IT INNOVATION, MS

School of Interdisciplinary Informatics, College of Information Science & Technology

Vision Statement

Information Technology Innovation (ITIN) is the interdisciplinary practice of conceptualizing, designing, prototyping, and fielding an IT-based product or service. It focuses both on the technological and entrepreneurial aspects of IT products. Being many-faceted by definition, IT Innovation brings together the aspects of Computer Science and Management Information Systems with other disciplines that inform IT design and application such as health care, business, psychology, art, music, or public administration, among many others. It integrates and interfaces a diverse set of disciplines in addition to information technology. In addition, IT Innovation takes a more holistic and immersive approach to idea/product development: It focuses on the ideation, design, and development of an IT-based innovation, as well as on the entrepreneurial realization of this innovation as a profitable or sustainable product or service. There is a great demand for ITIN entrepreneurs and professionals locally, regionally, and nationally, and the MS in IT Innovation program was created, in part, to prepare a workforce to conceptualize, design, prototype, and field IT-based solutions. It focuses on the ideation, design, and development of an IT-based innovation, as well as on the entrepreneurial realization of this innovation as a profitable or sustainable product or service.

Program Website (https://www.unomaha.edu/college-of-information-science-and-technology/academics/it-innovation.php)

Admissions

Application Deadlines (Spring 2020, Summer 2020, and Fall 2020)

• Fall: July 1
• Spring: December 1
• Summer: April 1

Program-Specific Requirements

• Applicants are required to have a command of oral and written English. Those who do not hold a baccalaureate or other advanced degree from the U.S., or a baccalaureate or other advanced degree from a predetermined country on the waiver list (https://www.unomaha.edu/graduate-studies/prospective-students/Proof%20of%20English%20Proficiency-%20International.pdf), must meet the minimum language proficiency score requirement in order to be considered for admission.
  • Paper-based TOEFL: 550
  • Computer-based TOEFL: 213
  • Internet-based TOEFL: 80

• IELTS: 6.5
• PTE: 53
• The minimum undergraduate grade point average (GPA) requirement for the MS in IT Innovation program is 3.00 or equivalent score on a 4.00 scale. Applicants should have the equivalent of a 4-year undergraduate degree.
• Three (3) letters of recommendation who can evaluate the applicant’s work and/or academic achievements.
• Writing Sample
  • Applicants are required to submit a writing sample from work or previous academic experiences. Alternatively, if you do not have a writing sample, please submit a two page double-spaced word processed essay that addresses the following two topics:
    • Two accomplishments that demonstrate your potential for success in the graduate program.
    • Your unique personal qualities and life experiences that distinguish you from other applicants to our graduate program.
• Resume
  • Submit a detailed resume indicating your work experience and background.

Non-Degree students interested in taking courses without admission to the MS in IT Innovation degree program may do so with permission of the graduate program committee.

Requirements

Foundation Courses

Foundation courses ensure that all students in the IT Innovation program have a strong foundation on which to build the rest of the program.

Foundation courses cannot be used to satisfy the 36 semester hours required for the MS in IT Innovation degree. Students who have not completed all the foundation course requirements may be admitted on provisional status until those requirements have satisfactorily been completed. All must be completed prior to or concurrent with the first six hours of MS in IT Innovation graduate course work.

Foundation Courses include:

• Six credit hours of Programming & Development courses, examples include: Java, C, C++, C#, Unity or PHP.
• Three credit hours of System Analysis & Design courses, examples include: ITIN 4440 Agile Development, ISQA 8040 Overview Systems Analysis & Design, or ISQA 8220 Advanced Systems Analysis & Design.

Electives

Approved Electives

Students will select a cognate of four related electives with approval from their faculty advisor.

Select Capstone or Thesis

ITIN 8940 ITIN CAPSTONE I
ITIN 8950 ITIN CAPSTONE II
Exit Requirements
Complete the Capstone requirement (ITIN 8940 and ITIN 8950) or the thesis option ITIN 8990.

All candidates completing the thesis option, should carefully review the Graduate College requirements for forming the Supervisory Committee, Thesis/Thesis Equivalent Proposal Approval forms, and final approval and submission of the thesis.

Quality of Work Standards
The Graduate College’s Quality of Work standards shall be applied to foundation courses as well as courses taken as part of the degree program. In particular, the GPC will recommend to the Graduate College that any

1. Student receiving a grade of “C-” or below in any foundation courses will be automatically dismissed from the program or, in the case of unclassified or non-degree students, be automatically denied admission.
2. Student receiving a grade of “C” or “C-” in any foundation course will be placed on probation or dismissed from the program.
3. Student not maintaining a “B” (3.0 on 4.0 scale) average in foundation courses will be placed on probation or dismissed from the program.

ITIN 8000 TECHNOLOGY & INNOVATION-STATE OF THE ART (0 credits)
ITIN 8000 provides a regular forum for IT Innovation graduates students, where the latest developments in the field of IT Innovation are introduced and discussed. The course also functions as a central communication and collaboration hub for graduate students in IT Innovation. Participation is required.
Prerequisite(s)/Corequisite(s): Students in the MS in IT Innovation program may register. Not open to non-degree graduate students.

