

STUDY & EVALUATION SCHEME
INTEGRATED B.TECH+MBA: COMPUTER SCIENCE & ENGINEERING
I YEAR: I SEMESTER

S. NO.	SUBJECT CODE	SUBJECT	HOURS PER WEEK			CREDIT
			L	T	P	
1	----/ BCY1701	Physics/Chemistry	3	1	3	5.5
	BPH1701- CS	Physics (for CS)				
	BPH1701- EC	Physics (for EC)				
	BPH1701- EE	Physics (for EE)				
	BPH1701- CE	Physics (for CE)				
	BPH1701- ME	Physics (for ME)				
2	BMA1001- CS	Mathematics-I (for CS)	3	1	0	4
	BMA1001- EC	Mathematics-I (for EC)				
	BMA1001- EE	Mathematics-I (for EE)				
	BMA1001- CE	Mathematics-I (for CE)				
	BMA1001- ME	Mathematics-I (for ME)				
3	BEE1701/ BCS1701	Basic Electrical Engineering/Programming for Problem Solving	3	1	2	5
4	BME1701/ BME1702	Engineering Graphics and Design/ Workshop Practices	1	0	4	3
5	XESX601/ BHU701	Environmental Science*/Design	2/2	0/0	0/2	0/3
TOTAL			12/12	3/3	9/11	17.5/21.5

* - Mandatory Non—Credit Course

L -Lecture

T -Tutorial

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I YEAR: II SEMESTER

S. NO.	SUBJECT CODE	SUBJECT	HOURS PER WEEK			CREDIT
			L	T	P	
1	BCY2701/ -----	Chemistry/ Physics	3	1	3	5.5
	BPH2701- CS	Physics (for CS)				
	BPH2701- EC	Physics (for EC)				
	BPH2701- EE	Physics (for EE)				
	BPH2701- CE	Physics (for CE)				
	BPH2701- ME	Physics (for ME)				
2	BMA2001- CS	Mathematics-II (for CS)	3	1	0	4
	BMA2001- EC	Mathematics-II (for EC)				
	BMA2001- EE	Mathematics-II (for EE)				
	BMA2001- CE	Mathematics-II (for CE)				
	BMA2001- ME	Mathematics-II (for ME)				
3	BCS2701/ BEE2701	Programming for Problem Solving/ Basic Electrical Engineering	3	1	2	5
4	BME2702/ BME2701	Workshop Practices / Engineering Graphics and Design	1	0	4	3
5	BHU2701/ XESX601	English/ Environmental Science*	2/2	0/0	2/0	3/0
TOTAL			12/12	3/3	11/9	20.5/17.5

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II YEAR: III SEMESTER

S. NO.	SUBJECT CODE	SUBJECT	L	T	P	CIE	ESE	TOTAL	C
1	BCS3014	Data Structures and Algorithms	3	1	-	40	60	100	4
2	BCS3513	Data Structures and Algorithms Lab	-	-	2	80	20	100	1
3	BCS3015	Software Engineering	3	-	-	40	60	100	3
4	BCS3514	Software Engineering Lab	-	-	2	80	20	100	1
5	BMA3011	Discrete Mathematics	3	1	-	40	60	100	4
6	BEC3017	Digital Electronics	3	-	-	40	60	100	3
7	BEC3506	Digital Electronics Lab	-	-	2	80	20	100	1
8	BEC3018	Analog Electronics Circuits	3	-	-	40	60	100	3
9	BEC3513	Analog Electronics Circuits Lab	-	-	2	80	20	100	1
10	BHU3038	Effective Technical Communication	3	-	-	40	60	100	3
TOTAL			18	2	8	560	440	1000	24

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II YEAR: IV SEMESTER

S. NO.	SUBJECT CODE	SUBJECT	L	T	P	CIE	ESE	TOTAL	C
1	BCS4017	Computer Organization and Architecture	3	1	-	40	60	100	4
2	BCS4518	Computer Organization and Architecture Lab	-	-	2	80	20	100	1
3	BCS4022	Operating Systems	3	1	-	40	60	100	4
4	BCS4519	Operating Systems Lab	-	-	2	80	20	100	1
5	BCS4023	Formal Language and Automata Theory	3	1		40	60	100	4
6	BCS4520	IT Workshop	1	-	2	80	20	100	2
7	BMA4012-CS	Mathematics-III	2	-	-	40	60	100	2
8	BMG4008	Organizational Behaviour	3	-	-	40	60	100	3
9	XLAX601	Constitution of India	2	-	-	Satisfactory/Unsatisfactory		0	
10	XCSX601	Industrial Visit-I	-	-	-	Satisfactory/Unsatisfactory		0	
TOTAL			17	3	6	440	360	800	21

