

Handbook for Ph.D. in Information Systems

Department of Information Systems and Operations Management



**Bryan School of Business and Economics
The University of North Carolina at Greensboro**

August 2011

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The Ph.D. degree in Information Systems (IS) offered by the Department of Information Systems and Operations Management in the Bryan School of Business and Economics at The University of North Carolina-Greensboro (UNCG) is an innovative research program designed to prepare students for careers as faculty in academic units and as professionals in research organizations. UNCG's Ph.D. enhances mainstream IS programs with unique features. The primary mission is to prepare graduates to conduct top-quality basic and applied research in Information Systems. In addition, the program includes: a commitment to practical relevance, an emphasis on producing quality teachers, a research apprenticeship requirement, and interdisciplinary research.

Program Overview

The program is designed for full time students. A full-time student is expected to complete the Ph.D. degree in four years. The program requires two years of course work, followed by written comprehensive examinations, an oral examination, proposal defense, writing of the dissertation, and the dissertation defense. While the coursework may be customized for each student in consultation with the Ph.D. Director, the major elements of the coursework include courses in the major (IS), supporting area, research methodology, and teaching preparation. The supporting area can be from within the Bryan School or outside depending on the research focus of the student. Typical requirements are: 24-27 hours in the major, 7-8 hours of research seminars, 9 hours in the supporting area, 15 hours in research methodology, and 4-7 hours in teaching preparation. There are also requirements for a research apprenticeship during the first two years and an organizational internship if necessary. Students entering into the program with deficiencies may be advised to take additional "leveling" courses. Students are advised to work closely with Department faculty and the Ph.D. Director in order to identify and develop research interests early during the program.

Topics in Information Systems

Topics in Information Systems include, but are not limited to: Information Systems Planning, Management and Global Issues, Inter-Organizational Systems, Current and Emerging Information Technologies, Information Systems Behavioral Topics, Theories of Information Systems, Research and Frameworks in Information Systems, Information Systems Research Methods.

Admission

This is a full-time program designed for students with master's degrees in appropriate areas. Students admitted without a master's degree in IS or a related field will be required to take foundation or leveling courses.

Application to the Graduate School should include the following:

- Completed application form now available on-line through APPLYYOURSELF.
- Non-refundable fee of \$55 (Fee Subject to change)
- Official transcripts from every college and university you have attended. You may send an unofficial transcript followed by the official transcript not less than 30 days prior to the day you enroll.
- Three recommendations submitted by you in sealed envelopes.
- Residency statement (if you are claiming North Carolina residency)
- Official GMAT test scores (GRE score will be calculated based on GMAT conversion formula)
- TOEFL scores (if you are an international student)
- Personal statement. It should be 1-2 pages long and single spaced. In addition, you may include a resume. The personal statement should address the following points:
 - your background
 - your goals and motivation for pursuing the Ph.D. degree
 - your research interests and activities, and how they would fit into our departmental profile
 - reasons for applying to our program

Application Deadline

Currently, admissions are made only for the Fall semester. Deadline to apply for Fall entrance is February 15. Admission decisions will be made in a timely manner after deadline.

Department Contacts

For programmatic issues, please contact:

Dr. Lakshmi Iyer, Information Systems Ph.D. Program Director or
Mr. Rodney Ouzts, Program Assistant.

Information Systems and Operations Management Department
Bryan School of Business and Economics, P.O. Box 26170
The University of North Carolina at Greensboro
Greensboro, NC 27402-6170, USA

Ph: 336.334.4346 or 336.334.4984 Fax: 336.334.5580

Emails: rmouzts@uncg.edu or LSIyer@uncg.edu

For administrative questions, please contact:
Mr. Rodney Ouzts
IS Ph.D. Program Administrative Assistant
P.O. Box 26170
Bryan School of Business and Economics, Room 440
The University of North Carolina at Greensboro
Greensboro, NC 27402-6170, USA
Ph: 336.334.4346 Fax: 336.334.5580 Email: RMOuzts@uncg.edu

Specific Requirements

The program of study leads to a 74-84 hour Doctor of Philosophy degree in Information Systems. The requirements consist of the following:

A. Leveling Courses/Prerequisites

Note: In light of changes being made to MSITM/MBA curriculum, these requirements may change.

