APPLIED COMPUTING AND INFORMATICS (ACMP)

Applied Computing and Informatics Graduate Courses

ACMP 8000 TECHNOLOGY & INNOVATION STUDIO (3 credits)
ACMP 8000 is a studio course that provides a foundation to incoming MSc ITIN students from all disciplines through self-guided modules covering topics from technology, innovation, design, and computing. Students will use the modules to practice applying and mastering skills in a self-guided collaborative environment. Each module will consist of three levels of difficulty. Student performance will be assessed by students' personal progress and skills improvement as shown by them completing increasingly difficult levels of the modules. Students will be graded on a satisfactory/unsatisfactory basis. The class requires in-person participation and attendance.
Prerequisite(s): Students in the MS in IT Innovation program must register during their first three terms. Not open to non-degree graduate students.

ACMP 8006 SPECIAL TOPICS IN IT INNOVATION (3 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 ACMP 4000).
Prerequisite(s): Permission of instructor. Additional prerequisites may be required for particular topic offerings.

ACMP 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): Graduate Standing

ACMP 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 good theory? 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): Graduate standing / permission of the instructor

ACMP 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.

ACMP 8256 INNOVATION VENTURES (3 credits)
This team-based course provides students with the opportunity to practice the basic tools of business discovery and validation. Concepts and techniques in innovation, entrepreneurship, and strategy will be used to aid students in the venture creation process. Important considerations impacting the viability of the venture post formation will also be explored. Practical real-world experimentation is the central component of the course and will help students to conceive, develop, and launch their own innovative ventures. (Cross-listed with BSAD 8726, ENTR 4720, ACMP 4720, MGMT 4720, MKT 4720).
Prerequisite(s): Admission to a graduate program or instructor permission.

ACMP 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, ACMP 4260).

ACMP 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): CIST 2500 or equivalent

ACMP 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): Written permission required

ACMP 8910 INTERNSHIP (1-3 credits)
The purpose of this course is to provide the students with an opportunity for practical application and further development of knowledge and skills acquired in the MS in IT Innovation program. The internship gives students professional work experience and exposure to the challenges and opportunities faced by IT professionals in the workplace.
Prerequisite(s): Students must have completed a minimum of 12 credit hours towards the MS in ITIN program. Instructor permission is required to register. Not open to non-degree graduate students.

ACMP 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): Must be in ITIN MS degree and have completed two sections of ACMP 8000/ITIN 8000, ACMP 8220/ITIN 8220, ACMP 8300/ITIN 8300, and 3 upper division interdisciplinary course hours identified in student's course plan. Not open to non-degree graduate students.

ACMP 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): Must be in ITIN MS degree and have completed three sections of ITIN or ACMP 8000, ACMP 8220, ACMP 8300, ACMP 8940 and 6 upper division interdisciplinary course hours identified in student's course plan. Not open to non-degree graduate students.

ACMP 8960 THESIS EQUIVALENT PROJECT IN IT INNOVATION (1-6 credits)
This course allows a graduate student to conduct a research project in IT Innovation or a related area. The project is expected to place an emphasis on applied, implementations-based, or experimental research. The process for development and approval of the project must include: 1) apply for eligibility to take ACMP 8960 with a chosen faculty advisor, 2) register for 6 credits of ACMP 8960 to complete the chosen project, 3) participate in a public oral defense of their project work to the Graduate Concentration Committee. The approved written project will be submitted to the Office of Graduate Studies by the advertised deadlines.
Prerequisite(s): Permission of graduate advisor. Not open to non-degree graduate students.

ACMP 8990 THESIS (1-6 credits)
This course is required for the Master of Science degree in the MS in IT Innovation Program. The purpose of this course is to conduct original research in IT Innovation, under supervision of a faculty member, culminating in a paper document that represents the student's competency in their chosen field, as well as scholarly contributions. With consultation from their committee, MS in IT Innovation thesis students should be prepared to independently complete the writing of their thesis and successfully defend their thesis.
Prerequisite(s): Graduate major in ITIN and approval of the Thesis Advisory Committee.

ACMP 9300 SOCIAL COMPUTING AND ITS APPLICATIONS (3 credits)
It is indisputable that social media and the Internet more broadly reshaped information disbursement and processing. Digital participation and communication has become the 'new normal' and the dividing line between off- and online communities is increasingly blurred. This leads to specific challenges in the extraction and analysis of online social media data, and the management of new communication.
Prerequisite(s): Open to all currently-admitted doctoral students. Students should have a technical aptitude; experience with at least one web scripting language, (e.g. PHP, rails, python etc) is helpful. Experience with JSON is advantageous but not essential.