



Criteria 1.2.1.1 - Number of Programmes in which CBCS / Elective course system implemented.

List of Elective Courses

PAPER CODE	PAPER NAME
CE	
CE(PE)601 A	STABILITY OF SLOPES
CE(PE)601 B	FOUNDATION ENGINEERING
CE(PE)601 C	GROUND IMPROVEMENT TECHNIQUE
CE(PE)602 A	BUILDING CONSTRUCTION PRACTICE
CE(PE)602 B	STRUCTURAL ANALYSIS-II
CE(PE)602 C	INDUSTRIAL STRUCTURES
CE(OE)601 A	SOFT SKILLS AND INTERPERSONAL COMMUNICATION - I
CE(OE)601 B	INTRODUCTION TO PHILOSOPHICAL THOUGHTS
CE703 A	ADVANCED FOUNDATIONS
CE 703 B	SOIL STABILIZATION AND GROUND IMPROVEMENT TECHNIQUES
CE 703 C	ADVANCED HIGHWAY AND TRANSPORTATION ENGINEERING
CE 704 A	ADVANCED STRUCTURAL ANALYSIS
CE 704 B	HYDRAULIC STRUCTURES
CE705 A	ENGINEERING MATERIALS (ME 303)
CE 705 B	ELECTRICAL AND ELECTRONIC MEASUREMENT(EE402)
CE 793 A	MATERIAL TESTING LAB (ME 493)
CE 793 B	ELECTRICAL AND ELECTRONIC MEASUREMENT LABORATORY(EE492)
CE801 A	ENVIRONMENTAL POLLUTION AND CONTROL
CE 801 B	WATER RESOURCE MANAGEMENT AND PLANNING
CE 801 C	REMOTE SENSING AND GIS
CE 802 A	FINITE ELEMENT METHOD
CE 802 B	DYNAMICS OF SOILS AND FOUNDATIONS
CE 802 C	DESIGN OF TALL BUILDINGS
CE 802 D	PAVEMENT DESIGN
ECE	
PE-EC505A	NANO ELECTRONICS
PE-EC505B	SPEECH AND AUDIO PROCESSING
	POWER ELECTRONICS



PE-EC505C	SCIENTIFIC COMPUTING
OE-EC506A	SOFT SKILL AND INTERPERSONAL COMMUNICATION
OE-EC506B	CYBER LAW & INTELLECTUAL PROPERTY RIGHTS
OE-EC506C	HUMAN RESOURCE MANAGEMENT
PE-EC603A	INTRODUCTION TO MEMS
PE-EC603B	BIO-MEDICAL ELECTRONICS
PE-EC603C	CMOS VLSI DESIGN
PE-EC603D	INFORMATION THEORY & CODING
OE-EC604A	ELECTRONIC MEASUREMENTS AND MEASURING INSTRUMENTS
OE-EC604B	OPERATING SYSTEM
OE-EC604C	OBJECT ORIENTED PROGRAMMING
EC-703A	RF & MICROWAVE ENGG
EC-703B	OPTICAL COMMUNICATION & N/W
EC-703C	COMPUTER NETWORKS
EC-703D	FPGA & RECONFIGURABLE COMPUTING
EC704A	RADAR ENGG
EC704B	EMBEDDED SYSTEMS
EC704B	BIOMEDICAL INSTRUMENTATION
EC705A	ARTIFICIAL INTELLIGENCE
EC705B	ROBOTICS
EC705C	DATA BASE MANAGEMENT SYSTEM
EC705D	POWER ELECTRONICS
EC801A	SMART ANTENNA
EC801B	DIGITAL IMAGE PROCESSING
EC801C	SATELLITE COMMUNICATION & REMOTE SENSING
EC802A	NEURAL N/W & APPLICATIONS
EC802B	MATERIAL SC. & ENGG
EC802C	RENEWABLE ENERGY
EC802D	AUDIO & SPEECH PROCESSING
EE	
PE-EE 501A	HIGH VOLTAGE ENGINEERING
PE-EE501B	POWER PLANT ENGINEERING
PE-EE501C	RENEWABLE & NON CONVENTIONAL ENERGY
OE-EE 501A	DATA STRUCTURE & ALGORITHM



OE-EE501B	OBJECT ORIENTED PROGRAMMING
OE-EE501C	COMPUTER ORGANIZATION & ARCHITECTURE
PE-EE 601A	DIGITAL CONTROL SYSTEM
PE-EE601B	HVDC TRANSMISSION
PE-EE601C	ELECTRICAL MACHINE DESIGN
PE-EE 602A	ELECTRICAL AND HYBRID VEHICLE
PE-EE 602B	POWER QUALITY & FACTS
PE-EE 602C	INDUSTRIAL ELECTRICAL SYSTEMS
OE-EE 601A	DIGITAL SIGNAL PROCESSING
OE-EE 601B	COMMUNICATION ENGINEERING
OE-EE 601C	VLSI & MICROELECTRONICS
EE-703A	POWER SYSTEM-III
EE-703B	CONTROL SYSTEM-III
EE-703C	ELECTRIC MACHINE-III
EE-704A	HIGH VOLTAGE ENGINEERING
EE-704B	POWER PLANT ENGINEERING
EE-704C	POWER GENERATION AND ECONOMICS
EE-704D	RENEWABLE & NON CONVENTIONAL ENERGY
EE-705A	COMPUTER NETWORK
EE-705B	AI & SOFT COMPUTING
EE-705C	DIGITAL COMMUNICATION
EE-705D	DIGITAL IMAGE PROCESSING
EE-801A	HVDC TRANSMISSION
EE-801B	ILLUMINATION ENGINEERING
EE-801C	ENERGY MANAGEMENT & AUDIT
EE-801D	DIGITAL SPEECH SIGNAL PROCESSING
EE-802A	POWER PLANT INSTRUMENTATION & CONTROL
EE-802B	SENSORS & TRANSDUCERS
EE-802C	BIOMEDICAL INSTRUMENTATION
EE-802D	PROCESS CONTROL
CSE	
PEC-IT501C	ADVANCED COMPUTER ARCHITECTURE
PEC-IT501B	ARTIFICIAL INTELLIGENCE
PEC-IT501D	COMPUTER GRAPHICS
MC-CS501	CONSTITUTION OF INDIA
PEC-IT501A	THEORY OF COMPUTATION



