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I. Introduction

This document is a guide for students pursuing, or wishing to pursue, a PhD degree in the Department of Management Sciences at the University of Iowa. It describes degree requirements, departmental policies, and financial aid opportunities. It should be considered a supplement to the Manual of Rules and Regulations of the Graduate College and the General Catalog of the University of Iowa. The latest versions of these documents can be found online from the University’s main website, [http://www.uiowa.edu](http://www.uiowa.edu). Additional information about the department, including the most recent version of this document, may be found at the department’s site, [http://tippie.uiowa.edu/management-sciences/](http://tippie.uiowa.edu/management-sciences/).

The policies and procedures outlined in this document are effective in the fall semester 2005, and were last revised in summer 2015. 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:

Departmental Executive Officer, Management Sciences:
Prof. Nick Street
S210 PBB
319-335-1016
nick-street@uiowa.edu

Department Administrator, Management Sciences:
Scott Hansen
S210 PBB
319-335-0858
scott-a-hansen@uiowa.edu

Director of Graduate Studies, Management Sciences:
Prof. Ann Campbell
W244 PBB
319-335-0918
ann-campbell@uiowa.edu

PhD Program Coordinator, Tippie College of Business:
Renea Jay
W288 PBB
319-335-0830
renea-jay@uiowa.edu
II. Admissions

Students seeking admission to the PhD program in Management Sciences 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 Tippie 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 Management Sciences 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 four 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 PhD 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 COGS contract may be viewed from the University web site at http://www.uiowa.edu/hr/relations/bargaining/.

A. Teaching Assistantships

Teaching assistantships are the most 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. Many students are employed as TAs during their entire time in the program.

In order to qualify for employment as a teaching assistant, students whose native language is not English are required to pass two exams offered by the University: the English Speaking Proficiency Assessment (ESPA) test, a general test of spoken English, and the English Language Performance Test (ELPT), a practice lecture test given to students who pass the ESPA test. The department will register students for these exams. More information on these exams can be found at [http://www.uiowa.edu/~iiepesl/TAPE/TAPEindex.html](http://www.uiowa.edu/~iiepesl/TAPE/TAPEindex.html). A student who fails to qualify as a TA will be expected to enroll in the suggested TA preparation courses in order to maintain their enrollment status in the department. Any student who does not qualify as a TA during their first year in the program will not be offered further financial aid by the department.

**B. Research Assistantships**

A limited number of research assistant positions are available to students in the PhD program. Typically these are offered by individual faculty and are paid through research grant funding. They are available to advanced students who show exceptional research potential. To learn more about RA opportunities, students should contact the individual faculty member.

**C. Tuition**

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

**D. Fellowships**

1. **First Year Fellowships**

   Subject to available funding, first-year students will be offered a fellowship position at the 25% support level. It is expected that students will use this support to explore different research areas with departmental faculty members and establish a foundation for their own research. Students may supplement this support, up to the 50% level, with appointments as either teaching assistants or graders.

2. **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.

3. Summer Fellowships

Students who are post-comprehensive exam 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. The application includes a proposal by the student and a recommendation from their advisor. All post-comprehensive exam students must apply for the Graduate College Summer Fellowship before they can be considered for departmental support. Details on how to apply can be found at: http://www.grad.uiowa.edu/gc-post-comprehensive-summer-research-awards.

The department also offers a summer research fellowship to many continuing students. This award is typically in the range of $2500 - $3000 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.

4. Graduate College Research Fellowships

Students who are post-comprehensive exam are eligible to apply for research fellowships that allow them to be released from teaching to concentrate on research. All research awards are awarded for one semester. There are currently two options:

a. Post-comprehensive research award (http://www.grad.uiowa.edu/gc-post-comprehensive-research-awards) which is for students within one year of completing their comprehensive exam. The application includes a proposal by the student and two letters of support (one from an advisor and one from the Director of Graduate Studies). The department may nominate two students per semester.

b. Ballard and Seashore dissertation fellowship (http://www.grad.uiowa.edu/ballard-and-seashore-dissertation-year-fellowships) which is for students with a high likelihood of completion within one semester of the fellowship period. The application includes a proposal by the student and three letters of support (one from advisor, one from committee member, and one from DGS). The department may nominate a maximum of two students per semester.

