

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
(Project-Option)**





Program Components - Project Option

1. The core courses (15 Credit Hours): 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	

Courses Group A



2. Specialization Courses (18 Credit Hours)

6 courses that must be chosen from at least 3 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. Courses of Research Nature (Core Courses, 9 Credit Hours)

A seminar course will be given 2 times per week; the time of each is one and half an hour. The instructor will start offering subjects or problems relevant to the field through several seminars. Accordingly, each student then will choose a subject or problem, and the choices of students will be presented in next seminars according to a schedule arranged by the instructor.

Two projects must be carried out under the supervision of a faculty member. It is advised that students should choose the subjects and problems of the 2 projects during the seminar course and be clear by the end of the third semester. The 2 projects will be registered and completed in 4th and 5th semesters, a project in each semester. The student must prepare a written report on each project and present it orally according to the rules adopted for that issue.

Course No.	Course Name	Cr. Hrs.	Prerequisite
CS 796	Research Seminar	3	
CS 797	Project 1	3	
CS 798	Project 2	3	



Guide Plan of Project-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 (9 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	

Semester III (9 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	
CS 796	Research Seminar	3	

Semester IV (9 Credit Hours)			
Course Number	Course Name	Credit Hours	Prerequisite
	Elective IV: Offered by the Department from the Courses of Group B.	3	
	Elective V: Offered by the Department from the Courses of Group B.	3	
CS 797	Project 1	3	



Semester V (6 Credit Hours)			
Course Number	Course Name	Credit Hours	Prerequisite
	Elective VI: Offered by the Department from the Courses of Group B.	3	
CS 798	Project 2	3	