PEC-IT601A	ADVANCED ALGORITHMS
PEC-IT601B	DISTRIBUTED SYSTEMS
PEC-IT601C	SIGNALS & SYSTEMS
PEC-IT601D	IMAGE PROCESSING
PEC-IT602A	PARALLEL AND DISTRIBUTED ALGORITHMS
PEC-IT602B	DATA WAREHOUSING & DATA MINING
PEC-IT602C	HUMAN COMPUTER INTERACTION
PEC-IT602D	PATTERN
OEC-IT601A	NUMERICAL METHODS
OEC-IT601B	HUMAN RESOURCE DEVELOPMENT AND ORGANIZATIONAL BEHAVIOR
CS703A	PATTERN RECOGNITION
CS703B	SOFT COMPUTING
CS703C	ARTIFICIAL INTELLIGENCE
CS703D	IMAGE PROCESSING
CS704A	DISTRIBUTED OPERATING SYSTEM
CS704B	CLOUD COMPUTING
CS704C	DATA WAREHOUSING AND DATA MINING
CS704D	SENSOR NETWORK
CS704E	MOBILE COMPUTING
CS705A	INTERNET TECHNOLOGY
CS705B	MICROELECTRONICS & VLSI DESIGN
CS705C	CONTROL SYSTEM
CS705D	MODELLING & SIMULATION
HU801A	ORGANISATIONAL BEHAVIOUR
HU801B	PROJECT MANAGEMENT
CS801A	ADVANCED COMPUTER ARCHITECTURE
CS801B	PARALLEL COMPUTING
CS801C	NATURAL LANGUAGE PROCESSING
CS801D	CRYPTOGRAPHY & NETWORK SECURITY
CS801E	BUSINESS ANALYTICS
CS802A	TECHNOLOGY MANAGEMENT
CS802B	CYBER LAW & SECURITY POLICY
CS802C	OPTICAL NETWORKING
CS802D	LOW POWER CIRCUITS AND SYSTEMS
CS802E	E-COMMERCE
CS802F	ROBOTICS
IT	
PEC-IT501C	ADVANCED COMPUTER ARCHITECTURE
PEC-IT501B	ARTIFICIAL INTELLIGENCE
PEC-IT501D	COMPUTER GRAPHICS
PEC-IT501A	THEORY OF COMPUTATION



PEC-IT601A	ADVANCED ALGORITHMS
PEC-IT601B	DISTRIBUTED SYSTEMS
PEC-IT601C	SIGNALS & SYSTEMS
PEC-IT601D	IMAGE PROCESSING
PEC-IT602A	PARALLEL AND DISTRIBUTED ALGORITHMS
PEC-IT602B	DATA WAREHOUSING & DATA MINING
PEC-IT602C	HUMAN COMPUTER INTERACTION
PEC-IT602D	PATTERN
OEC-IT601A	NUMERICAL METHODS
OEC-IT601B	HUMAN RESOURCE DEVELOPMENT AND ORGANIZATIONAL BEHAVIOR
IT703A	E-COMMERCE
IT703B	SOFT COMPUTING
IT703C	IMAGE PROCESSING
IT704A	DISTRIBUTED OPERATING SYSTEM
IT704B	CLOUD COMPUTING
IT704C	DATA WAREHOUSING AND DATA MINING
IT704D	SENSOR NETWORKS
IT704E	MOBILE COMPUTING
IT705A	BIO INFORMATICS
IT705B	CONTROL SYSTEM
IT705C	MODELLING & SIMULATION
IT705D	MICRO ELECTRONICS & VLSI DESIGN
IT705E	ADVANCED DATA COMMUNICATION & CODING
HU801A	ORGANISATIONAL BEHAVIOUR
HU801B	PROJECT MANAGEMENT
IT801A	ADVANCED COMPUTER ARCHITECTURE
IT801B	PARALLEL COMPUTING
IT801C	NATURAL LANGUAGE PROCESSING
IT801D	CRYPTOGRAPHY & NETWORK SECURITY
IT802A	TECHNOLOGY MANAGEMENT
IT802B	CYBER LAW & SECURITY POLICY
IT802C	OPTICAL NETWORKING
IT802D	LOW POWER CIRCUITS AND SYSTEMS
IT802E	BUSINESS ANALYTICS
IT802F	ROBOTICS
MBA	
MM 301	B2B MARKETING
MM 302	DIGITAL & SOCIAL MEDIA MARKETING
MM 303	IMC/ PROMOTION STRATEGY
MM 304	MARKETING RESEARCH
FM 301	TAXATION



FM 302	PROJECT APPRAISAL & FINANCE
FM 303	BEHAVIORAL FINANCE
FM 304	CORPORATE FINANCE
HR 301	TEAM DYNAMICS AT WORK
HR 302	HR METRICS AND ANALYTICS
HR 303	CROSS CULTURAL MANAGEMENT
HR 304	ORGANIZATIONAL DESIGN
MM 401	CONSUMER BEHAVIOUR
MM 402	RETAIL MANAGEMENT
MM 403	SALES & DISTRIBUTION MANAGEMENT
MM 404	SERVICE MARKETING
MM 405	PRODUCT & BRAND MANAGEMENT
MM 406	INTERNATIONAL MARKETING
FM 401	INVESTMENT ANALYSIS & PORTFOLIO MANAGEMENT
FM 402	MANAGING BANKS & FINANCIAL INSTITUTIONS
FM 403	MERGERS, ACQUISITION & CORPORATE RESTRUCTURING
FM 404	FINANCIAL DERIVATIVES
FM 405	INTERNATIONAL FINANCE
FM 406	FINANCIAL MARKETS & SERVICES
HR 401	MANPOWER PLANNING RECRUITMENT & SELECTION
HR 402	EMPLOYEE RELATIONS&LABOUR LAWS
HR 403	COMPENSATION & BENEFITS MANAGEMENT
HR 404	PERFORMANCE MANAGEMENT SYSTEMS
HR 405	STRATEGIC HRM
HR 406	INTERNATIONAL HRM
MM 301	SALES & DISTRIBUTION MANAGEMENT
MM 302	ADVERTISING & SALES PROMOTION
MM 303	MARKETING RESEARCH
FM 301	CORPORATE TAXATION & TAX PLANNING
FM 302	CORPORATE FINANCE
FM 303	SECURITY ANALYSIS & PORTFOLIO MANAGEMENT
HR 301	EMPLOYMENT & COMPENSATION ADMINISTRATION
HR 302	HUMAN RESOURCE PLANNING
HR 303	LABOUR LAWS
SM 302	SYSTEM ANALYSIS & DESIGN
MM 404	INTERNATIONAL MARKETING
MM 405	SERVICE MARKETING
MM 406	CONSUMER BEHAVIOUR
FM 404	FINANCIAL INSTITUTES AND MARKETS
FM 405	INTERNATIONAL FINANCE
FM 406	DERIVATIVES AND RISK MANAGEMENT



