Ph.D. Program in Information Systems and Operations Management

The key features of the Ph.D. Program in Information Systems and Operations Management (ISOM) at the Warrington College of Business Administration, University of Florida, are described in this document.

1. Mission Statement

The mission of the ISOM Ph.D. Program is to educate scholars who will make substantial contributions in their field of research. Our aim is to place our graduates in the top-tier of research Universities – either these Universities are members of the Association of American Universities, or they are classified as R1 Universities (“Doctoral Universities – Highest research activity”) by the Carnegie Commission on Higher Education.

2. Focus of the Program

Based on this mission, our primary goal is to train graduate students to make original research contributions in their chosen field and subsequently to place them in academic research environments. The major areas of study within the Department are: Information Systems/Information Technology (IS/IT) and Operations Management (OM).

3. Support

Students need three types of support to be successful in a Ph.D. program. The first type of support is structural. Students are provided with a work area, a personal computer, limited teaching responsibilities, and sufficient financial support.

The second type of support is research skill development. Depending upon student interest and background in the area of specialization, each student will be required to complete coursework to demonstrate research skill proficiency in the selected area. To gain experience in the application of these skills, students are expected to work closely with faculty members on research projects throughout the duration of the Program. Every student graduating from our program is expected to co-author several research articles with ISOM faculty members. As noted earlier, our department has a strong emphasis on research productivity.

The third type of support is social. The most important people in a Ph.D. program are your colleagues in the program. Our Ph.D. students are supportive. All students emphasize the collective success of the group. All of our students make a conscientious effort to help students from different cultures acclimatize to life in U.S.

4. Prerequisites

Applicants for the Ph.D. in ISOM must have, at a minimum, an undergraduate degree prior to entering the program. It is also expected that applicants will have a history of academic excellence and adequate scores on standardized tests. The minimum requirements are: (a) a score of 650 on the Graduate Management Admissions Test (GMAT), or 310 (verbal + quantitative) on the new revised version of the Graduate Record Examination (GRE), or 1350 on the old version of the GRE; and (b) a TOEFL score of 600 (for international students). Finally, it is critical that the applicant be able to communicate clearly in written and spoken English.
5. Application

If you are interested in applying to our program, we strongly encourage you to use the web-based application process at the UF Admissions website. Please complete your application no later than January 31st for Fall admission in order to receive full consideration for financial aid. Admission letters/e-mails will be sent out around March 15th. We do not admit Ph.D. students for Spring semester.

6. Curriculum

Although the exact schedule of courses/milestones is personalized and based on a student’s prior background, a typical program of study for new students is based on the assumption that the student has the required background in Business, Calculus, and Computer Programming. The program could be appropriately tailored to specific students’ needs. Students can substitute one course for another provided they give proper justification as to why such substitution is important to achieving their academic goals.

Year 1 and 2 (2 Fall semesters, 2 Spring semesters, and 1 Summer semester) and possibly in year 3

Methodological Coursework

- MAS 4105 – Linear Algebra (4) – This course could be waived, provided students pass a written exam in the course material.
- One of:
  - STA 6166 - Statistical Methods in Research I (3)
  - STA 6167 - Statistical Methods in Research II (3)
  - An equivalent research methods course (3)
- MAA 5228 - Modern Analysis I (3)
- ECO 7408 - Mathematical Methods and Applications to Economics (2)
- One of:
  - ECO 7404 – Game Theory (2)
  - ECO 6409 – Game Theory Applied to Business Decisions (2)
- Any four of the following six courses:
  - ECO 7119 – Information, Incentives, and Agency Theory
  - ECO 7115 – Microeconomic Theory (3)
  - ESI 6417 – Linear Programming and Network Optimization (3)
  - STA 6326 – Introduction to Theoretical Statistics I (3)
  - ESI 6546 – Stochastic Systems Analysis (3)
  - COT 5405 – Analysis of Algorithms (3)
- One of:
  - AEB 7572 – Econometric Methods II (3)
  - MAR 7626 – Multivariate Statistics (3)

Substantive Coursework: IS/IT Students

- Doctoral Seminars, as offered.

Substantive Coursework: OM Students

- Doctoral Seminars, as offered.
- ESI 6912 – Models for Supply Chain Management (3)
- One of:
  - ESI 6418 – Extensions to Linear Programming (3)
  - ESI 6429 – Introduction to Nonlinear Programming (3)
Year 2 (end of Summer A semester): Written Qualifying Exams

Year 3 (end of Fall semester): Submit and Present a Research Paper to one’s Faculty Committee

Year 3: Supplementary Methodological Coursework and Teaching Seminar

- Complete the remaining required coursework
- BTE 7171 – Preparing to Teach in Business

Year 4: Defend dissertation proposal

All required coursework must be completed before the proposal defense can be scheduled.

