

Girijananda Chowdhury University

MCA (2 YR) Syllabus

BRIDGE COURSE

(For Non Comp SC/ IT Students)

Theory/ Practical	Sl. No	Course Type	Course Code	Course Name	Hours per week			Credit	Mark	
					L	T	P		CA	FA
T	1	Bridge course	MCA001T	Bridge Course (Theory) - Computer Organization - Programming Fundamentals - Computer Networks	4	0	0	0	40	60
P	2	Bridge course	MCA001P	Bridge Course (Lab) - C Programming - Office Automation Software	0	0	4	0	40	60

SEMESTER-I

Theory/ Practical	Sl. No	Course Type	Course Code	Course Name	Hours per week			Credit	Mark	
					L	T	P		CA	FA
T	1	DSCC	MCA23 501T	Programming Techniques using Python	3	0	0	3	40	60
T	2	DSCC	MCA23 502T	Computer Organization and architecture	3	0	0	3	40	60
T	3	DSCC	MCA23 503T	Introduction to data Science	3	1	0	4	40	60
T	4	DSCC	MCA23 504T	Web Technology	3	0	0	3	40	60
T	5	AEC	MCA23 505T	Personality and Soft Skill development	3	0	0	3	40	60
P	6	DSCC	MCA23 501P	Programming Lab (Python)	0	0	4	2	40	60
P	7	DSCC	MCA23 504P	Web Technology Lab	0	0	4	2	40	60
					15	1	8	20	280	420

SEMESTER-II

Theory/ Practical	Sl. No	Course Type	Course Code	Course Name	Hours per week			Credit	Mark	
					L	T	P		CA	FA
T	1	DSCC	MCA23 506T	Advanced Data Structures and algorithms	3	0	0	3	40	60
T	2	DSCC	MCA23 507T	Advanced Database Management Systems	3	0	0	3	40	60
T	3	DSCC	MCA23 508T	Object Oriented Programming using Java	3	0	0	3	40	60
T	4	DSCC	MCA23 509T	Advanced Computer Networks	3	0	0	3	40	60
T	5	OEC	MCA23 5XXT	Elective-I (As per Table-I)	3	1	0	4	40	60
P	6	DSCC	MCA23 507P	DBMS Lab (SQL/ NoSQL)	0	0	4	2	40	60
P	7	DSCC	MCA23 508P	Object Oriented Programming Lab using Java	0	0	4	2	40	60
					15	1	8	20	280	420

SEMESTER-III

Theory/ Practical	Sl. No	Course Type	Course Code	Course Name	Hours per week			Credit	Mark	
					L	T	P		CA	FA
T	1	DSCC	MCA23 601T	Artificial Intelligence and machine learning	3	0	0	3	40	60
T	2	DSCC	MCA23 602T	Operating Systems	3	0	0	3	40	60
T	3	DSCC	MCA23 603T	Cyber Security	3	0	0	3	40	60
T	4	DSCC	MCA23 604T	Cloud Computing	3	0	0	3	40	60
T	5	OEC	MCA23 6XXT	Elective-II (As per Table-I)	3	1	0	4	40	60
P	7	DSCC	MCA23 601P	Machine learning Lab	0	0	4	2	40	60
P	6	DSCC	MCA23 602P	System Administration and Shell Programming	0	0	4	2	40	60
					15	4	8	20	240	360

SEMESTER-IV

Theory/ Practical	Sl. No	Course Type	Course Code	Course Name	Hours per week			Credit	Mark	
					L	T	P		CA	FA
T	1	VAC	MCA23 612T	Universal Human Values (Through Swayam / Online/offline)	2	0	0	0	40	60
T	2	OEC	MCA23 6XXT	Elective-III(Through Swayam)	3	0	0	3	40	60
T	3	OEC	MCA23 6XXT	Elective-IV(Through Swayam)	3	0	0	3	40	60
P	4	DSCC=8 SEC=6	MCA23 615R	System Development Project	-	-	*	14	40	60
					8	0	0	20	160	240

TABLE-I

OPEN ELECTIVE COURSES (SPECIALIZATION)

CODE	Elective-I	CODE	Elective-II
MCA23 510T	Advanced web Technology	MCA23 605T	Graph Theory and its applications
MCA23 511T	Data warehousing and Data mining	MCA23 606T	Statistical and multivariate analysis
MCA23 512T	Malware Analysis and Intrusion Detection	MCA23 607T	Deep Learning
MCA23 513T	Natural Language Processing	MCA23 608T	Cyber Forensics, Audit and Investigation
MCA23 514T	Bioinformatics And Sequence Analysis	MCA23 609T	Biomedical Data Analysis
MCA23 515T	Big data analytics	MCA23 610T	Information Theory and coding

(MOOCS : SWAYAM COURSES)

CODE	Elective-III	CODE	Elective-IV
MCA23 613T	Quantum Computing	MCA23 640T	Internet of Things/ Introduction to Internet Of Things
MCA23 614T	Molecular Computing	MCA23 641T	Image Processing/ Digital Image Processing
MCA23 615T	Nano Technology	MCA23 642T	Wireless Networks
MCA23 616T	Robotics	MCA23 643T	Android Mobile Application Dev
MCA23 617T	Remote Sensing & GIS/ Remote Sensing	MCA23 644T	Database and Content Organization
MCA23 618T	Mobile Computing	MCA23 645T	Cloud Computing
MCA23 619T	Remote Sensing and GIS for rural development	MCA23 646T	Bioinformatics
MCA23 620T	Regression Methods	MCA23 647T	Simulation and Modeling
MCA23 621T	Introduction to Cyber Security	MCA23 648T	Foundation of cryptography
MCA23 622T	Big Data Computing	MCA23 649T	Computer Vision and Image Processing
MCA23 623T	Deep learning	MCA23 650T	Data Analytics With Python
MCA23 624T	Blockchain and its Applications	MCA23 651T	Privacy and Security In Online Social Media
MCA23 625T	AI Knowledge Representation and Reasoning	MCA23 652T	Cryptography and network security
MCA23 626T	Ethical hacking	MCA23 653T	Competitive Programming

(or any other Course added time to time)