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HR 404	INDUSTRIAL RELATIONS
HR 405	ORGANIZATIONAL DEVELOPMENT
HR 406	HUMAN RESOURCE DEVELOPMENT
SM 405	E - BUSINESS

Syllabus for B.Tech(Civil Engineering) Up to Third Year

Revised Syllabus of B.Tech CE (for the students who were admitted in Academic Session 2010-2011)



Proposed Structure for Forthcoming Semester of B.Tech Courses on CE

Fourth Year – Seventh Semester

A. THEORY							
Sl. No	Field	Theory	Contact hours per week				Cr. Points
			L	T	P	Total	
1	CE701	Environmental Engineering	3	0	0	3	3
2	CE702	Water Resource Engineering	3	0	0	3	3
3	CE703	Professional Elective II	3	0	0	3	3
4	CE704	Professional Elective III	3	0	0	3	3
5	CE705	Free Elective II	3	0	0	3	3
Total Theory						15	15
B. PRACTICAL							
6	HU781	Group Discussion	0	0	3	3	2
7	CE791	Environmental Engg Lab	0	0	3	3	2
8	CE792	Civil Engineering Practice Sessional	0	0	3	3	2
9	CE793	Free Elective Laboratory	0	0	3	3	2
10	CE782	Industrial Training	4 weeks duration during 6 th -7 th Semester break				2
11	CE783	Project Part I				6	2
Total Practical						18	12
Total of Semester						33	27

Fourth Year – Eighth Semester

A. THEORY							
Sl. No	Field	Theory	Contact hours per week				Cr. Points
			L	T	P	Total	
1	HU801A HU801B	Organisational Behaviour/ Project Management	2	0	0	2	2
2	CE801	Professional Elective IV	3	0	0	3	3
3	CE802	Professional Elective V	3	0	0	3	3
Total Theory						8	8
B. PRACTICAL							
4	CE891	Structural Engineering Design Practice	0	0	6	6	4
5	CE881	Project Part II	0	0	12	12	6
6	CE882	Grand – Viva					3
Total Practical						18	13
Total of Semester						26	21

Free Elective II

CE705A Engineering Materials (ME303)

CE705B Electrical and Electronic Measurement (EE402)

Free Elective Lab

CE793A Material Testing Lab (ME493)

CE793B Electrical and Electronic Measurement Laboratory (EE492)

List of Electives:

Professional Elective – II

- CE703A Advanced Foundation Engineering
- CE703B Soil Stabilization and Ground Improvement Techniques
- CE703C Advanced Highway and Transportation Engineering

Professional Elective – III

- CE704A Advanced Structural Analysis
- CE704B Hydraulic Structures

Professional Elective – IV

- CE801A Environmental Pollution and Control
- CE801B Water Resource Management and Planning
- CE801C Remote Sensing and GIS

Professional Elective – V

- CE802A Finite Element Method
- CE802B Dynamics of Soils & Foundations
- CE802C Design of Tall Buildings
- CE802D Pavement Design

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Syllabus for B. Tech in Civil Engineering
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Curriculum Structure
Semester III (Second year)

Sl. No.	Category	Code	Course Title	Hours per week			Credits
				L	T	P	
Theory							
1	Basic Science courses	CE(BS)301	Biology for Engineers	2	1	0	3
2	Engineering Science Courses	CE(ES)301	Engineering Mechanics	3	1	0	4
3	Engineering Science Courses	CE(ES)302	Energy Science & Engineering	1	1	0	2
4	Basic Science courses	CE(BS)301	Mathematics-III (Transform & Discrete Mathematics)	2	0	0	2
5	Humanities and Social Sciences including Management courses	CE(HS)301	Humanities-I (Effective Technical Communication)	3	0	0	3
6	Humanities and Social Sciences including Management courses	CE(HS)302	Introduction to Civil Engineering	1	1	0	2
Theory credits							16
Practical/ Sessional							
1	Engineering Science Courses	CE(ES)391	Basic Electronics	1	0	2	2
2	Engineering Science Courses	CE(ES)392	Computer-aided Civil Engineering Drawing	1	0	2	2
3	Engineering Science Courses	CE(ES)393	Life Science	1	0	2	2
Practical credits							6
Total credits							22

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Semester IV (Second year]

Sl. No.	Category	Code	Course Title	Hours per week			Credits
				L	T	P	
Theory							
1	Engineering Science Courses	CE(ES)401	Introduction to Fluid Mechanics	2	0	0	2
2	Engineering Science Courses	CE(ES)402	Introduction to Solid Mechanics	2	0	0	2
3	Professional Core courses	CE(PC)401	Soil Mechanics – I	2	1	0	3
4	Professional Core courses	CE(PC)402	Environmental Engineering -I	2	1	0	3
5	Professional Core courses	CE(PC)403	Surveying & Geomatics	2	1	0	3
6	Professional Core courses	CE(PC)404	Concrete Technology	2	1	0	3
7	Humanities and Social Sciences including Management courses	CE(HS)401	Civil Engineering - Societal & Global Impact	2	0	0	2
8	Mandatory Courses (non-credit)	CE(MC)401	Management I (Organizational Behavior)	2	0	0	0
Theory credits							18
Practical/ Sessional							
1	Professional Core courses	CE(ES)491	Fluid Mechanics Laboratory	0	0	2	1
2	Professional Core courses	CE(ES)492	Solid Mechanics Laboratory	0	0	2	1
3	Professional Core courses	CE(ES)493	Engineering Geology Laboratory	0	0	2	1
4	Professional Core courses	CE(PC)493	Surveying & Geomatics	0	0	2	1
5	Professional Core courses	CE(PC)494	Concrete Technology Laboratory	0	0	2	1
Practical credits							5
Total credits							23

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Syllabus for B. Tech in Civil Engineering

(Applicable from the academic session 2018-2019)

Semester V (Third year]