Year 5: Defend dissertation

Some students may be able to complete all requirements, including completion of the dissertation in four years. For such students it is expected that they will have at least one research paper in the second round or better in a high-quality research journal.

Notes:
Some courses students might want to audit these courses (if they lack understanding in these areas):

- ISM 6257 - Intermediate Business Programming (2)
- ISM 6258 - Advanced Business Programming (2)
- ISM 6259 – Business Programming (2)
- MAN 6528 – Logistics/Transportation (2)
- MAN 6573 – Purchasing (2)
- MAN 6511 – Production Management Problems (2)
- MAN 6581 – Project Management (2)

Notes:

1. Students will be required to attend all ISOM Workshops and the Department Seminar Series (regardless of area of specialization) held at the University of Florida.
2. During the program, there is an opportunity for students to take elective courses depending upon their chosen specialization, research methodology, or supplementary fields of research/teaching interest. Typically, these courses will be graduate courses in Computer Sciences, Mathematics, Statistics, and/or Systems and Industrial Engineering. Before taking any of these courses, students need to obtain the approval of the Chair(s) of the Dissertation Committee and/or the Ph.D. Program Coordinator.
3. Any student signing up for Research credits in a semester must obtain the approval of the Chair(s) of their Dissertation Committee and/or the Ph.D. Program Coordinator.
4. For all other methodological courses students must obtain a minimum grade of B. If they fail to do so, questions based on one or more of these courses might be included in the written qualifying exam or they may have to take a separate exam covering the material introduced in these courses, at a later point in time.
5. In general, the students should distribute copies of their research papers to the committee two weeks before the presentation date. This includes the research paper, proposal defense, and the final dissertation defense.
7. Qualifier Exams

There are two components of the qualifier exams, the written qualifying exams and the oral qualifying exam/research paper.

Written Qualifying Exams (To be taken during the beginning of summer, typically by June, between the student’s second and third year)

These exams will consist of open-ended research questions based on the research seminars, and additional readings prescribed by faculty members. Each faculty member will give one exam lasting maximum of four hours. Grades for each of the qualifying exam taken (i.e. given by each professor) will be based on a scale of High Pass (HP), Pass (P), Low Pass (LP), and Fail (F).

To satisfactorily pass the exam, the student will need to obtain a HP or P score on all sections of the qualifying exam. If this is not the case, then the PhD coordinator will convene a faculty meeting to discuss the results of the qualifying exam. The outcome of the meeting will be one of the following:

- The student will be given one additional chance (i.e., retake the sections of the qualifying exam for which the assigned score was a LP or F or some other remedy suggested by faculty). If the student’s second attempt is also deemed unsatisfactory, the student will be asked to leave the doctoral program.

OR

- The student will be asked to leave the doctoral program.

If the decision is to ask the student to leave the doctoral program, he/she has the option to continue taking courses to complete the requirements for the MS-ISOM degree.

Oral Qualifying Exams/Research Paper (Must be presented no later than Fall Semester of third year)

Students must prepare and present a research paper to faculty members to demonstrate their research skills. Students are required to identify a faculty committee (of two faculty members) by the end of the Spring semester of their second year. In evaluating this paper and the presentation, the faculty committee will focus primarily on the originality of the research and/or the research plan, the model and/or the methodology involved, the potential for current or future publication, the ability to think creatively, and to communicate and carry out research independently. A student will have satisfactorily completed this requirement when a majority of faculty members on the committee agree that the research paper satisfies these requirements. After evaluating this paper, the committee will make specific suggestions for improvement. A student who does not satisfy this requirement might be given one additional semester to revise the paper based on the faculty committee’s recommendations. If given the extension, he/she will be asked to resubmit the paper and make a presentation to the committee by the end of the extension period. If this revised paper/presentation is evaluated as being unsatisfactory by the majority of faculty on the committee, the student will be asked to leave the doctoral program but can continue taking courses to obtain an MS-ISOM degree.

Since the focus of the Program is to produce high-quality researchers with active streams of research, the students need to satisfactorily pass both the written qualifying exams and the oral qualifying exams/research paper requirement in order to be admitted into Candidacy.

8. Research Guidelines

The job prospects, and lifelong scholarly contributions, of a Ph.D. student are positively correlated with
the training the student receives in the Ph.D. program. While the doctoral seminars are intended to expose students to different types of research, each student will be expected to develop a viable research program consisting of the following elements.

- Students will target the following research agenda:
  a. one viable research project by May 15 of year two in the Ph.D. program;
  b. two viable research projects by May 15 of year three in the Ph.D. program;
  c. three viable research projects by May 15 of year four in the Ph.D. program.

- It is strongly encouraged that a minimum of two faculty collaborators will participate across the three projects.

- A viable research project has the following characteristics:
  a. a project proposal (faculty verified);
  b. it is at least 30% complete (faculty verified);
  c. is likely to be publishable at a second-tier journal or better (faculty verified), provided it is successfully executed.

