SCHEME/SYLLABUS

MASTER OF COMPUTER APPLICATIONS (SOFTWARE ENGINEERING)
University School of Information Technology

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Semester	I	II	III	IV	V	VI

First Semester (Complete Semester Syllabus)				
Code No.	**Paper**	**L**	**T/P**	**Credits**
IT – 601	Information Technology	3	1	4
IT – 603	Computer Architecture	3	1	4
IT – 605	Programming and Data Structure	3	1	4
IT-607	Foundations of computer Science	3	1	4
BA – 609	Mathematics – I	3	1	4
Practicals				
IT – 651	Information Technology Lab	0	4	2
IT – 653	Programming and Data Structure Lab	0	4	2
IT – 655	Computer Architecture Lab	0	4	2
	TOTAL	**15**	**17**	**26**

Second Semester (Complete Semester Syllabus)				
Code No.	**Paper**	**L**	**T/P**	**Credits**
IT – 602	Software Engineering	3	1	4
IT – 604	Database Management Systems	3	1	4
IT – 606	Object Oriented Programming	3	1	4
MS – 608	Organizational Behaviour	3	1	4
BA – 610	Mathematics – II	3	1	4
Practicals				
IT – 652	Software Engineering Lab	0	2	1
IT – 654	Database Management Systems Lab	0	2	1
IT – 656	Object Oriented Programming Lab	0	4	2
IT- 658	Term Paper	0	4	2
	TOTAL	**15**	**17**	**26**

Third Semester (Complete Semester Syllabus)				
Code No.	**Paper**	**L**	**T/P**	**Credits**
IT – 701	Java Programming	3	1	4
IT – 703	Algorithm Analysis and Design	3	1	4
IT – 705	Web Technology	3	1	4

IT – 707	Computer Networks	3	1	4
IT – 709	Operating Systems	3	1	4
Practicals				
IT – 751	Java Programming Lab	0	2	1
IT – 753	Algorithm Analysis and Design Lab	0	2	1
IT – 755	Web Technology Lab	0	2	1
IT – 757	Computer Networks Lab	0	2	1
	TOTAL	**15**	**13**	**24**

Fourth Semester (Complete Semester Syllabus)				
Code No.	**Paper**	**L**	**T/P**	**Credits**
IT – 702	Data Warehousing & Data Mining	3	1	4
IT – 704	Object Oriented Software Engineering	3	1	4
IT – 706	Computer Graphics	3	1	4
Electives (Select any one)				
IT – 708	Enterprise Computing in Java	3	1	4
IT – 710	Microprocessors	3	1	4
IT – 712	Software Metrics	3	1	4
IT – 714	Front End Design Tools	3	1	4
IT – 716	Digital Signal Processing	3	1	4
IT - 718	Network Security	3	1	4
IT-720	.Net Programming	3	1	4
Practicals				
IT – 752	Data Warehousing & Data Mining Lab	0	2	1
IT – 754	Object Oriented Software Engineering Lab	0	2	1
IT – 756	Computer Graphics Lab	0	2	1
IT - 758	Elective Lab	0	2	1
IT - 760	Minor Project	0	8	4
	TOTAL	**12**	**20**	**24**

Fifth Semester (Complete Semester Syllabus)				
Code No.	**Paper**	**L**	**T/P**	**Credits**
IT – 801	Software Verification, Validation & Testing	3	1	4
IT – 803	Linux administration and Programming	3	1	4
IT – 805	Advanced Computer Networks	3	1	4
IT – 807	Multimedia Applications	3	1	4
Electives (Select any two)				
IT – 809	Digital Image Processing	3	1	4
IT – 811	Advanced Computer Architecture	3	1	4
IT – 813	Compiler Construction	3	1	4
IT – 815	Software Project Management	3	1	4
IT – 817	Fuzzy Sets & Logic	3	1	4

IT – 819	Neural Networks	3	1	4
IT – 821	Simulation & Modeling	3	1	4
IT – 823	Introduction to Multi agent Systems	3	1	4
IT – 825	Artificial Intelligence	3	1	4
IT-827	Reliability Engineering	3	1	4
IT-829	Software Quality Management	3	1	4
IT-831	Mobile Computing	3	1	4
IT– 833	Software Requirements & Estimation	3	1	4
Practicals				
IT – 851	Software Verification, Validation & Testing Lab	0	2	1
IT – 853	Linux & X-Windows Programming	0	2	1
IT – 855	Advanced Computer Networks	0	2	1
IT – 857	Multimedia Applications	0	2	1
	TOTAL	**18**	**14**	**28**

Sixth Semester				
Code No.	**Paper**	**L**	**T/P**	**Credits**
IT – 854	Dissertation	0	30	26
IT – 856*	Seminar and Progress Reports	0	10	06
	TOTAL	**6**	**40**	**32**

***NUES**

The student will submit a synopsis at the beginning of the semester for approval from the departmental committee in a specified format. The student will have to present the progress of the work through seminars and progress reports.

Note:

1. The total number of the credits of the MCA(SE) programme = 160.

2. Each student shall be required to appear for examinations in all courses. However, for the award of the degree a student shall be required to earn the minimum of 150 credits.