Sl. No.	Category	Code	Course Title	Hours per week			Credits
				L	T	P	
Theory							
1	Professional Core courses	CE(PC)501	Design of RC Structures	2	1	0	3
2	Professional Core courses	CE(PC)502	Engineering Hydrology	2	1	0	3
3	Professional Core courses	CE(PC)503	Structural Analysis – I	2	1	0	3
4	Professional Core courses	CE(PC)504	Soil Mechanics – II	2	1	0	3
5	Professional Core courses	CE(PC)505	Environmental Engineering – II	2	1	0	3
6	Professional Core courses	CE(PC)506	Transportation Engineering	2	1	0	3
7	Mandatory courses (non-credit)	CE(MC)501	Constitution of India/ Essence of Indian Knowledge Tradition	-	-	-	0
Theory credits							18
Practical/ Sessional							
1	Professional core courses	CE(PC)591	RC Design Sessional	0	0	2	1
2	Professional core courses	CE(PC)594	Soil Mechanics Laboratory	0	0	2	1
3	Professional core courses	CE(PC)595	Environmental Engineering Laboratory	0	0	2	1
4	Professional core courses	CE(PC)596	Transportation Engineering Laboratory	0	0	2	1
5	Professional core courses	CE(PC)597	Computer Application in CE	0	0	2	1
Practical credits							5
Total credits							23

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Syllabus for B. Tech in Civil Engineering
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Semester VI (Third year]

Sl. No.	Category	Code	Course Title	Hours per week			Credits
				L	T	P	
Theory							
1	Professional Core courses	CE(PC)601	Construction Engineering & Management	2	0	0	2
2	Professional Core courses	CE(PC)602	Engineering Economics, Estimation & Costing	2	0	0	2
3	Professional Core courses	CE(PC)603	Water Resources Engineering	2	0	0	2
4	Professional Core courses	CE(PC)604	Design of Steel Structures	2	0	0	2
5	Professional Elective courses	CE(PE)601	Elective-I	2	0	0	2
6	Professional Elective courses	CE(PE)602	Elective-II	2	0	0	2
7	Open Elective courses	CE(OE)601	Open Elective-I (Humanities)	2	0	0	2
Theory credits							14
Practical/ Sessional							
1	Professional Core courses	CE(PC)693	Water Resource Engineering Laboratory	0	0	2	1
2	Professional Core courses	CE(PC)694	Steel Structure Design Sessional	0	0	2	1
3	Professional Core courses	CE(PC)695	Quantity Survey Estimation and Valuation Sessional	0	1	2	2
Practical credits							4
Total credits							18

CE(PE)601 (Elective-I)	CE(PE)602 (Elective-II)
601A: Stability of Slopes 601B: Foundation Engineering 601C: Ground Improvement Technique	602A : Building Construction Practice 602B : Structural Analysis-II 602C : Industrial Structures
CE(OE)601 (Open Elective-I)	
601A: Soft Skills and Interpersonal Communication – I 601B: Introduction to Philosophical Thoughts	

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Semester VII (Fourth year]

Sl. No.	Category	Code	Course Title	Hours per week			Credits
				L	T	P	
Theory							
1	Open Elective courses	CE(OE)701	Open Elective-II	2	0	0	2
2	Professional Elective courses	CE(PE)701	Elective III	2	1	0	3
3	Professional Elective courses	CE(PE)702	Elective IV	2	1	0	3
4	Professional Elective courses	CE(PE)703	Elective V	2	1	0	3
5	Professional Elective courses	CE(PE)704	Elective-VI	2	1	0	3
6	Professional Elective courses	CE(PE)705	Elective-VII	2	0	0	2
Theory credits							16
Practical/ Sessional							
1	Internship	CE(IN)791	Industrial Internship (after sixth semester)				1
2	Project	CE(PROJ)792	Project-1 (Project work)	0	0	10	5
Practical credits							6
Total credits							22

CE(OE)701 (Open Elective-II)	CE(PE)701 (Elective-III)
A: Metro Systems & Engineering	701A: Computational Hydraulics
B: ICT for Development	701B: Disaster Preparedness and Planning
C: Cyber Law & Ethics	701C: Hydraulic Structure
CE(PE)702 (Elective-IV)	CE(PE)703 (Elective-V)
702A: Prestressed Concrete	703A: Air and Noise Pollution and Control
702B: Repairs & Rehabilitation of Structures	703B: Physico-Chemical Processes for Water and Wastewater Treatment
702C: Finite Element Method	703C: Water and Air Quality Modelling
CE(PE)704 (Elective-VI)	CE(PE)705 (Elective-VII)
704A: Structural Dynamics	705A: Railway and Airport Engineering
704B: Advanced Structural Analysis	705B: Pavement Design
704C: Coastal Hydraulics and Sediment Transport	705C: Transport System Planning

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Semester VIII (Fourth year]

Sl. No.	Category	Code	Course Title	Hours per week			Credits
				L	T	P	
Theory							
1	Humanities and Social Sciences including Management courses	CE(HS)801	Professional Practice, law & Ethics	2	0	0	2
2	Professional Elective Courses	CE(PE)801	Elective VIII	2	0	0	2
3	Open Elective courses	CE(OE)801	Open Elective-III	2	0	0	2
4	Open Elective courses	CE(OE)802	Open Elective-IV	2	0	2	2
Theory credits							8
Practical/ Sessional							
1	Comprehensive Viva Voce	CE(CV)891	Comprehensive Viva Voce				1
2	Project	CE(PROJ)892	Project-2 (Continued from VII)	0	0	10	5
Practical credits							6
Total credits							14
CE(PE)801 (Elective-VIII)							
801A: GIS & Remote Sensing 801B: Rock Mechanics 801C: Environmental laws and Policy 801D: Pavement Materials and Design							
CE(OE)801 (Open Elective-III)				CE(OE)802 (Open Elective-IV)			
A: Human Resource Development and Organizational Behavior B: Bridge Engineering C: Deep Foundations D: Groundwater Contamination				A: Soft Skills and Personality Development B: Earthquake Engineering C: Urban Transport Planning D: Environmental Impact Assessment and Life cycle Analysis			

TOTAL CREDITS – [38 +(22+23)+(23+18)+(21+15)]=160

SEM 1 & SEM 2	SEM3	SEM4	SEM5	SEM6	SEM7	SEM8	Total
38	22	23	23	18	21	15	160

Syllabus for B.Tech(Computer Science & Engineering) Up to Fourth Year

Revised Syllabus of B.Tech CSE (for the students who were admitted in Academic Session 2010-2011)