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III YEAR: V SEMESTER

S. NO.	SUBJECT CODE	SUBJECT	L	T	P	CIE	ESE	TOTAL	C
1	BCS5016	Database Management Systems	3	1	-	40	60	100	4
2	BCS5515	Database Management Systems Lab	-	-	2	80	20	100	1
3	BCS5001	Design and Analysis of Algorithms	3	1	-	40	60	100	4
4	BCS5501	Design and Analysis of Algorithms Lab	-	-	2	80	20	100	1
5	BCS5017	Object Oriented Programming	2	1	-	40	60	100	3
6	BCS5516	Object Oriented Programming Lab	-	-	2	80	20	100	1
7	BEC5015	Signals and Systems	3	-	-	40	60	100	3
8	-----	Open Elective – I	3	-	-	40	60	100	3
9	-----	Elective – I	3	-	-	40	60	100	3
10	XHUX602	Essence of Indian Traditional Knowledge	2	-	-	Satisfactory/Unsatisfactory			0
11	BAP5501	Aptitude and Reasoning and Online Test	-	-	2	Satisfactory/Unsatisfactory			0
TOTAL			19	3	8	480	420	900	23

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III YEAR: VI SEMESTER

S. NO.	SUBJECT CODE	SUBJECT	L	T	P	CIE	ESE	TOTAL	C
1	BCS6014	Compiler Design	3	1	-	40	60	100	4
2	BCS6515	Compiler Design Lab	-	-	2	80	20	100	1
3	BCS6001	Computer Networks	3	1	-	40	60	100	4
4	BCS6501	Computer Networks Lab	-	-	2	80	20	100	1
5	-----	Elective –II	3	-	-	40	60	100	3
6	-----	Elective –III	3	-	-	40	60	100	3
7	BSS6001	Soft- Skill and Interpersonal Communication	2	-	-	100	-	100	2
8	BCS6505	Seminar	-	-	2	100	-	100	1
9	BAP6501	Aptitude and Reasoning and Online Test	-	-	2	Satisfactory/Unsatisfactory		0	
TOTAL			14	2	8	520	280	900	19

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IV YEAR: VII SEMESTER

S. NO.	SUBJECT CODE	SUBJECT	L	T	P	CIE	ESE	TOTAL	C
THEORY									
1	BCS7001	Distributed Systems	3	1	0	40	60	100	3
2	BCS7002	Digital Image Processing	3	2	0	40	60	100	4
3	BCS7003	Information Security and Cyber Laws	3	1	0	40	60	100	3
4	MCM7001	Accounting and Financial Analysis	3	1	0	40	60	100	4
5	MMG7003	Marketing Management	3	1	0	40	60	100	4
6	MMG7004	Quantitative Techniques	3	1	0	40	60	100	4
PRACTICAL/TRAINING/PROJECT									
7	BCS7501	Distributed System Lab	0	0	2	80	20	100	1
8	BCS7502	Digital Image Processing Lab	0	0	2	80	20	100	1
9	BCS7503	Summer Training	0	0	2	100	-	100	1
10	BCS7504	Project – I	0	0	2	100	-	100	2
TOTAL			18	7	8	600	400	1000	27

* Project – I will cover Engineering Design Project

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IV YEAR: VIII SEMESTER

S. NO.	SUBJECT CODE	SUBJECT	L	T	P	CIE	ESE	TOTAL	C
THEORY									
1	BCS8001	Cryptography and Network Security	3	2	0	40	60	100	4
2	MMG8001	Research Methodology	3	1	0	40	60	100	4
3	MMG8002	Human Research Management	3	0	0	40	60	100	3
4	MMG8005	Business Environment	3	0	0	40	60	100	3
5	MCM8001	Financial Management	3	1	0	40	60	100	4
6	MMG8006	Legal Aspects of Business	3	0	0	40	60	100	3
7	MMG8007	Entrepreneurship Development	3	0	0	40	60	100	3
PRACTICAL/TRAINING/PROJECT									
8	BCS8501	Project –II	0	0	4	80	20	100	6
TOTAL			21	4	4	360	440	800	30

