

**SRI VENKATESWARA UNIVERSITY: TIRUPATI**  
**DEPARTMENT OF COMPUTER SCIENCE**  
**MCA SYLLABUS (WITH EFFECT FORM 2015-2016)**

Semester	Course Number	Course Title	Core / Elective	No Credits	Instruction Periods per week				Max. Marks Sess. Univ		Total Marks
					L	T	P	Total			
<b>FIRST</b>	MCA 101	Discrete Mathematics	Core	4	3	1		4	30	70	100
	MCA 102	Probability and Statics	Core	4	3	1		4	30	70	100
	MCA 103	Introductory Programming	Core	4	3	1		4	30	70	100
	MCA 104	Computer Organization	Core	4	3	1		4	30	70	100
	MCA 105	Organization, Accounting and Financial Management	Core	4	3	1		4	30	70	100
	MCA 106P	Software Lab 1 (AFM-Tally Lab)	--	4			3	3	30	70	100
	MCA 107P	Programming Lab	--	4			3	3	30	70	100
	MCA 108P	PC Hardware & MS Office	--	4			3	3	30	70	100
<b>SECOND</b>	MCA 201	Computer Oriented Operations Research	Core	4	3	1		4	30	70	100
	MCA 202	Programming with Java	Core	4	3	1		4	30	70	100
	MCA 203	Operating System	Core	4	3	1		4	30	70	100
	MCA 204	Data Structures	Core	4	3	1		4	30	70	100
	MCA 205	Data Base Management Systems	Core	4	3	1		4	30	70	100
	MCA 206P	Software Lab2 (OS /Java Lab)	--	4			3	3	30	70	100
	MCA 207P	DS Lab	--	4			3	3	30	70	100
	MCA 208P	DBMS Lab	--	4			3	3	30	70	100
<b>THIRD</b>	MCA 301	Management of Information in Systems	Core	4	3	1		4	30	70	100
	MCA 302	Data Communication and Computer Networks	Core	4	3	1		4	30	70	100
	MCA 303	Software Engineering	Core	4	3	1		4	30	70	100
	MCA 304	Design and Analysis of Algorithms	Core	4	3	1		4	30	70	100
	MCA 305	Technical Communication and Computer Ethics	Core	4	3	1		4	30	70	100
	MCA 306P	Software Lab3 (MIS, DCCN, DAA)	--	4			3	3	30	70	100
	MCA 307P	Software Engineering Lab	--	4			3	3	30	70	100
	MCA 308P	Communication Skills Lab	--	4			3	3	30	70	100
<b>FOURTH</b>	MCA 401	Object Oriented Systems Design	Core	4	3	1		4	30	70	100
	MCA 402	Data Warehousing and Data Mining	Core	4	3	1		4	30	70	100
	MCA 403	Web Programming	Core	4	3	1		4	30	70	100
	MCA 404	Elective I 404A Artificial Intelligence 404B Software Testing 404C Automata Theory 404D Remote Sensing & GIS	IE	4	3	1		4	30	70	100
	MCA 405	Elective II 405A E-Commerce 405B Cryptography & Network Security 405C Cyber Security 405D Neural Networks	IE	4	3	1		4	30	70	100
	MCA 406P	Software Lab4 (ST, GIS, CNS)	--	4			3	3	30	70	100
	MCA 407P	Web Programming Lab	--	4			3	3	30	70	100
	MCA 408P	Data Mining Lab (ETL & BO/COGNOS & WEKA)	--	4			3	3	30	70	100
	MCA 408S	Seminar	Core	2		2		2	50		50

<b>FIFTH</b>	MCA 501	Computer Graphics	Core	4	3	1		4	30	70	100	
	MCA 502	Big data and Business Analytics	Core	4	3	1		4	30	70	100	
	MCA 503	Systems Programming	Core	4	3	1		4	30	70	100	
	MCA 504	Elective III <b>504A</b> User Interface Design <b>504B</b> Enterprise Resource Planning <b>504C</b> Mobile App Development <b>504D</b> IT in Forensic Science	IE	4		3	1		4	30	70	100
	MCA 505	Elective IV <b>505A</b> Cloud Computing <b>505B</b> Image Processing <b>505C</b> Software Project Management <b>505D</b> Natural Language Processing with Python	IE	4		3	1		4	30	70	100
	MCA 506P	Software Lab5 (CG + Analytics Lab)	--	4				3	3	30	70	100
	MCA 507P	Software Lab6 (.Net, Python, App Development)	--	4				3	3	30	70	100
	MCA 508P	Mini Project	Core	4				3	3	30	70	100
	MCA 508S	Seminar	Core	2			2		2	50		50
<b>SIXTH</b>												
	Project			12				40	40	100	200	300

**MCA 404 Elective:**

1. 404A Artificial Intelligence
2. 404B Software Testing
3. 404C Automata Theory
4. 404D Remote Sensing &GIS

**MCA 405 Elective:**

1. 405A E-Commerce
2. 405B Cryptography & Network Security
3. 405C Cyber Security
4. 405D Neural Networks

**MCA 504 Elective:**

1. 504A User Interface Design
2. 504B Enterprise Resource Planning
3. 504C Mobile App Development
4. 504D IT in Forensic Science

**MCA 505 Elective:**

1. 505A Cloud Computing
2. 505B Image Processing
3. 505C Software Project Management
4. 505D Natural Language Processing with Python

**SIXTH SEMESTER:**

**Major Project Work:**

1. Project Seminar (Internal) : 50 Marks
2. Project Report (Internal) : 50 Marks
3. National / International Conference Publication Proceedings (External) : 50 Marks  
(paper based on project should be submitted to conference and published in the form of proceedings)
4. National / International Journal Publication (External) : 50 Marks  
(paper based on project should be submitted to the journal and should be published)
5. Viva Voce (External) : 50 Marks
6. Project Execution (External) : 50 Marks