5. Departmental Research Fellowships

Two departmental research fellowships are also offered each semester unless otherwise announced. These positions provide 25% salary support are awarded on a competitive basis. See the Appendix for details on how to apply and requirements.
E. Travel

The department provides limited funds for graduate students to attend appropriate academic conferences for the purpose of presenting their research. Awards of up to $750 per academic year (pre-comprehensive exam) or $1250 (post-comprehensive exam) are available. Expenses are limited to travel, conference registration, lodging and food. Students are expected to apply for any other available funds, such as student scholarships and Graduate College travel awards (http://gss.grad.uiowa.edu/funding/gss-travel-funds). The application form for department awards may be found in the Appendix. Another source of travel funding for female students, where selection of presentations is chosen competitively, is available here: http://www.uiowa.edu/wise/dr-eunice-beam-wise-travel-grants.

IV. Ph.D. Degree Requirements

The PhD program in Management Sciences 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. As a general rule, 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 PhD degree described in the Manual of Rules and Regulations of the Graduate College.

A. Advising

Every PhD student must have a faculty advisor from the Management Sciences Department. Upon admission, each student is assigned an 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 academic and research advisor and chair of the student’s thesis committee. It is expected that a student will complete a Plan of Study form (see Appendix) in consultation with his/her advisor every semester and submit the completed form to the department. This form should include the classes taken, along with the grades received, and the classes the student plans to take in the upcoming semester.

The advisor / advisee relationship requires the consent of both parties and can be terminated by either. To change advisors, the new advisor should email the Department Administrator and copy the student and the old advisor. All parties should be in agreement before the official change is requested.

Students wishing to pursue a PhD with an advisor who is not a member of the Management Sciences faculty must submit a request to the Director of Graduate Studies (DGS) requesting that an external chair be appointed. A Management Sciences faculty member must be appointed as co-advisor.
B. Course Requirements

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

Interdepartmental Core Requirement (6 hours):

Two PhD courses from other College of Business departments 6
Suggestions (but many others may be used):

<table>
<thead>
<tr>
<th>Economics</th>
<th>Marketing</th>
<th>Finance</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON:5100 Microeconomics I</td>
<td>MKTG:7850 Seminar in Marketing</td>
<td>FIN:7120 Seminar in Corp Finance</td>
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<tr>
<td>ECON:5800 Econometrics</td>
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</tr>
</tbody>
</table>

Departmental Core Requirements (6 hours):

Management Information Systems 3
MSCI:4480 Knowledge Discovery or
MSCI:6800/CS:4440 Web Mining

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

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

Research Methodology (12 hours):

STAT:3100 or STAT:4100 Mathematical Statistics I 3
STAT:3101 or STAT:4101 Mathematical Statistics II 3
Choose two of the following: 6
ECON:5100 Microeconomics I
MSCI:6600 Linear Programming
MSCI:6900 Heuristic Search Methods
MSCI:6700 Discrete Optimization
MATH:4820 Optimization Techniques
STAT:6300 Probability and Stochastic Processes I
STAT:6301 Probability and Stochastic Processes II
STAT:3210 Experimental Design & Analysis
STAT:6540 Applied Multivariate Analysis
CS:5350 Design & Analysis of Algorithms
Other applied mathematics or computing courses may be substituted with departmental approval.

