ENTREPRENEURSHIP AND TECHNOLOGY LEADERSHIP CONCENTRATION, SOFTWARE ENGINEERING (MS)

Course Requirements

Introductory Courses

Course	Title	Quarter Hours
CSC 400	DISCRETE STRUCTURES FOR COMPUTER SCIENCE	4
CSC 401	INTRODUCTION TO PROGRAMMING	4
CSC 402	DATA STRUCTURES I	4
CSC 403	DATA STRUCTURES II	4
CSC 406	SYSTEMS I	4
CSC 407	SYSTEMS II	4

CDM Foundation Courses

Course	Title	Quarter Hours
SE 430	OBJECT ORIENTED MODELING	4
SE 450	OBJECT-ORIENTED SOFTWARE DEVELOPMENT	4
or SE 456	ARCHITECTURE OF REAL-TIME SYSTEMS	
SE 477	SOFTWARE AND SYSTEMS PROJECT MANAGEMENT	4

Business (Kellstadt) Elective Courses

Course	Title	Quarter Hours
MGT 500	LEADING EFFECTIVE AND ETHICAL ORGANIZATIONS	4
MGT 570	ENTREPRENEURSHIP AND NEW VENTURE MANAGEMENT	4

Major Elective Courses

Students must take 16 Credit Hours of courses from the list of CDM electives below and eight (8) Credit Hours of courses from the list of Kellstadt courses listed below.

CDM Electives

Students may select any SE elective or the following courses:

Course	Title	Quarter Hours
CSC 453	PRINCIPLES OF DATABASE MANAGEMENT SYSTEMS	
HCI 440	INTRODUCTION TO USER-CENTERED DESIGN	

The following courses are recommended:

Course	Title	Quarter Hours
SE 433	SOFTWARE TESTING AND QUALITY ASSURANCE	
SE 452	OBJECT-ORIENTED ENTERPRISE COMPUTING	
SE 482	REQUIREMENTS ENGINEERING	
SE 475	MANAGING GLOBALLY DISTRIBUTED SOFTWARE DEVELOPMENT	
SE 529	SOFTWARE RISK MANAGEMENT	
SE 554	ENTERPRISE COMPONENT ARCHITECTURE	
SE 579	ANALYTICS AND DATA MINING IN SOFTWARE ENGINEERING	

The Master's Project or Thesis must represent an original contribution to the area, and may include system development, empirical studies, or theoretical work. The scope and the details of the research project will be determined by the research supervisor, and must be approved by the student's academic advisor.

Students also have an option of pursuing a Master's Research Project to fulfill their CDM elective requirements.

Course	Title	Quarter Hours
Select one of the following:		
SE 695 & SE 696	MASTER'S RESEARCH and MASTER'S PROJECT	
SE 695 & SE 698	MASTER'S RESEARCH and MASTER'S THESIS	

Business (Kellstadt) Elective Courses

Course	Title	Quarter Hours
MGT 502	OPERATIONS MANAGEMENT	
MGT 530	LEADERSHIP IN ORGANIZATIONS	
MGT 535	CHANGE MANAGEMENT AND CONSULTING	
MKT 555	MARKETING MANAGEMENT	
ACC 502	FINANCIAL ACCOUNTING FOR MANAGERIAL DECISION MAKING	
ACC 555	MANAGEMENT ACCOUNTING FOR DECISION-MAKING	
IS 535	INFORMATION TECHNOLOGY INVESTMENT FINANCIAL ANALYSIS	
IS 570	MANAGING CHANGE FOR DIGITAL TRANSFORMATION	

Capstone

Students must complete the following course.

Course	Title	Quarter Hours
SE 491	SOFTWARE ENGINEERING STUDIO	4

Studio Sequence Substitution Policy

Software Engineering (SE) Studio is a requirement for MS SE students. It can only be substituted for students who have had industrial experience

in team software development projects. For those students with sufficient experience, they must complete a MS Project or Thesis in lieu of SE Studio.

Substitution of SE Studio must be approved in advance. Student should seek such approval no later than the second quarter after starting the Foundation phase of the program. The request for substitution should be submitted to Software Engineering Program Committee (SE-PC) and the decision will be made by the SE-PC in consultation with the student's advisor.

Each applicant should provide supporting materials of his/her experience in software development, including resume, and letter(s) from the project manager describing the applicant's role in the projects.

All approvals of substitution will be contingent upon the applicant's completion of a MS Project or Thesis for eight (8) credit hours. Any deviation from that must be approved by the SE-PC as well.