CSE

Second Year - Third Semester

A. THEORY							
Sl.No.	Field	Theory	Contact Hours/Week				Cr. Points
			L	T	P	Total	
1	HU301	Values & Ethics in Profession	3	0	0	3	3
2	PH301	Physics-2	3	1	0	4	4
3	CH301	Basic Environmental Engineering & Elementary Biology;	3	0	0	3	3
4	CS301	Analog & Digital Electronics	3	0	0	3	3
5	CS302	Data Structure & Algorithm	3	1	0	4	4
6	CS303	Computer Organisation	3	1	0	4	4
Total of Theory						21	21
B. PRACTICAL							
7	PH391	Physics-2	0	0	3	3	2
8	CS391	Analog & Digital Electronics	0	0	3	3	2
9	CS392	Data Structure & Algorithm	0	0	3	3	2
10	CS393	Computer Organisation	0	0	3	3	2
Total of Practical						12	8
Total of Semester						33	29

Second Year - Fourth Semester

A. THEORY							
Sl.No.	Field	Theory	Contact Hours/Week				Cr. Points
			L	T	P	Total	
1	M(CS)401	Numerical Methods	2	1	0	3	2
2	M401	Mathematics-3	3	1	0	4	4
3	CS401	Communication Engg & Coding Theory	2	0	0	3	3
4	CS402	Formal Language & Automata Theory	3	1	0	4	4
5	CS403	Computer Architecture	3	1	0	4	4
Total of Theory						18	17
B. PRACTICAL							
6	HU481	Technical Report Writing & Language	0	0	3	3	2
7	M(CS)491	Lab Practice	0	0	2	2	1
8	CS491.	Communication Engg & Coding Theory	0	0	3	3	2
9	CS492	Software Tools	0	0	3	3	2
10	CS493	Computer Architectur	0	0	3	3	2
Total of Practical						14	9
Total of Semester						32	26

Syllabus for B.Tech(Computer Science & Engineering) Up to Fourth Year

Revised Syllabus of B.Tech CSE (for the students who were admitted in Academic Session 2010-2011)



Third Year - Fifth Semester

A. THEORY								
Sl. No	Field	Theory	Contact Hours/Week				Cr. Pts	
			L	T	P	Total		
1	HU501	Economics for Engineers	3	0	0	3	3	
2	CS501	Design & Analysis of Algorithm	3	1	0	4	4	
3	CS502	Microprocessors & Microcontrollers	3	1	0	4	4	
4	CS503	Discrete Mathematics	3	0	0	3	3	
5	Free Elective	CS504A	Circuit Theory & Network (ECE)	3	0/1	0	3/4	3/4
		CS504B	Data Communication (ECE)					
		CS504C	Digital Signal Processing (ECE)					
		CS504D	Object Oriented Programming (IT)					
Total of Theory						17/18	17-18	
B. PRACTICAL								
6	CS591	Design & Analysis of Algorithm	0	0	3	3	2	
7	CS592	Microprocessors & Microcontrollers	0	0	3	3	2	
8	CS593	Programming Practices using C++	1	0	2	3	2	
9	F.E.	CS594A	Circuit Theory & Network (ECE)	0	0	3	3	2
		CS594B	Data Communication (ECE)					
		CS594C	Digital Signal Processing (ECE)					
		CS594D	Object Oriented Programming (IT)					
Total of Practical						12	8	
Total of Semester						29/30	25-26	

Third Year - Sixth Semester

A. THEORY								
Sl. No.	Field	Theory	Contact Hours/Week				Cr. Pts	
			L	T	P	Total		
1	HU601	Principles of Management	2	0	0	2	2	
2	CS601	Data Base Management System	3	0	0	3	3	
3	CS602	Computer Networks	3	0	0	3	3	
4	CS603	Operating System	3	0	0	3	3	
5	P.E.	CS604A	Information Theory & Coding	3	0	0	3	3
		CS604B	Computer Graphics					
		CS604C	ERP					
6	F. E.	CS605A	Operation Research (M)	3/3	0/1	0/0	3/4	3/4
		CS605B	Human Resource Management (HSS)					
		CS605C	Multimedia Technology (IT)					
Total of Theory						17/18	17-18	
B. PRACTICAL								
7	CS691	8. Data Base Management System Lab	0	0	3	3	2	
8.	CS692	9. Network Lab	0	0	3	3	2	
9.	CS693	10. Operating System Lab	0	0	3	3	2	
10	CS681	Seminar	0	0	3	3	2	
Total of Practical						12	8	
Total of Semester						29-30	25-26	

Syllabus for B.Tech(Computer Science & Engineering) Up to Fourth Year

Revised Syllabus of B.Tech CSE (for the students who were admitted in Academic Session 2010-2011)



Proposed

Fourth Year - Seventh Semester

A. THEORY

Sl. No.	Field	Theory	Contact Hours/Week				Cr. Pts	
			L	T	P	Total		
1	CS70	Software Engg.	3	0	0	3	3	
2	1 CS70	Compiler Design	3	0	0	3	3	
3	3 CS70	A. Pattern Recognition B. Soft Computing C. Artificial Intelligence D. Image Processing	3	0	0	3	3	
4	4 CS70	A. Distributed Operating System B. Cloud Computing C. Data Warehousing and Data Mining D. Sensor Networks E. Mobile Computing	3	0	0	3	3	
5	5 CS70	A. Internet Technology (IT) B. Microelectronics & VLSI Design (ECE) C. Control System (EE) D. Modelling & Simulation (M)	3	0	0	3	3	
Total of Theory						15	15	
B. PRACTICAL								
6	HU78 1	Group Discussion	0	0	3	3	2	
7	CS791	Software Engg. Lab	0	0	3	3	2	
8	CS793	A. Pattern Recognition B. Soft Computing C. Artificial Intelligence D. Image Processing	0	0	3	3	2	
9	CS795	A. Internet Technology (IT) B. Microelectronics & VLSI Design (ECE) C. Control System (EE) D. Modelling & Simulation (M)	0	0	3	3	2	
10	CS792	Industrial training	4 wks during 6 th -7 th Sem-break					2
11	CS794	Project- 1				3	2	
Total of Practical						15	12	
Total of Semester						30	27	

Syllabus for B.Tech(Computer Science & Engineering) Up to Fourth Year

Revised Syllabus of B.Tech CSE (for the students who were admitted in Academic Session 2010-2011)



