2012-2011

In the Name Of Allah, the Most Beneficent, the Most Merciful

Imam Mohammad Ibn Saud Islamic University
College of Computer and Information Sciences
Department of Computer Sciences

Program Description of
Master of Science in Computer Sciences
(Thesis-Option)

Graduate Committee- Computer Sciences Department

Program Components - Thesis Option

1. Core Courses (15 Credit Hours) and Seminar Course (1 Credit Hour)

The core courses and a seminar course which are shown below as Courses Group A:

Course No.	Course Name	Cr. Hrs.	Prerequisite
CS 610	Advanced Computer Algorithms	3	
CS 670	Advanced Database Management Systems	3	
CS 630	Advanced Computer Networks	3	
CS 680	Advanced Software Engineering	3	
CS 620	Advanced Computer Architecture	3	
CS 795	Seminar in Research Methods	1	

Courses Group A

2. Specialization Courses (9 Credit Hours)

3 courses that must be chosen from at least 2 areas from the list shown below as Courses Group B:

Area	Course No.	Course Name	Cr. Hrs.	Prerequisite
Networking and Information Security	CS 631	Mobile Networks	3	
	CS 632	Advanced Network Security	3	
	CS 633	Network Modeling & Simulation	3	
	CS 734	Network Management	3	
	CS 735	Advanced Cryptography	3	
	CS 739	Selected Topics in Computer Networks	3	
Intelligent Computing	CS 660	Advanced Artificial Intelligence.	3	
	CS 661	Natural Language Processing.	3	
	CS 662	Machine Learning	3	
	CS 763	Constraint based-reasoning and Optimization.	3	
	CS 764	Intelligent Robotics	3	
	CS 769	Selected Topics in Artificial Intelligence	3	
Software Engineering	CS 681	Advanced Object Analysis and Design.	3	
	CS 682	Advanced Software Management	3	
	CS 683	Advanced Software Testing	3	
	CS 784	Advanced Software Specification	3	
	CS 785	Requirements Engineering and Software Structure	3	
	CS 789	Selected Topics in Software Engineering	3	

Databases and Web Computing	CS 671	Data Warehouse Technologies.	3	
	CS 672	Data and Web Mining.	3	
	CS 673	Advanced Web Services.	3	
	CS 773	E-commerce.	3	
	CS 774	Semantic Web Technologies.	3	
	CS 779	Selected Topics In Data Base Systems	3	
Theory of Computing	CS 611	Advanced Automata Theory	3	
	CS 710	Advanced Parallel Computing	3	
	CS 711	Advanced Parallel Computer Algorithms	3	
	CS 719	Selected Topics in Parallel Computing	3	
Selected Topics	CS 790	Selected Topics in Computer Science	3	

Courses Group B

3. Thesis (6 Credit Hours)

The thesis consists of an original research in a suitable subject to be chosen at the beginning of the 3rd semester, and must be carried out under the supervision of a faculty member. The Thesis will be discussed and defended by the student according to the rules of the university and college.

Course No.	Course Name	Cr. Hrs.	Prerequisite
CS 799	Thesis	6	

Guide Plan of Thesis-Based Option
Master of Science
Specialization: Computer Science

Semester I (9 Credit Hours)			
Course Number	Course Name	Credit Hours	Prerequisite
CS 610	Advanced Computer Algorithms	3	
CS 630	Advanced Computer Networks	3	
CS 680	Advanced Software Engineering	3	

Semester II (10 Credit Hours)			
Course Number	Course Name	Credit Hours	Prerequisite
CS 620	Advanced Computer Architecture	3	
CS 670	Advanced Data Base Management Systems	3	
	Selective I: Offered by the Department from the Courses of Group B.	3	
CS 795	Seminar in Research Methods	1	

Semester III (6 Credit Hours)			
Course Number	Course Name	Credit Hours	Prerequisite
	Selective II: Offered by the Department from the Courses of Group B.	3	
	Selective III: Offered by the Department from the Courses of Group B.	3	
Note: The student can start to prepare for the Thesis with the supervisor.			

Semester IV (6 Credit Hours)			
Course Number	Course Name	Credit Hours	Prerequisite
CS 799	Thesis	6	