ITIN 8006 SPECIAL TOPICS IN IT INNOVATION (1-6 credits)
This course is designed to acquaint students with issues which are current to the field or emerging trends in the IT Innovation area. Topics will vary across terms. This course may be repeated, but no topic may be taken more than once. (Cross-listed with ITIN 4000).
Prerequisite(s)/Corequisite(s): Permission of instructor. Additional prerequisites may be required for particular topic offerings.

ITIN 8100 INTERMEDIA (3 credits)
This is an ongoing course that brings together students of the arts and students of scientific disciplines in order to facilitate and promote the creation of Intermedia art, and to further explore shared resources, joint research, and exhibition/performance opportunities.
Prerequisite(s)/Corequisite(s): Instructor permission

ITIN 8210 DESIGN SCIENCE AND THEORY DEVELOPMENT (3 credits)
The purpose of this course is to help students understand theory, theoretical contributions, and design science. Students will approach such questions as: What is a theory? What makes a theory good? Why are theories just theories and not laws? What is not a theory? Following this introduction, we explore design science as a research methodology and Information Technology design theories. Ultimately, students create their own new studies around some design concept.
Prerequisite(s)/Corequisite(s): Graduate standing / permission of the instructor

ITIN 8220 DESIGN PROCESS (3 credits)
Inter-disciplinary design teams will work together to design and innovate products of the future. The design projects in the course are developed to directly address a problem brought forward by a technology company in the Omaha area in order to provide students with a design experience that directly impacts real-world product development. Students will focus on the technological (interface), physical (ergonomics) and aesthetic quality of design, and will learn how to conduct rigorous user studies in a laboratory setting. Teams will be cross disciplinary and consider all aspects of the design, creation, testing, and fabrication of the products.

ITIN 8266 USER EXPERIENCE DESIGN (3 credits)
User experience (UX) design is concerned with the application of user-centered design principles to the creation of computer interfaces ranging from traditional desktop and web-based applications, mobile and embedded interfaces, and ubiquitous computing. This course provides in-depth, hands-on experience with real world application of the iterative user-centered process including contextual inquiry, task analysis, design ideation, rapid prototyping, interface evaluation, and reporting usability findings. (Cross-listed with CSCI 4260, CSCI 8266, ITIN 4260).

ITIN 8300 RESEARCH FOUNDATIONS (3 credits)
This course serves as an introduction to research literature and research methodology in the innovation and creativity research domain. Students are introduced to skills, methodological issues, and bibliographic resources to enhance their ability in critically evaluating and conducting research in the IT Innovation field. Through a series of readings, in-class discussions, and lectures the student will select and define a research question, explore the various types of research designs and complete a literature review. This course is structured to make research meaningful and significant and enable students to write effectively.
Prerequisite(s)/Corequisite(s): CIST 2500 or equivalent

ITIN 8900 INDEPENDENT STUDIES (1-3 credits)
A variable credit course for the graduate student who will benefit from independent reading assignments and research type problems. Independent study makes available courses of study not available in scheduled course offerings. The student wishing to take an independent study course should find a faculty member willing to supervise the course and then submit, for approval, a written proposal (including amount of credit) to the IT Innovation Graduate Program Committee Chair at least three weeks prior to registration.
Prerequisite(s)/Corequisite(s): Written permission required

ITIN 8940 ITIN CAPSTONE I (3 credits)
The purpose of the Information Technology Innovation (ITIN) capstone courses is for ITIN majors to explore, identify, evaluate, design, construct and implement a new innovative product that leverages information technology and includes an interdisciplinary field of study. The capstone is the culmination product of the specific various disciplines a student has selected as the unique combination for his or her degree. This course serves as part one of the capstone project for the ITIN Masters degree. The two courses for the ITIN capstone project are intended to be completed in two consecutive semesters (Fall/Spring).
Prerequisite(s)/Corequisite(s): Must be pursuing ITIN MS degree and have completed: two sections of ITIN 8000, ITIN 8220, 8300, and 3 hours of upper division courses in interdisciplinary area identified in the student’s course plan. Not open to non-degree graduate students.
ITIN 8950 ITIN CAPSTONE II (3 credits)
The purpose of the ITIN capstone courses is for ITIN majors to explore, identify, evaluate, design, construct and implement a new innovative product that leverages information technology and an interdisciplinary field. The capstone is the culmination product for prospective graduate and utilizes the discipline(s) a student has selected as the unique combination for his or her degree. This course serves as part two of the capstone project for the Information Technology Innovation (ITIN) program. The two courses for the ITIN capstone project are taught in two consecutive semesters.

Prerequisite(s)/Corequisite(s): Must be pursuing ITIN MS degree and have completed: three sections of ITIN 8000, ITIN 8220, 8300, 8940 and 6 hours of upper division courses in interdisciplinary area identified in the student's course plan. Not open to non-degree graduate students.