

ECM (A17 Regulation) CBCS Course Structure

FIRST YEAR - I SEMESTER

S. No.	Code	Subject	L	T	P/D	C	CIE	SEE
1	6H101	English – I	2	-	-	2	25	75
2	6H111	Engineering Mathematics – I	3	2	-	3	25	75
3	6H121	Engineering Physics – I	3	1	-	3	25	75
4	6H131	Engineering Chemistry	2	1	-	2	25	75
5	6F101	Computer Programming	3	1	-	3	25	75
6	6B101	Engineering Drawing – I	1	1	4	3	25	75
7	6H171	English Language Communication Skills Lab	-	-	2	1	25	75
8	6H181	Engineering Physics Lab – I	-	-	2	1	25	75
9	6H186	Engineering Chemistry Lab	-	-	2	1	25	75
10	6F171	C Programming Lab	-	-	4	2	25	75
11	6B171	Engineering Workshop – I	-	-	2	1	25	75
12	6F172	IT Workshop – I	-	-	2	1	25	75
13	6D191	Seminar on Current Affairs / Technical Topic	-	-	2	1	100	-
Total :			14	6	15	24	400	900

CIE: Continuous Internal Evaluation

SEE: Semester End Examination

FIRST YEAR - II SEMESTER

S. No.	Code	Subject	L	T	P/D	C	CIE	SEE
1	6H202	English – II	2	2	-	2	25	75
2	6H213	Engineering Mathematics-II	3	2	-	3	25	75
3	6H223	Applied Physics – I	3	1	-	3	25	75
4	6E201	Data Structures	3	1	-	3	25	75
5	6B202	Engineering Drawing - II	1	1	2	2	25	75
6	6H232	Environmental and Applied Chemistry	2	1	-	2	25	75
7	6A242	Network Analysis	3	1	-	3	25	75
8	6Z233	Gender Sensitization, Values, Ethics and Yoga	1	1	-	1	25	75
9	6E271	Data Structures Lab (C, C++)	-	-	4	2	25	75
10	6B272	Engineering Workshop – II	-	-	2	1	25	75
11	6H282	Engineering Physics Lab - II	-	-	2	1	25	75
12	6D292	Seminar on Science and its Impact/Technical Topic	-	-	2	1	100	-
Total :			18	10	9	24	375	825

SECOND YEAR - I SEMESTER

Sl. No.	Code	Subject	L	T	P/D	C	CIE	SEE
1	6H373	Functional and Communicative English (FCE)	1	2	-	1	25	75
2	6H316	Engineering Mathematics-III	3	2	-	3	25	75
3	6C303	Probability Theory and Stochastic Process	3	1	-	3	25	75
4	6E302	Object Oriented Programming Through Java	3	1	-	3	25	75
5	6DC04	Data Communication and Computer Networks	3	1	-	3	25	75
6	6C301	Electronic Devices and Circuits	3	1	-	3	25	75
7	6D301	Discrete Structures and Graph Theory	3	1	-	3	25	75
8	6E372	Object Oriented Programming Through Java Lab	-	-	4	2	25	75
9	6C371	Electronic Devices and Circuits Lab	-	-	4	2	25	75
10	6D393	Seminar on Technology and its Impact/Technical topic	-	-	2	1	100	-
		Total :	19	9	8	24	325	675

SECOND YEAR – II SEMESTER

Sl. No.	Code	Subject	L	T	P/D	C	CIE	SEE
1	6CC04	Signals and Systems	3	1	-	3	25	75
2	6ZC01	Managerial Economics and Financial Analysis	2	1	-	2	25	75
3	6C407	Electronic Circuit Analysis	3	1	-	3	25	75
4	6FC03	Database Management Systems	3	1	-	3	25	75
5	6D420	Digital Logic and Pulse Circuits	3	1	-	3	25	75
6	6D414	Software Engineering	3	1	-	3	25	75
7	6D476	Electronic Circuits Pulse Circuits Lab	-	-	4	2	25	75
8	6F474	Database Management Systems Lab	-	-	4	2	25	75
9	6D485	Signals and Systems Lab	-	-	2	1	25	75
10	6D481	Comprehensive Viva Voce - I	-	-	-	1	50	50
11	6D494	Technical Seminar	-	-	2	1	100	-
		Total :	18	6	12	24	350	750

THIRD YEAR – I SEMESTER

S. No.	Code	Subject	L	T	P/D	C	Internal	External
1	6DC11	Computer Organization and Operating Systems	2	2	-	2	25	75
2	6CC06	Analog Communications	3	1	-	3	25	75
3	6CC14	Linear and Digital IC Applications	3	1	-	3	25	75
4	6FC09	Web Technologies	3	1	-	3	25	75
5	6ZC02	Management Science (<i>Subject from IV-II</i>)	3	-	-	3	25	75
6		Professional Elective – I	3	1	-	3	25	75
7		Professional Elective – II	3	1	-	3	25	75
8	6H576	Quantitative Aptitude	-	-	2	1	25	75
9	6D577	Group Project	-	-	2	1	25	75
10	6CC79	Linear and Digital IC Applications Lab	-	-	4	2	25	75
11	6FC82	Web Technologies Lab	-	-	4	2	25	75
12	6D584	Summer Internship Project	-	-	-	1	25	75
13	6D595	Technical Literature Review and Seminar - I	-	-	2	1	100	-
		Total :	20	7	14	28	400	900