Major area of study (12 hrs)
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:

<table>
<thead>
<tr>
<th>Information Systems</th>
<th>Operations Management</th>
<th>Quantitative Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSCI:4480 Knowledge Discovery</td>
<td>MSCI:6700 Discrete Optimization</td>
<td>MSCI:6700 Discrete Optimization</td>
</tr>
<tr>
<td>MSCI:6800 Web Mining</td>
<td>MSCI:6900 Heuristic Search</td>
<td>MSCI:6900 Heuristic Search</td>
</tr>
<tr>
<td>MSCI:7000 Social Network Analytics-Models and Algorithms</td>
<td>MSCI:7900 Supply Chain Management</td>
<td>MSCI:6300 Dynamic Programming</td>
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<tr>
<td></td>
<td>STAT:6300 Applied Stochastic Processes</td>
<td>IE:6720 Nonlinear Programming</td>
</tr>
<tr>
<td></td>
<td>MSCI:6600 Linear Programming</td>
<td>MSCI:6600 Linear Programming</td>
</tr>
</tbody>
</table>

Suggested electives for majors:

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<tr>
<th>Information Systems</th>
<th>Operations Management</th>
<th>Quantitative Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSCI:6900 Heuristic Search</td>
<td>MATH:4820 Optimization Techniques</td>
<td>CS:4700 High Performance and Parallel Computing</td>
</tr>
<tr>
<td>CS:5350 Design and Analysis of Algorithms</td>
<td>MATH:4010 Basic Analysis</td>
<td>MATH:4820 Optimization Techniques</td>
</tr>
<tr>
<td>STAT:4520 Bayesian Statistics</td>
<td>STAT:4510 Regression, Time Series, and Forecasting</td>
<td>MATH:4010 Basic Analysis</td>
</tr>
<tr>
<td>STAT:4510 Regression, Time Series, and Forecasting</td>
<td>IE:3610 Stochastic Models</td>
<td>MATH:5800 Numerical Analysis</td>
</tr>
<tr>
<td>CS:4420 Artificial Intelligence</td>
<td>IE:6750 Stochastic Optimization</td>
<td>MATH:4610 Continuous Mathematical Models</td>
</tr>
<tr>
<td>IE:4172 Big Data Analytics</td>
<td>IE:6720 Nonlinear Programming</td>
<td>MSCI:4480 Knowledge Discovery</td>
</tr>
<tr>
<td>MSCI:6600 Linear Programming</td>
<td></td>
<td>MSCI:7900 Supply Chain Management</td>
</tr>
</tbody>
</table>

Other courses may be added or substituted with departmental approval.

**Minor area of study (12 hrs)**

Major and minor areas combined must total at least 24 hours. Minor areas outside of the department or even outside of the College of Business Administration 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 (24 hrs)**

In order to fulfill the 72-hour requirement for the PhD degree, students must complete another 24 hours of coursework. Up to 15 of these may be thesis hours (MSCI:7975). Appropriate elective courses (including approved transfer credits) can also be used, subject to departmental approval.

**Transfer Credits**

Students with prior graduate coursework can request the transfer of some of these credits to reduce the 72 semester hours required for the PhD degree. Cases are considered individually, but a transfer of 9 hours for students with a Masters Degree in a technical area is typical. Transfer credits cannot violate Graduate College residency requirements. Students wishing to transfer credits should submit a petition to the College of Business PhD program coordinator.

**C. Exams**

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

1. **Qualifying Exam: Fall 2nd year**

The qualifying exam is an oral examination on a research topic selected by the student with faculty assistance, and that the student studies during the summer of the first year. An examination committee of three management sciences faculty in total (selected by the student and his/her advisor) will conduct the examination. Specific requirements may be set by the student’s committee; however, the exam typically requires two components: 1) A written report detailing a literature review and research work completed by the student, and 2) an oral presentation of this work. 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. Students failing the examination must retake it no later than the end of the spring semester of the second year.

2. **Comprehensive Exam: Fall 3rd year**

A written comprehensive examination will be given in the fall of the 3rd year. The student, in consultation with his/her advisor, chooses four 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. Part 1 of the exam is a 4-hour, closed-book exam containing one question from each of the four courses. Part 2 is a
4-hour, closed-book exam with a single, more advanced question from each course. Each question will be graded by the respective instructor, and the results of the two questions will be given the final grade of: satisfactory, unsatisfactory, or reservations. A vote of “reservations” indicates that a faculty member feels the deficiencies were modest and can be readily rectified.

