copy of your latest transcript
 - Copy of your current registration
 - Proposal completion form
- 2) Meet with your advisor to select a committee of at least four faculty members that are most appropriate for supervising the dissertation.
- 3) Have the Department Administrator reserve a room for a two-hour time slot. The proposal defense must occur at least one semester prior to the final dissertation defense and after a student has reached Ph.D. candidacy.
- 4) At the proposal defense, bring the transcript, copy of current registration, proposal completion form, and your current Plan of Study. The Plan of Study should indicate that you have completed the required courses in the departmental core, research methodology, and the major area of study.

Travel Funds Request Procedure

Before travel, the student should complete the Graduate Student Travel Form, which is available from the Ph.D. Program Coordinator, at least 2-3 weeks before the student's trip. After submitting the form, the student will be advised of additional steps to complete. This is a very important process for liability purposes for the student, Department, and University.

When the student returns from travel, he or she will submit the travel form again with actual expenses and receipts to the Department. This is also the time the student can submit the trip to the Graduate College to see if he or she can win one of the Graduate College travel awards.

The student will need to take advantage of all the meals the conference offers. Alcohol will not be reimbursed. Additional questions should be directed to the Ph.D. Program Coordinator.

Annual Milestone Report

Last Name _____ First Name _____

Advisor _____

1. Schedule a time with your advisor to discuss your annual milestone report.
2. Update your Plan of Study checklist. Discuss any planning issues with your advisor in your milestone meeting.
3. Send your advisor the following questions ahead of your meeting and discuss them together in your meeting.
4. Submit an electronic or hard copy of the Annual Milestone Report, current Plan of Study, and Application for Summer Merit Fellowship to the DGS by May 1 of each year. These will be reviewed by the Graduate Committee.

Date met with advisor _____

Document your research progress in the past year. In your description, include milestones achieved in the last year, e.g., passed qualifying exam, passed comps, passed proposal, submitted paper, presented at conference, papers accepted).

What are the specific goals for this summer and the next school year? (e.g. finish coding algorithm this summer, submit second paper by October, etc.)

Identify skills that you could improve that would help you make better progress, e.g., better technical writing skills, faster turnaround of research assignments, etc.

What are some resources that would aid your progress as a researcher, e.g., more courses on a specific topic, more technical assistance with the computing cluster, etc.?

Application Procedure for Summer Merit Fellowship

Applications for the Business Analytics Summer Merit Fellowship must be submitted to the DGS by May 1 before the summer under consideration. This application must be accompanied by an updated Plan of Study and Annual Milestone Report. The application consists of a statement that:

- The student will meet regularly with his or her advisor during the summer.
- The advisor has read and agreed with the Plan of Study and Annual Milestone Report.
- The student will have no other remunerative support during the summer, i.e., no internship, no job, no other fellowship, and no other source of income.
- The student will be on campus during the summer, except for up to one month of vacation.

Notes:

- (1) Students who are post-comp must have applied for the Graduate College Summer Fellowship and not been awarded the fellowship.
- (2) Failure to make significant progress on summer research goals may result in the student being ineligible for support in future summers.
- (3) Students are eligible in the summers following the first 4 years in program. Students in later years may be funded, depending on budgetary constraints, on a case-by-case basis.

Change of Advisor Form: Business Analytics Ph.D.

The official advisor for _____ is being changed as follows:

Advisor	Signature	Date
New advisor: _____	_____	_____
New co-advisor: _____	_____	_____
Previous advisor: _____	_____	_____
Previous co-advisor: _____	_____	_____

Student Signature: _____ Date: _____

Please email a copy of this form to the DGS and Ph.D. Program Coordinator before the change can be finalized.

Glossary of Terms

DGS = Director of Graduate Studies

Graduate committee = The department committee, consisting of faculty who oversee the Ph.D. program. Chaired by the DGS.

Graduate College = University of Iowa's governing body, which oversees all academic programs that award all graduate degrees

RA = Research assistant / assistantship

TA = Teaching assistant / assistantship

GA = Graduate assistant / assistantship. RAs and TAs are both types of GAs.

Post-comp = Student has officially passed their comprehensive exam as documented with the Graduate College

QM = quantitative methods

OM = operations management

IS = information systems

First-year advisor = Faculty member who assists student with selecting courses during the student's first year and otherwise helps the student adjust to life in the Ph.D. program. Also sometimes called the "initial advisor" or "temporary advisor."