To be taken to remedy deficiencies, in consultation with the Ph.D. Program Director.

ISM 671. Data Management
ISM 672. Web Programming
ISM 673. Telecommunications and Distributed Networks
ISM 674: Systems Analysis and Design
ISM 677: Information Systems Management

Students with no business background must take a least three of the four courses, in consultation with PhD Program Director.

MBA 702: Financial and Managerial Accounting (3)
MBA 706: Marketing Management (3)
MBA 708: Operations for Competitive Advantage (3)
MBA 709: Human Capital in Organizations (3)

B. Major (minimum of 21 hours)

ISM 753: Seminar in IS Planning, Management and Global Issues (3)
ISM 754: Seminar in Inter-Organizational Systems (3)
ISM 755: Seminar on Current and Emerging Information Technologies (3)
ISM 756: Seminar in Information Systems Behavioral Topics (3)
ISM 785: Theories of Information Systems (3)
ISM 786: Introduction to Research and Frameworks in Information Systems (3)
ISM 788: Seminar in IS Research methods (3)

C. Research Seminars (7-8 hours)

A minimum of 7 hours taken throughout the program.

D. Supporting Area (9 hours minimum)

With approval of the Ph.D. Program Director, the supporting area can be selected from the Bryan School of Business & Economics, or outside of the Bryan School.

Possible supporting areas include: Accounting, Economics, Finance, International Business, Management, Marketing, Operations Management, Computer Science, Geographic Information Science, Political Science, Psychology, Sociology and Textile Products Marketing.

E. Research Methodology (15 hours minimum)

Courses chosen in consultation with the Ph.D. Program Director. Possible courses include:

STA 661: Advanced Statistics in the Behavioral and Biological Sciences I (3)

STA 662: Advanced Statistics in the Behavioral and Biological Sciences II (3)

STA 671: Multivariate Analysis (3)

ERM 731: Structural Equation Modeling in Education (3)

ELC 665: Approaches to Qualitative Inquiry (3)

Or other courses as approved by the Ph.D. Program Director

F. Teaching Education (4-7 hours)

Courses must be chosen in consultation with the Ph.D. Program Director. Possible courses include:

PSY 721: Teaching of Psychology (1). *Normally offered only in the spring and with permission from Psychology Department and Ph.D. Program Director.*

ISM 782: Practicum in IS Teaching (1-3)

G. Organizational Research Internship

ISM 783 (3): Required of students lacking relevant work experience, as determined by the Ph.D. Program Director.

H. Research Apprenticeship

Two papers must be submitted for publication in conference proceedings or journals prior to taking written comprehensive examinations.

I. Foreign Language

There is no requirement for a foreign language.

J. Transfer Credit

12 hours maximum with approval of the Ph.D. Program Director

K. Comprehensive Written Examinations

Upon completion of the required course work and research apprenticeship, the student will be eligible to sit for written comprehensive examinations. The examination will have two parts.

Exam I

This exam will be content based. It will be six hour long and closed book/notes. It will examine the student on the various topic areas, their integration and research issues related to the courses being tested. The courses being tested on may change over time and from student to student. Students will be told in advance what courses they will be tested on. Students will be required to use a department supplied computer for the exam.

Exam II

This exam will assess the research readiness of the student. The exam will be take-home and 48 hours will be allowed to complete the exam. It will build on the courses: ISM 785, ISM 786, ISM 788, and research methodology courses. It will also include current and important readings in leading journals, which may or may not have been included in any of the classes. Students are therefore expected to remain current with the state of research in MIS. It is preferred that the answers be typed using MS Word on a computer.

Note 1: Typically, Exam I is scheduled on a Monday from 9 a.m. to 12 noon and then 2 p.m. to 5 p.m.