The Exam Committee will consist of the four instructors for the courses, the student’s advisor, and at least one member of the Graduate Committee to create a total of at least five members (as required by the Graduate College). In the rare situation where the union of these groups is less than five faculty members, another faculty member from the department can be added. The Exam Committee will meet after the exam and decide on a committee report of satisfactory, unsatisfactory, or reservations for the entire exam. Two “unsatisfactory” votes by instructors will necessarily make the committee report unsatisfactory. If there are two or more votes of “reservations”, a list of required actions by the student to correct the deficiencies and deadlines must be recorded and submitted to the Graduate College. 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 of time, 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 Exam 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 this exam is achieved.

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

3. Proposal Defense: Spring 3rd year – Fall 4th year

The student must prepare a written dissertation proposal and defend it in an oral examination. It is suggested that the committee of five 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 very 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 of the 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” in the Appendix.

The dissertation should be defended in the spring of the 4th or 5th year. The dissertation must describe original research performed by the PhD candidate. A committee of at least five faculty members is proposed by the student and his/her advisor, and approved by the department. The committee must have a majority of members from the Department of Management Sciences and must have at least one member from outside the College of Business.

The student is responsible for knowing and meeting all deadlines set by the Graduate College for PhD candidates. An Application for Graduate College Degree and Examination Application form must be completed by the student and the Department Administrator and submitted to the Graduate College at least three weeks prior to the exam (see Appendix). The student will determine a mutually-agreeable time and location for the defense and arrange with the Department Administrator to reserve a room. Finally, the student will distribute the dissertation to the committee a minimum of two weeks prior to the defense.

D. Academic Review and Dismissal

The faculty will meet each fall to review all aspects of each student’s progress towards a degree, 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 of time (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.

E. 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 summer fellowships and research assistantships.

V. MA 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 PhD. The MA is a coursework-only degree and is subject to the requirements of the Graduate College, as found in the Rules and Regulations of the Graduate College manual. 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 Management Sciences functional areas: Information Systems, Operations Management, and Quantitative Methods.
Appendix

The following pages contain standard forms and checklists relevant to the graduate program in Management Sciences. They are:

1. Ph.D. plan of study checklist
2. Requirements for first-year fellowship
3. Comprehensive exam procedures
4. Proposal defense procedures
5. Request for travel support
6. Application procedures for summer fellowship
7. Application procedures for departmental research fellowships
# PHD PLAN OF STUDY CHECKLIST

