

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

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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

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, 9 hours in the supporting area, 12 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: Business Planning and Information Technology, Data Mining and Warehousing, Database Design and Administration, Electronic Commerce, Emerging Technologies, Enterprise Resource Planning Systems, Global Information Technology Management, Information Networks and Architectures, Management of Information Technology, Systems Development, and Workflow and Collaboration Systems.

Admission

The program is designed primarily for students with master's degrees in appropriate areas. At a minimum, students should possess a bachelor's degree. 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
- Non-refundable fee of \$45
- Two 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
- 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. Please apply after January 1. Admission decisions will be made by March 31.

Department Contact

For programmatic issues, please contact:

Dr. Prashant Palvia
IS Ph.D. Program Director
Information Systems and Operations Management Department
Bryan School of Business and Economics
The University of North Carolina at Greensboro
Greensboro, NC 27402-6165, USA

Ph: 336.334.4818 Fax: 336.334.4083 Email: pcpalvia@uncg.edu

For administrative questions, please contact:

Mr. Rodney Ouzts
Ph.D. Administrative Assistant
Room 441
Bryan School of Business and Economics
The University of North Carolina at Greensboro
Greensboro, NC 27402-6165, USA

Ph: 336.334.4346 Fax: 336.334.4083 Email: RMOuzts@uncg.edu

Specific Requirements

The program of study leads to a 73-91 hour Doctor of Philosophy degree in Information Systems. The requirements consist of the following:

The current requirements for prerequisites and major, listed below, are likely to change, pending approval. Please see appendix at the end.

A. Leveling Courses/Prerequisites

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

ISM 601: Information Systems and Technology (1.5)
ISM 602: Business Data Systems (1.5)
ISM 604: Business Application Programming I (1.5)
ISM 605: Business Application Programming II (1.5)
ISM 608: Networks and Telecommunications (1.5)
ISM 609: Distributed Systems and Architecture (1.5)
ISM 614: Object-Oriented Programming I (1.5) in lieu of ISM 604
ISM 615: Object-Oriented Programming II (1.5) in lieu of ISM 605
ISM 620: Systems Analysis (1.5)
ISM 621: Systems Design and Software Engineering (1.5)
ISM 622: Advanced Relational Database Design and Implementation (1.5)
ISM 641: Business Planning and Information Technology (1.5)
MBA 602: Presentation and Interpretation of Financial Statements (1.5)
MBA 603: Economic Analysis (1.5)
MBA 604: Organizational Analysis (1.5)
MBA 605: Financial Management (1.5)
MBA 606: Marketing Management (1.5)
MBA 607: The Operations Function (1.5)
MBA 617: Management Science (1.5)

B. Major (minimum of 25 hours)

9 hours: ISM 785, ISM 786, and ISM 787 (3 hrs each).

16 hours: Eight 2 hour research seminars – five required, three electives (see below)

The first 5 below are required and must be taken before the written comps. Select 3 from the rest – they can be taken any time during the program.

ISM 751: Seminar in Decision Support Systems (2 hr)

ISM 752: Seminar in Information Networks and Architectures (2 hr)

ISM 763: Seminar in Electronic Commerce (2 hr)

ISM 774: Seminar in Global Information Technology (2 hr)

ISM 781: Seminar in Information Systems Planning and Strategy (2 hr)

ISM 761: Seminar in Systems Development (2 hr)

ISM 762: Seminar in Database Design and Administration (2 hr)

ISM 765: Seminar in Information Systems Security (2 hr)

ISM 771: Seminar in Management of Information Technology Services (2 hr)

ISM 773: Seminar in Supply Chain Management (2 hr)

ISM 775: Seminar in Workflow and Collaborative Systems (2 hr)

ISM 777: Seminar in Emerging Information Technologies (2 hr, may be repeated)

C. Research Seminars (5-8 hours)

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 (12 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)

F. Teaching Education (4-7 hours)

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

CUI 607: Adult Learning and College Teaching (3)

CUI 759: College Teaching Practicum (3)

PSY 721: Teaching of Psychology (1)

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: the first part will be composed of IS content from various courses, their integration and existing literature; the second part will be designed to evaluate the research readiness of the student. The examination is given once or twice during the year. If the student fails in the first attempt, a second attempt may be allowed by the Ph.D. Program Director. 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 Asst. to check out past sample questions.