Note 2: Typically, Exam II will be given to the students on a Wednesday. They can pick it up from the Ph.D. administrative assistant between 11:30 a.m. and 12 noon. The typed answers will be due in the administrative assistant's office by 12 noon on Friday.

Note 3: Current plans are to administer both exams in the same week twice a year (late July and January), depending on the number of students wanting to take the exam.

Note 4: Questions are graded by multiple faculty and results are discussed by faculty. The Director will communicate the results to the students. If a student fails the exam, he or she may be allowed to retake the exam one more time. The Graduate School policy does not allow the student to retake an exam (written or oral) more than once.

Student should declare their intent to take the August exam by March 1 and the January exam by October 1. (Please see yellow form in back of this manual). Sample questions are available for viewing from the office. Please see IS Ph.D. Administrative Assistant to check out past sample questions.

L. Oral Examination

The oral exam will be given four weeks after the successful completion of the written examinations. All members of the student's advisory committee will participate in the exam. Additional faculty members may be invited to participate in the exam.

M. Proposal Topic Defense

Following the oral examination, the student will prepare a dissertation proposal that will be defended before a doctoral committee and topic must be approved. The defense may be attended by others outside the committee. Upon successful completion of the proposal topic defense, the student must apply for doctoral candidacy. Note: A student may register for dissertation hours only after successful completion of written and oral comprehensive exams.

N. Advisory/Dissertation Committee & Dissertation

The student, in consultation with the Ph.D. Program Director, will form an advisory committee early in the program. This committee will have 4 faculty members (chair + three other members), all from the ISOM Department. The committee will be chaired by the Ph.D. Program Director. As required by the graduate school, two, including the chair, must be members of the graduate faculty and no more than one may be an Adjunct graduate faculty member.

The advisory committee for each student should be formed by September 1 of the second year. The committee will be formed by the student in consultation with the Ph.D. Program Director. If the student does not take the initiative for forming the committee, the Ph.D. Program Director will form the committee.

After the student passes the written comprehensive exam and the oral exam, the committee will be officially reconstituted as the dissertation committee by the student in consultation with the Ph.D. Program Director. This committee must have at least four members. As required by the graduate school, two, including the chair, must be members of the graduate faculty and no more than one may be an Adjunct graduate faculty member. One member may be selected from the supporting area of study.

Dissertation (18-24 hours)

A minimum of 18 hours credit will be devoted to research that culminates in the preparation of the required doctoral dissertation. Upon completion, the dissertation will be defended before a doctoral committee. The defense may be attended by others outside the committee.

O. No Food Or Drinks

There will be no food or drinks at the oral examination, proposal defense, and

dissertation defense.

P. Announcements

Announcements of the oral exam, proposal defense, and dissertation defense should be made to the ISOM Faculty at least two weeks in advance. A flier will be prepared for proposal defense and dissertation defense, and posted on the Bryan School bulletin boards two weeks in advance. E-mail announcements will be sent out to ISOM Dept. and others as directed by Graduate School. The Ph.D. Administrative Assistant will prepare these based on information received from student.

Q. Student Portfolios

Each student will prepare a Teaching Portfolio and a Research Portfolio by June 30th of the third year. The Teaching Portfolio will contain: teaching philosophy, course syllabi, course evaluations, projects, sample of graded assignments, awards, recognitions, etc. The Research Portfolio will contain: philosophy and interests, lists of articles in journals and conferences, summary of dissertation, selected articles, awards, recognitions, etc.

R. Summer Assistantships

All summer assistantship recipients from the Graduate School will be required to make a presentation in the ISOM research seminar series. Students will be informed of this requirement.

S. Forms

There are a several forms that are required by the UNCG Graduate School and the IS Ph.D. Program. Sample copies of those forms are located in the Appendix of this manual. **Note: It is the responsibility of the student to ensure all forms are completed in a timely manner to meet Graduate School and graduation requirements.**

A listing of these forms is as follows:

Can be Obtained from IS Ph.D. Office (see Rodney Ouzts).