**Last Name_______________________  First Name________________________  Advisor_____________________**

<table>
<thead>
<tr>
<th>COURSE NO.</th>
<th>COURSE TITLE</th>
<th>SEMESTER/YEAR</th>
<th>GRADE</th>
<th>S.H.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Interdepartmental Core Requirements (6 hrs)</strong></td>
<td></td>
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<tr>
<td></td>
<td>PhD course from Marketing, Econ, Finance, Mgmt &amp; Org, or Accounting</td>
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<td>3 s.h.</td>
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<tr>
<td></td>
<td>PhD course from Marketing, Econ, Finance, Mgmt &amp; Org, or Accounting</td>
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<td></td>
<td>Information Systems 3 s.h.</td>
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<tr>
<td></td>
<td>MSCI:4480 or MSCI:6800/CS:4440 Other MIS course with departmental approval</td>
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<td></td>
<td>Quant Methods/Operations Mgmt 3 s.h.</td>
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<td>3 s.h.</td>
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<td>MSCI:6600 or MSCI:7900 Other OM or quant course with departmental approval</td>
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<tr>
<td><strong>2. Departmental Core Requirements</strong>* (6 hrs)</td>
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<tr>
<td></td>
<td>STAT:3100 or 4100 Mathematical Statistics I</td>
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<tr>
<td></td>
<td>STAT:3101 or 4101 Mathematical Statistics II</td>
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<td>3 s.h</td>
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<tr>
<td>Choose two of the following courses:</td>
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<td></td>
<td>ECON:5100  Microeconomics I</td>
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<td>3 s.h</td>
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<td></td>
<td>MSCI:6600  Linear Programming</td>
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<td></td>
<td>MSCI:6900  Heuristic Search Methods</td>
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<td>3 s.h</td>
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<td></td>
<td>MSCI:6700  Discrete Optimization</td>
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<td>3 s.h</td>
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<td></td>
<td>MATH:4820  Optimization Techniques</td>
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<td>3 s.h</td>
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<td></td>
<td>STAT:6300  Applied Stochastic Process I</td>
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<td>3 s.h</td>
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<tr>
<td></td>
<td>STAT:6301  Applied Stochastic Process II</td>
<td></td>
<td></td>
<td>3 s.h</td>
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<tr>
<td></td>
<td>STAT:3210  Experimental Design &amp; Anal</td>
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<td>3 s.h</td>
</tr>
<tr>
<td></td>
<td>STAT:6540  Applied Multivariate Analysis</td>
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<td>3 s.h</td>
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<tr>
<td></td>
<td>CS:5350  Design &amp; Analysis of Algorithms</td>
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<tr>
<td><strong>3. Research Methodology</strong>** (12 hrs):</td>
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<td><strong>4. Major Area of Study</strong>* (12 hrs)</td>
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Written Comp Exam Date:
(requires completion of courses in all areas with \* to be admitted to Ph.D. candidacy)
### PHD PLAN OF STUDY CHECKLIST (continued)

<table>
<thead>
<tr>
<th>COURSE NO.</th>
<th>COURSE TITLE</th>
<th>SEMESTER/YEAR</th>
<th>GRADE</th>
<th>S.H.</th>
</tr>
</thead>
</table>

5. **Minor Area of Study (12 hrs) **

<table>
<thead>
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<th>Course</th>
<th>Title</th>
<th>Semester/Year</th>
<th>Grade</th>
<th>SH</th>
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6. **Electives (9 hours)**

<table>
<thead>
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<th>Title</th>
<th>Semester/Year</th>
<th>Grade</th>
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7. **Dissertation (15 hrs) **

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<th>Course</th>
<th>Title</th>
<th>Semester/Year</th>
<th>Grade</th>
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**Dissertation Proposal Date:**

(Requires completion of courses in all areas with *)

**Final Exam Date:**

**Committee:**

_____________________________________________
_____________________________________________
_____________________________________________
_____________________________________________
_____________________________________________
## Requirements for First-year Fellowships
### Management Sciences Department

Incoming PhD students in the Management Sciences Department will receive two semesters of 1/4-time support through a fellowship program. The intent of this fellowship is to reduce the teaching requirements for the students, thus allowing them to acquaint themselves with the research of the departmental faculty and prompt students to begin identifying potential research projects. To facilitate the genesis of their research careers, the following milestones will be observed for all students receiving this support.

<table>
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<th>Deadline</th>
<th>Milestone</th>
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<td>October 1</td>
<td>Student must submit to the department <strong>a list of no less than six faculty members</strong> whose research is relevant to areas of interest. This list, constructed in consultation with the student’s initially-assigned coursework advisor, should consist primarily of Management Sciences faculty, but may include faculty from other UI departments.</td>
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<tr>
<td>End of Fall Semester</td>
<td>Student <strong>must have met with each faculty member</strong> on her/his list to discuss research and assign introductory readings.</td>
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<tr>
<td>Feb 1</td>
<td>Student must submit to the department <strong>a report summarizing the findings</strong> from her/his meetings with faculty and the associated readings. This report should include a brief description of the research area for each of the faculty on your list, along with brief summaries and thoughts about each of the assigned papers.</td>
</tr>
<tr>
<td>End of Spring Semester</td>
<td>Student must give <strong>a short presentation (15 – 20 minutes)</strong> detailing: (a) what she/he has learned in meetings with faculty, 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.</td>
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</table>
Comprehensive Exam Procedures

1) Schedule a date for your two part exam with the Director of Graduate Studies. Exams are typically given near the beginning of a semester (August or January). Every attempt is made to coordinate the date of all students taking the exam in a given year.