THIRD YEAR – II SEMESTER

S. No.	Code	Subject	L	T	P/D	C	Internal	External
1	6FC04	Design and Analysis of Algorithms	3	1	-	3	25	75
2	6DC05	Microprocessors and Microcontrollers	3	1	-	3	25	75
3	6DC21	Shell Programming and Scripting Languages	3	1	-	3	25	75
4	6FC11	Information Security (<i>Subject from IV-II</i>)	3	1	-	3	25	75
5	6H677	Logical Reasoning	-	-	2	1	25	75
6		Professional Elective-III	3	1	-	3	25	75
7		Professional Elective-IV	3	1	-	3	25	75
8		Open Elective-I	2	1	-	2	25	75
9	6DC71	Microprocessors and Microcontrollers Lab	-	-	4	2	25	75
10	6D670	Shell Programming and Scripting Languages Lab	-	-	2	1	25	75
11	6D682	Comprehensive viva voce - II	-	-	-	1	50	50
12	6D696	Technical Literature Review and Seminar - II	-	-	2	1	100	-
13	6HC74	Effective English Communication and Soft Skills	1	-	-	1	25	75
		Total :	21	7	10	27	425	875

FOURTH YEAR – I SEMESTER

S. No.	Code	Subject	L	T	P/D	C	Internal	External
1	6D702	Automata Theory and Compiler Design	3	1	-	3	25	75
2	6DC06	Embedded and Real Time Systems	4	1	-	4	25	75
3	6DC07	VLSI Design	3	1	-	3	25	75
4	6GC49	Intellectual Property Rights	1	1	-	1	25	75
5		Professional Elective – V	3	1	-	3	25	75
6		Open Elective – II	2	1	-	2	25	75
7		Open Elective – III	2	1	-	2	25	75
8	6DC72	Embedded Systems Lab	-	-	3	2	25	75
9	6DC73	VLSI Lab	-	-	3	2	25	75
10	6D778	Industry Oriented Mini Project	-	-	-	2	25	75
11	6D779	Project – I	-	1	3	3	25	75
12	6D797	Technical Literature Review and Seminar - III	-	-	2	1	100	-
		Total:	18	8	11	28	375	825

FOURTH YEAR – II SEMESTER

S. No.	Code	Subject	L	T	P/D	C	Internal	External
1	6D880	Project – II	-	-	20	12	25	75
2	6D883	Comprehensive viva voce - III	-	-	-	1	50	50
3	6D898	Technical Literature Review and Seminar - IV	-	-	2	1	100	-
		Total :	-	-	22	14	175	125

**B.TECH ECM A17 REGULATION COURSE STRUCTURE
UNDER CHOICE BASED CREDIT SYSTEM (CBCS)
MAJOR STREAMS (PROFESSIONAL ELECTIVE STREAMS)**

L T P/D C
3 1 0 3

NOTE: Following are the streams which the student can choose from III-yr I-Semester in CBCS

Professional Elective Streams	Professional Elective – I (3-1)	Professional Elective – II (3-1)	Professional Elective – III (3-2)	Professional Elective – IV (3-2)	Professional Elective – V (4-1)
Communications	Electro Magnetic Waves and Transmission Lines (6CC08)	Digital Communications (6C511)	Antennas and Wave Propagation (6CC12)	Cellular and Mobile Communications (6CC15)	Wireless Communications and Networks (6C743)
Software Engineering	Software Requirements and Estimation (6EC04)	Software Project Management (6EC05)	Software Architecture and Design Patterns (6EC07)	Agile Software Development (6EC08)	Advanced Software Engineering (6EC09)
Data Science	Statistical Computation methods for Data Science (6HC17)	Introduction to Data Science (6EC10)	Big Data Analytics (6EC12)	Machine Learning (6EC13)	Artificial Intelligence and Deep Learning (6EC15)
Advanced Technologies	Information Retrieval Systems (6FC15)	Robotic Process Automation (6EC16)	Image Processing (6FC18)	Internet of Things (6DC55)	Cloud Computing (6FC14)
		Computer Graphics (6FC10)			
Advanced Software Languages	Linux Programming (6FC06)	C# and .Net Framework (6FC16)	Scripting Languages (6FC25)	Mobile Application Development (6FC12)	Semantic Web and Social Networks (6FC26)

MINOR STREAMS (OPEN ELECTIVES)

L	T	P/D	C
2	1	0	2

NOTE: Following are the **Open Elective (Minor) streams** which the student can choose **From III-yr II-Sem** under CBCS

Stream / Year-Semester	III-Year II-Semester / (Open Elective – I)	IV -Year I-Semester / (Open Elective – II)	IV-Year I-Semester / (Open Elective – III)
Bio-Tech	Biology for Engineers (6GC51)	Bioinformatics (6GC47)	Biomedical Instrumentation (6GC48)
Electrical	Control Systems Engineering (6AC46)	Fundamentals of Measurements and Instrumentation (6AC44)	Fundamentals of Renewable Energy Sources (6AC45)
Finance	Banking Operations, Insurance and Risk Management (6ZC05)	Entrepreneurship, Project Management and Structured Finance (6ZC19)	Financial Institutions, Markets and Services (6ZC15)
Mechanical	Smart Materials (6BC61)	Principles of Operations Research (6BC63)	Principles of Manufacturing Processes (6BC62)
Technology Entrepreneurship	Product and Services (6ZC20)	Innovation and Design Thinking (6ZC24)	General Management and Entrepreneurship (6ZC21)