1. Check List for New ISOM Ph.D. Student.
2. Completion of I-9 UNCG Card (obtain from Student Employment Office).
3. Conflict of Interest Form.
4. Student Information Sheet.
5. Privacy FERPA Form.
6. Program of Study (blue sheet).
7. Intent to take Oral (green sheet) and Written (yellow sheet) Exams.

Required by UNCG Graduate School (Samples located in Appendix)

Forms can be found on-line and must be filled out by student with appropriate signatures:

8. Doctoral Advisory/Dissertation Committee & Plan of Study.
9. Doctoral Plan of Study Revision.
10. Doctoral Advisory/Dissertation Committee Appointment.
11. Doctoral Advisory/Dissertation Committee Revision.
12. Dissertation Topic Approval.
13. Application for Admission to Candidacy.
14. Final Oral Exam Schedule.
15. Results of Doctoral Preliminary Examinations (Written & Oral)
16. Results of Oral Examination in Defense of Thesis/Dissertation
17. Certification of Degree Status.
18. Degree Audit Check Sheet.
19. Application for Graduation for Graduate Students.

Information Systems Ph.D. Candidate Student Timeline

Semester Begins	See Administrative Assistant to obtain required I-9 and FERPA Forms.
First Week of Ph.D. Program	Meet with Ph.D. Program Director to plan Program of Study. (see blue form).
First Week of Ph.D. Program	Attend departmental orientation session.
First Semester of Ph.D. Program	Attend all required Graduate School orientation/teaching assistant classes.
First Year of Ph.D. Program	Form Ph.D. Doctoral Advisory/Dissertation Committee* by January 30 of first year and submit form to Ph.D. Program Director & Graduate School (see next block).
By end of first semester or upon completion of 18 semester hrs of PhD Program	Submit Ph.D. Doctoral Advisory/Dissertation Committee & Plan of Study* form to Ph.D. Director and Graduate School.
Second Year of Ph.D. Program	Submit Intent to Take Written Comprehensive Exam (yellow) form to Ph.D. Program Director and Graduate School by March 1 st
July/August before Third Year of Ph.D. Program.	Take Written Comprehensive Exam.
Third Year of Ph.D. Program and Within Four Weeks of Passing Written Comprehensive Exam.	Submit Intent to Take Oral Comprehensive Exam form to Ph.D. Director.
After successful completion of Oral and Written Comps and if necessary	Reconstitute Doctoral Advisory/Dissertation Committee*
After Completion of taking final Written	Submit Results of Doctoral Preliminary

and Oral Comprehensive Exams.	Exam (oral and written) form to Grad School.
Third Year of Program	Schedule Proposal Defense and Defend Proposal. Submit Dissertation Topic Approval form to Grad School. Begin writing Dissertation.
After Successful Completion of Oral and Written Comprehensive Exams and Approval of Dissertation Topic.	Submit Admission to Candidacy form to Graduate School
Fourth Year of Ph.D. Program and within two weeks prior to taking Final Oral Exam/Dissertation Defense**	Submit Final Oral Exam Schedule (Defense of Thesis/Dissertation)** Form to Ph.D. Director and Dean Graduate School. Schedule and Hold Final Oral Dissertation Defense
Upon Completion of Final Oral Defense	Submit Results of Oral Exam in Defense of Thesis/Dissertation form to Grad School
Fourth Year of Ph.D. Program and by first week of December.	Submit Certification of Degree Status Form to Graduate School (By Dec. 9 for spring graduates)
Fourth Year of Ph.D. Program.	Complete Degree Audit Check Sheet and Submit to Graduate School.
Fourth Year of Program and End of the First Week of Classes of the Term Student Will Graduate from Ph.D. Program.	Submit Application for Graduation For Graduate Students form to Graduate School.

* Denotes that Submission of a Revision Form is required if changes are made.

** You **must** be registered and pay for at least one semester hour during the time you are presenting taking your Final Oral Dissertation Defense even if this takes place during Summer Session.

Time Limit for Completion

According to the regulations of the Graduate School, all requirements for the Ph.D. must be completed within seven academic years from the date of the first enrollment for study following admission to the doctoral program. For transfer students, the seven-year time limit commences during the semester which transfer credit was earned.