- Student progress will be officially assessed in May of each academic year. To assess student progress, the Graduate Coordinator will contact the student and/or faculty advisors. A record of student progress will be maintained.

- A student with an insufficient number of viable projects will work with the Graduate Coordinator to identify research projects and/or faculty collaborators. A student with an insufficient number of viable projects, and a given target date, will have three months to remedy the situation. Students that cannot remedy the situation in three months will be put on probation. Students that cannot remedy the situation in six months will be asked to leave the doctoral program but can continue taking courses to obtain an MS-ISOM degree.


Students must prepare and present their dissertation proposal to faculty members to demonstrate their research skills. Students should have approximately two-thirds of their research completed prior to the dissertation proposal. Students can defend their dissertation when they have completed the remainder of the thesis.

10. Current Students

<table>
<thead>
<tr>
<th>Student</th>
<th>E-mail address</th>
<th>Current Year</th>
<th>Area of Specialization</th>
</tr>
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<tbody>
<tr>
<td>Quan Zheng</td>
<td><a href="mailto:quanzheng@ufl.edu">quanzheng@ufl.edu</a></td>
<td>6th Year</td>
<td>OM</td>
</tr>
<tr>
<td>Vashkar Ghosh</td>
<td><a href="mailto:vashkar.ghosh@ufl.edu">vashkar.ghosh@ufl.edu</a></td>
<td>5th Year</td>
<td>OM</td>
</tr>
<tr>
<td>Mahdi Moqri</td>
<td><a href="mailto:moqri@ufl.edu">moqri@ufl.edu</a></td>
<td>5th Year</td>
<td>IS/IT</td>
</tr>
<tr>
<td>Avinash Geda</td>
<td><a href="mailto:avinashgeda@ufl.edu">avinashgeda@ufl.edu</a></td>
<td>4th Year</td>
<td>OM</td>
</tr>
<tr>
<td>Jingchuan Pu</td>
<td><a href="mailto:jingchuan@ufl.edu">jingchuan@ufl.edu</a></td>
<td>4th Year</td>
<td>IS/IT</td>
</tr>
<tr>
<td>Arunima Chhikara</td>
<td><a href="mailto:arunima@ufl.edu">arunima@ufl.edu</a></td>
<td>3rd Year</td>
<td>OM</td>
</tr>
<tr>
<td>Anurag Garg</td>
<td><a href="mailto:Anurag.Garg@warrington.ufl.edu">Anurag.Garg@warrington.ufl.edu</a></td>
<td>2nd Year</td>
<td>IS/IT</td>
</tr>
<tr>
<td>Hongseok Jang</td>
<td><a href="mailto:Hongseok.Jang@warrington.ufl.edu">Hongseok.Jang@warrington.ufl.edu</a></td>
<td>2nd Year</td>
<td>OM</td>
</tr>
<tr>
<td>Name</td>
<td>Email</td>
<td>Year</td>
<td>Department</td>
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<tr>
<td>Honggang Hu</td>
<td><a href="mailto:Honggang.Hu@warrington.ufl.edu">Honggang.Hu@warrington.ufl.edu</a></td>
<td>1st</td>
<td>OM</td>
</tr>
<tr>
<td>Xiang (Shawn) Wan</td>
<td><a href="mailto:Xiang.Wan@warrington.ufl.edu">Xiang.Wan@warrington.ufl.edu</a></td>
<td>1st</td>
<td>IS/IT</td>
</tr>
<tr>
<td>Mariia Petryk</td>
<td><a href="mailto:Mariia.Petryk@warrington.ufl.edu">Mariia.Petryk@warrington.ufl.edu</a></td>
<td>1st</td>
<td>IS/IT</td>
</tr>
<tr>
<td>Yuan (Lucy) Zhang</td>
<td><a href="mailto:Yuan.Zhang@warrington.ufl.edu">Yuan.Zhang@warrington.ufl.edu</a></td>
<td>1st</td>
<td>IS/IT</td>
</tr>
</tbody>
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11. Contact Information

Support Staff: Jaleesa Conyers
Phone: (352) 392-9600
Fax: (352) 392-5438
E-mail: Jaleesa.Conyers@warrington.ufl.edu
Mailing Address:
Department of Information Systems and Operations Management
Warrington College of Business Administration
University of Florida PO Box 117169
Gainesville, FL 32611-7169

Support Faculty: Shubho Bandyopadhyay (Ph.D. Coordinator)
Phone: (352) 392-5946
Fax: (352) 392-5438
E-mail: shubho.bandyopadhyay@warrington.ufl.edu
Mailing Address:
Department of Information Systems and Operations Management
Warrington College of Business Administration University of Florida
PO Box 117169
Gainesville, FL 32611-7169