2) Determine, in consultation with your advisor, the list of four courses that will serve as your Major as well as any additional comprehensive exam committee members (if needed).

3) Contact your instructor from each of the four courses and get their informal agreement to write and grade two questions for the exam.

4) Contact the additional comprehensive exam committee members (if needed) to see if they are willing to serve on your committee.

5) **At least six weeks before the exam**, send the Department Administrator the following information:
   a) The numbers and names of the four 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 Management Sciences Office:

--Copy of your latest transcript
--Copy of your current registration
--Proposal completion form

2) Meet with your advisor to select a committee of five faculty members that are most appropriate for supervising the dissertation.

3) Have Renea Jay 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 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.
I. Management Sciences Graduate Student Travel Funds Request Form

Name _______________________________
Date _______________________________

Conference ____________________________________________________
Location _______________________________
Dates _______________________________

Participation (circle at least one):
Making a presentation  Showing a poster

Title of presentation and/or poster:
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

Other funds applied for (e.g., grant funds, Graduate College travel funds):
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

DEO approval signature _______________________________
Date _______________________________
Amount allocated _______________________________
Application Procedures for Summer Merit Fellowships

Applications for the Management Sciences Summer Merit Fellowship must be submitted to the Department Administrator by the specified date and time.

Since Fellowships are non-service awards to qualified students, awardees must agree in writing that the Award is to be their only remunerative summer support.

Qualifying Procedure

Awards will be based on meeting the following criteria:
(1) A two page report on research progress plus specific research goals for summer.
(2) Students who are post-qualifying exam must have applied for the Graduate College Summer Fellowship and not been awarded the fellowship.
(3) The student's latest Study Plan
(4) To receive funding, the student should be able to regularly meet with their advisor on campus over the summer.
(5) Failure to make significant progress on summer research goals will result in the student being ineligible for support in future summers.
(6) 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.
(7) A faculty research advisor must approve the application.
DEPARTMENTAL RESEARCH FELLOWSHIPS
MANAGEMENT SCIENCES DEPARTMENT

Unless otherwise announced, the Management Sciences Department will award two departmental Research Fellowship positions each semester. This position will provide 25% salary support and is intended to supplement a 25% TA appointment. They will be awarded competitively.

Applications for the Management Sciences Research Fellowships must be submitted to the Department Administrator by the specified date and time.

In order to be eligible for this position, a student must meet the following requirements:

1. full-time or equivalent (registration during the semester of the award), resident PhD student in the Department of Management Sciences,
2. in at least his/her third semester of full-time enrollment during semester of the award

Priority will be given to students who will not be post-comp in time to compete for one of the Graduate College Fellowships in the semester of the award and have a 50% TA appointment in the current semester. Applications from all students who meet the basic requirements (stated above), though, will be carefully considered.

Students who wish to be considered will submit a research proposal of no more than three pages to the department. For Fall applications, the proposal can build on the summer merit fellowship proposal with additional discussion to discuss the plan for the fall. It will include summaries of the following points:

- a description of a research problem
- a summary of research progress
- a statement of the proposed work
- a description of expected deliverables / results
- a statement on whether they are post-comp or not. If they are not, they should detail when they plan to take the exam. If they are post-comp, they need to list if and when they have won Graduate College Fellowships.
- a statement on how they were funded in the current semester (if 50% TA, 25% TA, advisor-supported RA, GC award, etc.)

Any student who receives a fellowship must also submit a proposal to the Graduate College’s Jakobsen conference to present their results. This conference is held in the Spring, so students with a Fall RA should be able to submit for the conference within that academic school year. For students with a Spring RA, they can submit a proposal during the semester of their RA or in the next academic year.

The proposal must be approved by a supervisor from the department faculty before it will be considered. Proposals will be judged by the department's PhD Committee.