Financial Support

Financial support is normally provided for the first four years you are in the program. Additional support beyond the four years is limited and not guaranteed.

Travel

Financial support for travel **may** be available to students beginning their third year. Amounts are allotted each year and dependent upon what is available in departmental budgets, type of conference and quality of work. Please note that the fiscal year begins on

July 1 and ends on June 30. Approval for travel is obtained by submitting Travel Authorization Expense report (located in appendix) to Ph.D. Program Director or Ph.D. Administrative Assistant at least three months in advance of anticipated travel. Ordinarily, support is provided only if student is presenting a paper at a conference. Proper receipts and Travel forms must be returned to Administrative Assistant in a timely manner for prompt payment. Reimbursement payments will be made directly into student account.

Department Faculty

Currently, the ISOM Department has fourteen world-class tenured/tenure-track faculty, and has plans to hire more to support the Ph.D. program. Faculty teaching and research interests include Data Mining and Warehousing, E-Commerce, Global Information Technology Management, Intelligent Agents, Knowledge Management, Media Choice Theory, Supply Chain Management, and Technology Implementation & Diffusion. Faculty frequently publishes research in top-tier journals, such as *Communications of the ACM*, *Decision Sciences*, *Journal of Operations Management*, *Management Science*, *Information Systems Research*, and *MIS Quarterly*. They participate and share their research in regional, national, and international conferences. Faculty and their research interests are listed below. More details can be found on the web site: <http://www.uncg.edu/bae/isom/facresearch/>

Dr. Kwasi Amoako-Gyampah (Ph.D., 1990, University of Cincinnati). Implementation and Management of Technology, Logistics and Supply Chain Management, Global Manufacturing Practices and Strategy

Dr. Joyendu Bhadury (Ph.D., 1991, University of Texas at Dallas). Facility Location Theory, Logistics and Supply Chain Management.

Dr. John Eatman (Ph.D., 1972, University of South Carolina). Information Architectures, Systems Development, Management of IT Services

Dr. Richard Ehrhardt (Ph.D., 1976, Yale University). Stochastic Modeling, Inventory Theory, Production Planning Systems, Supply Chain Management, Energy Distribution Planning

Dr. Vidyaranya Gargeya (Ph.D., 1992, Georgia State University). Global Operations Strategy, Supply Chain Management, Service Operations Management, Total Quality Management, Customer Relationship Management, and Performance Measurement.

Dr. Lakshmi S. Iyer (Ph.D., 1997, The University of Georgia). eBusiness/eCommerce, Emerging Technologies, Knowledge Management, eHealthcare, Decision Support and Business Intelligence.

Dr. Hamid Nemati (Ph.D., 1996, The University of Georgia). Information Security and Privacy, Healthcare IT, Data Mining and Warehousing, Artificial Intelligence, Knowledge Management, and E-commerce

Dr. Prashant Palvia (Ph.D., 1984, University of Minnesota). Global Information Technology Management, Technology Diffusion, IT for Socio-Economic Development, Global Virtual Teams, IT Strategy

Dr. Al Salam (Ph.D., 1998, State University of New York at Buffalo). E-Business, Knowledge Management and XML, Knowledge Representation and Ontology, IS and Competitive Dynamics, Services in Electronic Mediated Environment, Computer Security and Human Behavior, Social Networks and Competitive Dynamics.

Dr. Rahul Singh (Ph.D., 1999, Virginia Commonwealth University). Systems Security, Social Computing and Web 2.0, Design Science and Systems Development, Web Accessibility and Usability, eBusiness and Information Integration, Systems Strategy, Qualitative Methods.

Dr. Larry Taube (Ph.D., 1984, University of North Carolina at Chapel Hill). Supply Chain Management, ERP Implementation, Sales and Operations Planning

Dr. Xia Zhao (Ph.D. 2007 University of Texas – Austin). Information Security, Risk Management, IT Control & Compliance

APPENDIX