

## A. Program Structure (Project Track)

The Master of Computer Science curriculum is a two-year program designed to grant students the Master of Science in Computer Science upon the successful completion of the requirements. In the first year; the student study the required core courses, then in the second year students are allowed to determine which electives they prefer along with writing project or thesis that distributed in the last two terms of the program.

### Program Structure (Project Track):

----	7 Required Courses	21 cr.
----	8 Elective Courses	24 cr.
<b>Total</b>		<b>45 cr.</b>

### Required Courses:

MSC 501	Advanced Design and Analysis of Algorithms	3 cr.
MSC 502	Software Engineering	3 cr.
MSC 503	Database Systems	3 cr.
MSC 504	Computer Networks and Security	3 cr.
MSC 505	Seminar and Discussions	3 cr.
MCS 598	Project I	3 cr.
MCS 599	Project II	3 cr.
<b>Total</b>		<b>21 Cr.</b>

### Elective Courses:

The student must choose only eight elective courses:

MSC 520	Artificial Intelligence	3 cr.
MSC 521	Computer Security	3 cr.
MSC 522	Web Database & information Retrieval	3 cr.
MSC 523	Advanced Computer Graphics	3 cr.
MSC 524	Graphical User Interface	3 cr.
MSC 525	Software Project Management	3 cr.
MSC 526	Data Warehouse and Mining Systems	3 cr.
MSC 530	High Performance Computation	3 cr.
MSC 531	Distributed Systems	3 cr.
MSC 532	Interconnection Network	3 cr.
MSC 533	Selected Topics in Databases	3 cr.
MSC 534	Expert Systems & Knowledge Engineering Applications	3 cr.
MSC 535	Software Quality Management	3 cr.
MSC 536	Selected Topic in Artificial Intelligence	3 cr.
MSC 537	Selected Topics in Software Engineering	3 cr.
MSC 538	Designing Software Systems	3 cr.
MSC 539	Neural Networks & Machine learning applications	3 cr.

**B. Program Structure (Thesis Track):**

----	5 Required Courses	14 cr.
----	4 Elective Courses	12 cr.
MSC 400	Thesis	9 cr.
<b>Total</b>		<b>35 cr.</b>

**Required Courses:**

MSC 501	Advanced Design and Analysis of Algorithms	3 cr.
MSC 502	Software Engineering	3 cr.
MSC 503	Database Systems	3 cr.
MSC 504	Computer Networks and Security	3 cr.
MSC 514	Research Methodology	2 cr.
<b>Total</b>		<b>14 Cr.</b>

**Elective Courses:**

The student must choose only four elective courses:

MSC 520	Artificial Intelligence	3 cr.
MSC 521	Computer Security	3 cr.
MSC 522	Web Database & information Retrieval	3 cr.
MSC 523	Advanced Computer Graphics	3 cr.
MSC 524	Graphical User Interface	3 cr.
MSC 525	Software Project Management	3 cr.
MSC 526	Data Warehouse and Mining Systems	3 cr.
MSC 530	High Performance Computation	3 cr.
MSC 531	Distributed Systems	3 cr.
MSC 532	Interconnection Network	3 cr.
MSC 533	Selected Topics in Databases	3 cr.
MSC 534	Expert Systems & Knowledge Engineering Applications	3 cr.
MSC 535	Software Quality Management	3 cr.
MSC 536	Selected Topic in Artificial Intelligence	3 cr.
MSC 537	Selected Topics in Software Engineering	3 cr.
MSC 538	Designing Software Systems	3 cr.
MSC 539	Neural Networks & Machine learning applications	3 cr.

### A. Curriculum Study Plan Table (Project track)

Year	Course Code	Course Title	Required or Elective	Credit Hours	College or Department
<b>1<sup>st</sup> Year</b>					
<b>Semester 1</b>	MSC 501	Advanced Design and Analysis of Algorithms	R	3	CS <sup>1</sup>
	MSC 502	Software Engineering	R	3	CS
	MSC 503	Database Systems	R	3	CS
	MSC 504	Computer Networks and Security	R	3	CS
	<b>Total</b>			<b>12</b>	
<b>1<sup>st</sup> Year</b>					
<b>Semester 2</b>		Elective course	E	3	CS
		Elective course	E	3	CS
		Elective course	E	3	CS
		Elective course	E	3	CS
	<b>Total</b>			<b>12</b>	
<b>2<sup>nd</sup> Year</b>					
<b>Semester 1</b>		Elective course	E	3	CS
		Elective course	E	3	CS
	MCS 505	Seminar and Discussions	R	3	CS
	MCS 598	Project-1	R	3	CS
	<b>Total</b>			<b>12</b>	
<b>2<sup>nd</sup> Year</b>					
<b>Semester 2</b>		Elective course	E	3	CS
		Elective course	E	3	CS
	MCS 599	Project-2	R	3	CS
	<b>Total</b>			<b>9</b>	

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<sup>1</sup> Computer Science (CS)

**B. Curriculum Study Plan Table (Thesis Track)**

	<b>Course Code</b>	<b>Course Title</b>	<b>Required or Elective</b>	<b>Credit Hours</b>	<b>College or Department</b>
<b>1<sup>st</sup> Year</b>					
<b>Semester 1</b>	MSC 501	Advanced Design and Analysis of Algorithms	R	3	CS <sup>2</sup>
	MSC 502	Software Engineering	R	3	CS
	MSC 503	Database Systems	R	3	CS
	MSC 504	Computer Networks and Security	R	3	CS
	<b>Total</b>			12	
<b>1<sup>st</sup> Year</b>					
<b>Semester 2</b>		Elective course	E	3	CS
		Elective course	E	3	CS
		Elective course	E	3	CS
	MSC 514	Research Methodology	R	2	
	<b>Total</b>			11	
<b>2<sup>nd</sup> Year</b>					
<b>Semester 1</b>					
		Elective course	E	3	CS
	MCS 400	Thesis	R	9	CS
<b>2<sup>nd</sup> Year</b>					CS
<b>Semester 2</b>	MCS 400	Thesis	R	-	CS
	<b>Total</b>			12	

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<sup>2</sup> Computer Science (CS)