

Department of Information Technology

B.I.T., Mesra, Ranchi MCA Course Structure – 2011

Total Credits = 120

SEMESTER - I

Course Code	Course	Credit (L-T-P)
MCA 1001	Problem Solving and Program Design with C	3 (3-0-0)
MCA 1003	Numerical & Statistical Methods	4 (3-1-0)
MCA 1007	Discrete Mathematics	3 (3-0-0)
MCA 1009	Computer Organization & Architecture	3 (3-0-0)
MSH 1113	Environmental Psychology	3 (3-0-0) (B)
MCA 1002	C Programming Lab.	2 (0-0-3)
MCA 1004	Numerical & Statistical Methods Lab.	2 (0-0-3)
	Total	20

SEMESTER - II

Course Code	Course	Credit (L-T-P)
MCA 2001	Data Structures	3 (3-0-0)
MCA 2003	Object Oriented Design & Programming	3 (3-0-0)
MCA 2005	Database Management Systems	3 (3-0-0)
MCA 2007	Operating Systems	3 (3-0-0)
MCA 2002	Data Structures Lab.	2 (0-0-3)
MCA 2004	C++ Programming Lab.	2 (0-0-3)
MCA 2006	RDBMS Lab.	2 (0-0-3)
MCA 2008	Operating System Lab.	2 (0-0-3)
	Total	20

L- Lecture
T- Tutorial
P – Practical
B – Breadth Paper

SEMESTER - III

Course Code	Course	Credit (L-T-P)
MCA 3001	Java Programming	3 (3-0-0)
MCA 3003	Software Engineering	3 (3-0-0)
MCA 3005	Fundamentals of Computer Algorithms	3 (3-0-0)
MCA 3007	Automata Theory	4 (3-1-0)
	Elective – I	3 (3-0-0)
MCA 3002	Java Programming Lab.	2 (0-0-3)
MCA 3004	Software Engineering Lab.	2 (0-0-3)
	Total	20

SEMESTER - IV

Course Code	Course	Credit (L-T-P)
MCA 4001	Compiler Design	4 (3-1-0)
MCA 4103	Data Communications and Computer Networks	3 (3-0-0)
	Elective – II	3 (3-0-0)
MCA 4007	Computerized Financial Accounting	3 (3-0-0) (B)
MSH 1107	E-Commerce	3 (3-0-0) (B)
MCA 4002	Compiler Design Lab.	2 (0-0-3)
MCA 4004	Computer Networks Lab.	2 (0-0-3)
	Total	20

SEMESTER - V

Course Code	Course	Credit (L-T-P)
MCA 5001	Computer Graphics	3 (3-0-0)
MCA 5003	System Simulation & Modeling	4 (3-1-0)
MCA 5005	Optimization Theory	3 (3-0-0)
	Elective – III	3 (3-0-0)
MSH 1131	Principles of Management	3 (3-0-0) (B)
MCA 5002	Computer Graphics Lab.	2 (0-0-3)
MCA 5004	System Simulation & Modeling Lab	2 (0-0-3)
	Total	20

SEMESTER - VI

Course Code	Course	Credit (L-T-P)
MCA 6001	Project	20
	Total	20

List of Electives

Group I :	Database Technology	Group II	Software Technology
MCA 7101	Distributed Databases	MCA 7201	Advanced Java Programming
MCA 7103	Decision Support Systems	MCA 7203	Systems Programming
MCA 7105	Enterprise Resource Planning	MCA 7205	Programming Language Design & Concepts
MCA 7107	Data Mining & Ware Housing	MCA 7207	Assembly Language Programming
MCA 7109	Multimedia Databases	MCA 7209	Web Programming
		MCA 7211	Software Project Management
Group III	Cognitive Sciences and Intelligent Systems	Group IV	Networking and Distributed Systems
MCA 7301	Natural Language Processing	MCA 7401	Network Security and Cryptography
MCA 7303	Genetic Algorithms & Swarm Intelligence	MCA 7403	Grid Computing
MCA 7305	Artificial Intelligence	MCA 7405	Wireless Technology
MCA 7307	Image Processing	MCA 7407	Parallel & Distributed Computing
MCA 7309	Soft Computing	MCA 7409	Mobile Computing
Group V	Applications of Information Technology		
MCA 7501	Bioinformatics		
MCA 7505	Multimedia and Animation		
MCA 7507	Supply Chain Management		

- NOTE :-**
- (i) **Students are required to choose at least two electives from the same group.**
 - (ii) **Students are advised to do their projects on the areas where major electives are chosen.**