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V YEAR: IX SEMESTER

S. NO.	SUBJECT CODE	SUBJECT	L	T	P	CIE	ESE	TOTAL	C
THEORY									
1	MCS9002	Management Information System	3	0	0	40	60	100	3
2	MMG9001	Corporate Governance & Business Ethics	3	0	0	40	60	100	3
3	-----	Elective -1	3	1	0	40	60	100	4
4	-----	Elective -2	3	1	0	40	60	100	4
5	-----	Elective -3	3	1	0	40	60	100	4
6	-----	Open Elective –I	3	0	0	40	60	100	3
PRACTICAL/TRAINING/PROJECT									
7	MMG9501	Summer Training – Project Report	0	0	2	80	20	100	3
8	MMG9502	SPSS	0	0	2	80	20	100	1
TOTAL			18	3	4	400	400	800	25

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STUDY & EVALUATION SCHEME
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V YEAR: X SEMESTER

S. NO.	SUBJECT CODE	SUBJECT	L	T	P	CIE	ESE	TOTAL	C
THEORY									
1	MMG0003	Strategic Management	3	1	0	40	60	100	4
2	-----	Elective -1	3	1	0	40	60	100	4
3	-----	Elective -2	3	1	0	40	60	100	4
4	-----	Elective -3	3	1	0	40	60	100	4
5	-----	Open Elective –I	3	0	0	40	60	100	3
PRACTICAL/TRAINING/PROJECT									
6	MMG0502	Business Research Project	0	0	2	80	20	100	3
7	MMG0503	Comprehensive Viva	0	0	0	0	100	100	2
TOTAL			15	4	2	280	420	700	24

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LIST OF ELECTIVES

S. NO.	SUBJECT CODE	SUBJECT	
<u>Science Based Open Electives</u>			III/IV Semester
1	BCY3301/BCY4301	Industrial Chemical & Environment	
2	BCY3302/BCY4302	Polymer Technology	
3	BMA3301/BMA4301	Discrete Mathematics*	
4	BST3301/BST4301	Statistical & Numerical Analysis	
5	BPH3301/BPH4301	Nano Science	
6	BPH3302/BPH4302	Space Science	
* Not offered for Computer Science & Engineering			
<u>Departmental Elective – I</u>			VI Semester
1	BMA6104	Operation Research	
2	BEC6108	Microprocessor	
3	BCS6101	Geographical Information System	
4	BCS6103	Human Computer Interaction	
5	BCS6114	Introduction to Big Data	
<u>Departmental Elective –II</u>			VII Semester
1	BCS7101	Distributed Database	
2	BCS7102	Parallel Algorithm	
3	BCS7103	Pattern Recognition	
4	BCS7104	Real Time System	
5	BCS7105	Mobile Application Development	
6	BCS7106	Simulation and Modeling	
<u>Departmental Elective –III</u>			VIII Semester
1	BCS8101	Multimedia Systems	
2	BCS8102	Mobile Computing	
3	BCS8103	Storage Management	
4	BCS8104	Embedded System	

5	BCS8105	Bioinformatics
6	BCS8106	Ethical Hacking
<u>Departmental Elective –IV</u>		VIII Semester
1	BCS8201	Data Mining and Warehousing
2	BCS8202	Data Compression
3	BCS8203	Neural Network
4	BCS8204	Client Server Computing
5	BCS8205	Cloud Computing
6	BCS8206	Software Project Management
<u>Open Elective –I</u>		VII Semester
1	BCS7301	Human Computer Interface
2	BCS7302	Advances in IT
3	BCS7303	Database Systems
4	BCS7304	E – Commerce
<u>Open Elective –II</u>		VIII Semester
1	BCS8301	Information System
2	BCS8302	Soft Computing
3	BCS8303	Enterprise Resource Planning
4	BCS8304	Multimedia Tools and Application