Fourth Year - Eighth Semester

A. THEORY							
Sl. No.	Field	Theory	Contact Hours/Week				Cr. Pts
			L	T	P	Total	
1	HU801A HU801B	A. Organisational Behaviour B. Project Management	2	0	0	2	2
2	CS801	A. Advanced Computer Architecture B. Parallel Computing C. Natural Language Processing D. Cryptography & Network Security E. Business Analytics	3	0	0	3	3
3	CS802	A. Technology Management (HSS) B. Cyber Law & Security Policy (HSS) C. Optical Networking (ECE) D. Low Power Circuits & Systems (ECE) E. E-Commerce(IT) F. Robotics(EE & ME)	3	0	0	3	3
Total of Theory						8	8
B. PRACTICAL							
4	CS891	Design Lab / Industrial problem related practical training (Workshop needed)	0	0	6	6	4
5	CS892	Project-2	0	0	12	12	6
6	CS893	Grand Viva					3
Total of Practical						18	13
Total of Semester						26	21

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Curriculum Structure

Semester III (Second year)							
Sl. No.	Type of course	Code	Course Title	Hours per week			Credits
				L	T	P	
Theory							
1	Engineering Science Course	ESC 301	Analog and Digital Electronics	3	0	0	3
2	Professional Core Courses	PCC-CS301	Data Structure & Algorithms	3	0	0	3
3	Professional Core Courses	PCC-CS302	Computer Organisation	3	0	0	3
4	Basic Science course	BSC 301	Mathematics-III (Differential Calculus)	2	0	0	2
5	Humanities & Social Sciences including Management courses	HSMC 301	Economics for Engineers (Humanities-II)	3	0	0	3
Practical							
6	Professional Core Courses	PCC-CS393	IT Workshop (Sci Lab/MATLAB/Python/R)	0	0	4	2
7	Engineering Science Course	ESC 391	Analog and Digital Electronics	0	0	4	2
8	Professional Core Courses	PCC-CS391	Data Structure & Algorithms	0	0	4	2
9	Professional Core Courses	PCC-CS392	Computer Organisation	0	0	4	2
Total credits							22
Semester IV (Second year)							
Sl. No.	Type of course	Code	Course Title	Hours per week			Credits
				L	T	P	
Theory							
1	Professional Core Courses	PCC-CS401	Discrete Mathematics	3	1	0	4
2	Professional Core Courses	PCC-CS 402	Computer Architecture	3	0	0	3
3	Professional Core Courses	PCC-CS403	Formal Language & Automata Theory	3	0	0	3

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4	Professional Core Courses	PCC-CS404	Design & Analysis of Algorithms	3	0	0	3
5	Basic Science courses	BSC 401	Biology	2	1	0	3
6	Mandatory Courses	MC401	Environmental Sciences	1	-	-	0
Practical							
7	Engineering Science Course	PCC-CS 492	Computer Architecture	0	0	4	2
8	Professional Core Courses	PCC-CS494	Design & Analysis of Algorithms	0	0	4	2
						Total credits	20

Semester V (Third year)							
Sl. No.	Type of course	Code	Course Title	Hours per week			Credits
				L	T	P	
1	Engineering Science Course	ESC501	Software Engineering	3	0	0	3
2	Professional Core Courses	PCC-CS501	Compiler Design	3	0	0	3
3	Professional Core Courses	PCC-CS502	Operating Systems	3	0	0	3
4	Professional Core Courses	PCC-CS503	Object Oriented Programming	3	0	0	3
5	Humanities & Social Sciences including Management courses	HSMC-501	Introduction to Industrial Management (Humanities III)	3	0	0	3
6	Professional Elective	PEC-IT 501A/B/C/D	(Elective-I) Theory of	3	0	0	3

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	courses		Computation/Artificial Intelligence/ Advanced Computer Architecture/ Computer Graphics				
7	Mandatory Courses	MC- CS501	Constitution of India/ Essence of Indian Knowledge Tradition	-	-	-	0
Practical							
8	Professional Core Courses	ESC- 591	Software Engineering		0	4	2
9	Professional Core Courses	PCC- CS592	Operating Systems		0	4	2
10	Professional Core Courses	PCC- CS593	Object Oriented Programming		0	4	2
Total credits							24

Semester VI (Third year)							
Sl. No.	Type of course	Code	Course Title	Hours per week			Credits
				L	T	P	
1	Professional Core Courses	PCC- CS601	Database Management Systems	3	0	0	3
2	Professional Core Courses	PCC- CS602	Computer Networks	3	0	0	3
3	Professional Elective courses	PEC- IT601A/B/C/D	(Elective-II) Advanced Algorithms/ Distributed Systems/ Signals & Systems / Image Processing	3	0	0	3
4	Professional Elective courses	PEC- IT602A/B/C/D	(Elective-III) Parallel and Distributed Algorithms/ Data Warehousing & Data Mining/Human Computer Interaction/Pattern Recognition	3	0	0	3

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5	Open Elective courses	OEC-IT601A/B	(Open Elective-) Numerical Methods/ Human Resource Development and Organizational Behavior	3	0	0	3
6	Project	PROJ-CS601	Research Methodology	3	0	0	3
Practical							
7	Professional Core Courses	PCC-CS691	Database Management Systems	0	0	4	2
8	Professional Core Courses	PCC-CS692	Computer Networks	0	0	4	2
Total credits							22

Semester VII (Fourth year]							
Sl. No.	Type of course	Code	Course Title	Hours per week			Credits
				L	T	P	
1	Professional Elective courses	PEC-CS701A/B/C/D/E	(Elective-IV) Quantum Computing/ Cloud Computing/ Digital Signal Processing/Multi-agent Intelligent Systems/Machine learning	3	0	0	3
2	Professional Elective courses	PEC-CS702A/B/C/D/E	(Elective-V) Neural Networks and Deep Learning/ Soft Computing/ Ad-Hoc and Sensor Networks/Information Theory and Coding/Cyber Security	3	0	0	3
3	Open Elective courses	OEC-CS701A/B/C	(Open Elective-II) Operations Research/Multimedia Systems/Introduction to Philosophical Thoughts	3	0	0	3
4	Humanities & Social	HSM	Project Management and	2	1	0	3

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	Sciences including Management courses	C 701	Entrepreneurship				
5	Project	PROJ-CS781	Project-II	0	0	12	6
			Total credits				18

Semester VIII (Fourth year)							
[Summer Industry Internship]							
Sl. No.	Type of course	Code	Course Title	Hours per week			Credits
				L	T	P	
1	Professional Elective courses	PEC-CS801A/B/C/D/E	(Elective-VI) Signals and Networks/Cryptography & Network Security/Speech and Natural Language Processing/Web and Internet Technology/Internet of Things	3	0	0	3
2	Open Elective courses	OEC-CS801A/B/C/D/E	Open Elective-III Big Data Analysis/Cyber Law and Ethics/ Mobile Computing/Robotics/Soft Skill & Interpersonal Communication	3	0	0	3
3	Open Elective courses	OEC-CS802A/B/C	(Open Elective-IV) E-Commerce and ERP/Micro-electronics and VLSI Design/Economic Policies in India	3	0	0	3
4	Project	PROJ-CS881	Project-III	0	0	12	6
			Total credits				15