L. Oral Examination

The oral exam should be scheduled within four weeks after successful completion of the written examinations. All members of the student's advisory committee will participate in the exam. Other faculty members in the ISOM department may attend.

Upon successful completion of the oral examination, the student may apply for doctoral candidacy.

M. Proposal Defense

Following the oral examination, the student will prepare a dissertation proposal that will be defended before a doctoral committee. The defense may be attended by others outside the committee.

N. 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. 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 Written Comprehensive ISOM Ph.D. Exam (yellow sheet).

Required by UNCG Graduate School (Located in Appendix and must be filled out by student with appropriate signatures).

8. Doctoral 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. Certification of Degree Status.
16. Degree Audit Check Sheet.
17. Application for Graduation for Graduate Students.

O. 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.

Information Systems Ph.D. Candidate Student Timeline

Semester Begins	See Administrative Assistant to obtain Forms and Manual.
First Week of Ph.D. Program	Meet with Ph.D. Director to plan Program of Study. (see blue form).
First Semester of Ph.D. Program	Attend any required teaching assistant seminars/courses.
First Year of Ph.D. Program	Form Ph.D. Doctoral Advisory/Dissertation Committee* by January 30 of first year and submit to Ph.D. Program Director & Graduate School.
First Year of Ph.D. Program	Submit Ph.D. Doctoral Plan of Study 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
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 Completion of taking final Written and Oral Comprehensive Exams.	Submit Dissertation Topic Approval Form to Graduate School.
After Successful Completion of Oral and Written Comprehensive Exams and Approval of Dissertation Topic.	Submit Admission to Candidacy form to Graduate School
After Successful Completion of Oral and Written Comps and If Necessary.	Reconstitute Doctoral Advisory/Dissertation Committee
Third Year of Program	Schedule Proposal Defense and begin Writing Dissertation.
Fourth Year of Ph.D. Program and within two weeks prior to taking Final Oral Exam/Dissertation Defense.	Submit Oral (Dissertation Defense) Exam Form to Ph.D. Director and Graduate School. Schedule and Hold Final Oral Dissertation Defense.
Fourth Year of Ph.D. Program and by first week of December.	Submit Certification of Degree Status Form to Graduate School.
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.

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.

Travel

Financial support for travel may be available to students. 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.

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*, 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. 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, Materials Management

Dr. Vidya Gargeya (Ph.D., 1992, Georgia State University). Global Operations Strategy, Supply Chain Management, Service Operations Management, Total Quality Management

Dr. Gerald Hershey (Ph.D., 1971, Indiana University). Business Process Reengineering and Management, Systems and Human Productivity, Educational Program Development and Management

Dr. Lakshmi S. Iyer (Ph.D., 1997, The University of Georgia). Knowledge Management, Data Mining, E-Business Strategy, E-Commerce Application Development.

Dr. Ruth King (Ph.D., 1987, The University of Texas). Strategic use of IT, MIS professional development, Computer mediated group work and group decision making.

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

Dr. Prashant Palvia (Ph.D., 1984, University of Minnesota). Global Information Technology Management, Electronic Commerce, Media Choice Theory, Technology Diffusion

Dr. Al Salam (Ph.D., 1998, State University of New York at Buffalo). E-Business, Knowledge Management and XML, Knowledge Representation and Ontology

Dr. Rahul Singh (Ph.D., 1999, Virginia Commonwealth University). Intelligent Agents, Data Mining, Electronic Business, Application of Artificial Intelligence to Decision Making

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

Dr. Thomas Van Dyke (Ph.D., 1996, University of North Texas). Information Systems Service Quality, IS Developer Productivity

Dr. James Weeks (Ph.D., 1974, University of South Carolina). Scheduling Theory, Inventory Management, Logistics, Operations Strategy

APPENDIX