List of Subject Electives IX & X Semester

S. No.	SPECIALIZATION	CODE	SUBJECT	SEM
1	MARKETING MANAGEMENT	MMG9003-MK	Sales and Distribution Management	IX
		MMG9004-MK	Integrated Marketing Communication	IX
		MMG9005-MK	Consumer Behaviour	IX
		MMG0003-MK	Retailing Management	X
		MMG0004-MK	International Marketing Management	X

		MMG0005-MK	Marketing of Services	
2	HUMAN RESOURCE MANAGEMENT	MMG9003-HR	Human Resource Planning and Performance Management	IX
		MMG9004-HR	Industrial Relations and Labor Laws	IX
		MMG9005-HR	Training and Development	IX
		MMG0003-HR	Compensation Management	X
		MMG0004-HR	Negotiation and Counseling	X
		MMG0005-HR	Cross Cultural Management	X
3	FINANCIAL MANAGEMENT	MCM9003-FM	Security Analysis and Portfolio Management	IX
		MCM9004-FM	Taxation and Tax Planning	IX
		MCM9005-FM	Management Accounting for Decision Making	IX
		MCM0003-FM	Financial Institution and Services	X
		MCM0004-FM	Management of Working Capital	X
		MCM0005-FM	International Financial Management	X
4	OPERATION MANAGEMENT	MMG9003-OM	Logistics and Distribution Management	IX
		MMG9004-OM	Project Management	IX
		MMG9005-OM	Production Planning and Control	IX
		MMG0003-OM	Strategic Sourcing	X
		MMG0004-OM	Operations Strategy	X
		MMG0005-OM	Supply Chain Modeling	X
5	INTERNATIONAL BUSINESS	MMG9003-IB	International Trade	IX

	MANAGEMENT	MMG9004-IB	Export Management and Documentation	IX
		MMG9005-IB	International Logistics	IX
		MMG0003-IB	International Marketing Management	X
		MMG0004-IB	International Financial Management	X
		MMG0005-IB	Cross Cultural Management	X
6	ENTREPRENEURSHIP AND FAMILY BUSINESS MANAGEMENT	MMG9001-ET	Business Analysis and Development Planning	IX
		MMG9002-ET	Creativity and Change in Organizations	IX
		MMG9003-ET	Management of Intellectual Property Rights	IX
		MMG0001-ET	Management of Funds for Small Business	X
		MMG0002-ET	Management of MSME	X
		MMG0003-ET	Managing Growing and Existing the New Venture	X

LIST OF OPEN ELECTIVES/VALUE ADDED COURSE

S. NO.	SUBJECT CODE		SUBJECTS	SEM
	For Open Elective	For Value Added		
1	MMG9001-OE	MMG9001-VA	Talent Acquisition and Management	IX
2	MMG9002-OE	MMG9002-VA	Conflict and Stress Management	IX
3	MMG9003-OE	MMG9003-VA	Brand Management	IX
4	MMG9004-OE	MMG9004-VA	Digital Marketing	IX
5	MMG9005-OE	MMG9005-VA	Financial Derivatives	IX
6	MMG9006-OE	MMG9006-VA	Behavioral Finance	IX

7	MMG9007- OE	MMG9007- VA	Tourism Management	IX
8	MMG9008- OE	MMG9008- VA	Business Intelligence & Analytics	IX
9	MMG9009- OE	MMG9009- VA	E-Commerce Technology	IX
10	MMG0001- OE	MMG0001- VA	Organization Change and Development	X
11	MMG0002- OE	MMG0002- VA	HR Issues in Mergers and Acquisitions	X
12	MMG0003- OE	MMG0003- VA	Rural Marketing	X
13	MMG0004- OE	MMG0004- VA	Mall Marketing	X
14	MMG0005- OE	MMG0005- VA	Insurance and Risk Management	X
15	MMG0006- OE	MMG0006- VA	Online Trading of Financial Assets	X
16	MMG0007- OE	MMG0007- VA	Management of Healthcare Services	X
17	MMG0008- OE	MMG0008- VA	Real Estate Management	X
18	MMG0009- OE	MMG0009- VA	Software Project Management	X