Syllabus for B.Tech(Electronics & Communication Engineering) Up to Fourth Year

Revised Syllabus of B.Tech ECE (for the students who were admitted in Academic Session 2010-2011)



ECE SECOND YEAR: THIRD SEMESTER

A. THEORY							
Sl.No.	Field	Theory	Contact Hours/Week				Cr. Points
			L	T	P	Total	
1	M(CS)301	Numerical Methods	2	1	0	3	2
2	M302	Mathematics-III	3	1	0	4	4
3	EC301	1. Circuit Theory & Networks	3	1	0	4	4
4	EC302	2. Solid State Device	3	0	0	3	3
5	EC303	1. Signals & Systems	3	0	0	3	3
	EC304	2. Analog Electronic Circuits	3	1	0	4	4
6							
Total of Theory						21	20
B. PRACTICAL							
7	M(CS)391	Numerical Lab	0	0	2	2	1
8	EC391	Circuit Theory & Network Lab	0	0	3	3	2
9	EC392	Solid State Devices	0	0	3	3	2
10	EC393	1. Signal System Lab	0	0	3	3	2
11	EC394	2. Analog Electronic Circuits Lab	0	0	3	3	2
Total of Practical						14	9
Total of Semester						35	29

ECE SECOND YEAR: FOURTH SEMESTER

A. THEORY							
Sl.No.	Field	Theory	Contact Hours/Week				Cr. Points
			L	T	P	Total	
1	HU401	Values & Ethics in Profession	3	0	0	3	3
2	PH401	Physics-II	3	1	0	4	4
3	CH401	Basic Environmental Engineering & Elementary Biology	2+1	0	0	3	3
4	EC401	1. EM Theory & Transmission Lines	3	1	0	4	4
5	EC402	2. Digital Electronic & Integrated Circuits	3	1	0	4	4
Total of Theory						18	18
B. PRACTICAL							
6	HU481	Technical Report Writing & Language Lab Practice	0	0	3	3	2
7	PH491	Physics-II Lab	0	0	3	3	2
8	EC491	1. EM Theory & Tx Lines Lab	0	0	3	3	2
9	EC492	2. Digital Electronic & Integrated Circuits Lab	0	0	3	3	2
Total of Practical						12	8
Total of Semester						30	26

Syllabus for B.Tech(Electronics & Communication Engineering) Up to Fourth Year

Revised Syllabus of B.Tech ECE (for the students who were admitted in Academic Session 2010-2011)



Third Year - Fifth Semester

A. THEORY							
Sl.No	Paper Code	Theory	Contact Hours/Week				Cr. Pts
			L	T	P	Total	
1	HU-501	Economics for Engineers	3	0	0	3	3
2	EC-501	Analog Communication	3	1	0	4	4
3	EC-502	Microprocessors & Microcontrollers	3	1	0	4	4
4	EC-503	Control System	3	0	0	3	3
5	F. E.- EC 504A EC-504B	Computer Architecture Data structure & C	3	1	0	4	3/4
Total of Theory						18	18
B. PRACTICAL							
6	EC-591	Analog Communication*	0	0	3	3	2
7	EC-592	Microprocessors & Microcontrollers*	0	0	3	3	2
8	EC -593	Control System*	0	0	3	3	2
9	F.E. EC-594A EC-594B	Computer Architecture Data structure & C	0	0	3	3	2
Total of Practical						12	8
Total of Semester						30	26

Laboratories to have both physical experiments and simulation. Only virtual laboratory is not accepted

Third Year - Sixth Semester

A. THEORY							
Sl.No.	Field	Theory	Contact Hours/Week				Cr. Pts
			L	T	P	Total	
1	HU-601	Principles of Management	2	0	0	2	2
2	EC601	Digital Communications	3	0	0	3	3
3	EC602	Digital Signal Processing	3	0	0	3	3
4	EC 603	Telecommunication System	3	0	0	3	3
5	(No Lab) EC-604A EC-604B	Antenna Theory & Propagation Information Theory & Coding	3	0	0	3	3
6	(With Lab) EC-605A EC-605B EC-605C	Object Oriented Programming (IT) Programming Language (CSE) Electronic Measurement & Instrumentation(EI)	3	0	0	3	3
Total of Theory						17	17
B. PRACTICAL							
8	EC691	Digital Communications	0	0	3	3	2
9	EC 692	Digital Signal Processing	0	0	3	3	2
10	F.E. EC-695A EC-695B EC-695C	Object Oriented Programming (IT) Programming Language (CSE) Electronic Measurement & Instrumentation	0	0	3	3	2
11	EC-681	Seminar	0	0	3	3	2
Total of Practical						12	8
Total of Semester						29	25



Proposed

Fourth Year - Seventh Semester

A. THEORY							
Sl. No.	Field	Theory Name of Paper	Contact Hours/Week				Cr. Pts
			L	T	P	Total	
1	EC701	Wireless Communication & N/W	3	0	0	3	3
2	EC702	Microelectronics & VLSI Designs	3	0	0	3	3
3	EC703 (With Lab)	A. RF & Microwave Engg. B. Optical Communication & N/W C. Computer Networks D. FPGA & Reconfigurable Computing	3	0	0	3	3
4	EC704 (No Lab)	A. Radar Engg B. Embedded Systems C. Biomedical Instrumentation	3	0	0	3	3
5	F. E. EC705	A. Artificial Intelligence (CSE) B. Robotics (CSE) C. Data Base Management System D. Power Electronics	3	0	0	3	3
Total of Theory						15	15
B. PRACTICAL							
Name of Paper							
6	HU781	Group Discussion	0	0	3	3	2
7	EC792	VLSI Design Lab	0	0	3	3	2
8	EC793	A. RF & Microwave Engg. Lab B. Optical Communication & N/W Lab C. Computer Networks Lab D. FPGA & Reconfigurable Computing lab	0	0	3	3	2
9	F.E. EC795	A. Artificial Intelligence Lab(CSE) B. Robotics lab(CSE) C. Data Base Management System Lab (CSE) D. Power Electronics Lab(EE)	0	0	3	3	2
10	EC781	Industrial training	4 wks during 6 th -7 th Sem-break				2
11	EC782	Project part 1				3	2
Total of Practical						15	12
Total of Semester						30	27

Fourth Year - Eighth Semester

A. THEORY							
Sl. No.	Field	Theory Paper Name	Contact Hours/Week				Cr. Pts
			L	T	P	Total	
1	HU801A	Organisational Behaviour	2	0	0	2	2
3	EC801 (No Lab)	A. Smart Antenna B. Digital Image Processing C. Satellite Communication & Remote Sensing	3	0	0	3	3
	EC802 (No Lab)	A. Neural N/W & Applications (CSE) B. Material Sc. & Engg (Mat. Sc) C. Renewable Energy (EE) D. Audio & Speech Processing (CSE)	3	0	0	3	3
Total of Theory						8	8
B. PRACTICAL							
	EC881	Design Lab / Industrial problem related practical training	0	0	6	6	4
	EC882	Project part-2	0	0	12	12	6
	EC893	Grand viva					3
Total of Practical						18	13
Total of Semester						26	21

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Curriculum Structure

2nd Year: 3rd Semester

A. Theory							
Sl No.	Field	Theory	Contact Hours/week				Credit Points
			L	T	P	Total	
1.	EC301	Electronic Devices	3	0	0	3	3
2.	EC302	Digital System Design	3	0	0	3	3
3.	EC303	Signals and Systems	3	0	0	3	3
4.	EC304	Network Theory	3	0	0	3	3
5.	ES-CS301	Data Structure & Algorithm (ES)	3	0	0	3	3
6.	BS-M301	Probability & Statistics(BS)	3	0	0	3	3
Total Theory						18	18
B. Practical							
7.	EC391	Electronic Devices Lab.	0	0	2	2	1
8.	EC392	Digital System Design Lab.	0	0	2	2	1
9.	ES-CS391	Data Structure Lab(ES)	0	0	2	2	1
Total Practical						6	3
Total Credits						24	21
C. Non Credit Course							
	MC381	Environmental Science	0	0	2	2	0

2ndYear: 4th Semester

A. Theory							
Sl No.	Field	Theory	Contact Hours/week				Credit Points
			L	T	P	Total	
1.	EC401	Analog Communication	3	0	0	3	3
2.	EC402	Analog Electronic Circuits	3	0	0	3	3
3.	EC403	Microprocessor & Microcontrollers	3	0	0	3	3
4.	ES-CS401	Design and Analysis of Algorithm(ES)	3	0	0	3	3
5.	BS-M401	Numerical Methods(BS)	2	0	0	2	2
6.	BS-B401	Biology for Engineers	2	1	0	3	3
Total Theory						14	17
B. Practical							
7.	EC491	Analog Communication Lab	0	0	2	2	1
8.	EC492	Analog Electronic Circuits Lab.	0	0	2	2	1
9.	EC493	Microprocessor & Microcontrollers Lab	0	0	2	2	1
10.	BS-M(CS)491	Numerical Methods Lab	0	0	2	2	1
11.	HS-HU481	Soft Skill Development Lab	0	0	2	2	1
Total Practical						10	5
Total Credits						24	22

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3rd Year: 5th Semester

A. Theory							
Sl No.	Field	Theory	Contact Hours/week				Credit Points
			L	T	P	Total	
1.	EC501	Electromagnetic Waves	3	0	0	3	3
2.	EC502	Computer Architecture	3	0	0	3	3
3.	EC503	Digital Communication & Stochastic Process	3	1	0	4	3.5
4.	EC504	Digital Signal Processing	3	0	0	3	3
5.	PE-EC505 A/B/C/D	Program Elective I	3	0	0	3	3
6.	OE-EC506 A/B/C	Open Elective I	3	0	0	3	3
Total Theory						19	18.5
B. Practical							
7.	EC591	Electromagnetic Wave Lab	0	0	2	2	1
8.	EC592	Digital Communication Lab.	0	0	2	2	1
9.	EC593	Digital Signal Processing Lab.	0	0	2	2	1
Total Practical						6	3
C Sessional							
10	MC-HU581	Effective Technical Communication	0	0	3	3	0
Total Credits						28	21.5

3rd Year: 6th Semester

C. Theory							
Sl No.	Field	Theory	Contact Hours/week				Credit Points
			L	T	P	Total	
1.	EC601	Control System & Instrumentation	3	0	0	3	3
2.	EC602	Computer Network	3	0	0	3	3
3.	PE-EC603	Program Elective II	3	0	0	3	3
4.	OE-EC604	Open Elective II	3	0	0	3	3
5.	HS-HU601	Economics for Engineers	3	0	0	3	3
Total Theory						15	15
D. Practical							
6.	EC692	Computer Network Lab.	0	0	2	2	1
7.	EC691	Control System and Instrumentation Lab.	0	0	2	2	1
8.	EC681	Mini Project/ Electronic Design Workshop	0	0	4	4	2
Total Practical						8	4
Total Credits						23	19
9	MC681	Universal Human Values	2	0	0	2	0

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4th Year: 7th Semester

D. Theory							
Sl No.	Field	Theory	Contact Hours/week				Credit Points
			L	T	P	Total	
1.	PE-EC701	Program Elective -3	3	0	0	3	3
2.	PE-EC702	Program Elective -4	3	0	0	3	3
3.	PE-EC703	Program Elective -5	3	0	0	3	3
4.	OE-EC704	Open Elective - 3	3	0	0	3	3
5.	HS-HU701	Principles of Management	2	0	0	2	2
Total Theory						14	14
E. Practical							
6	EC781	Industrial Training	During Semester Break(6 th & 7 th)				1
7.	EC782	Project Stage - I	0	0	8	8	4
Total Practical						8	5
Total Credits						22	19

4th Year: 8th Semester

E. Theory							
Sl No.	Field	Theory	Contact Hours/week				Credit Points
			L	T	P	Total	
1.	PE-EC801	Program Elective - 6	3	0	0	3	3
2.	PE-EC802	Program Elective - 7	3	0	0	3	3
3.	OE-EC803	Open Elective - 4	3	0	0	3	3
4.	OE-EC804	Open Elective - 5	3	0	0	3	3
Total Theory						12	12
F. Practical							
5.	EC881	Project Stage - II	0	0	15	15	7.5
6.	EC891	Grand Viva					1.5
Total Practical						15	9
Total Contact /Credits						27	21

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Professional Electives

Sl No.	Course Code	Course Title	Hours/week			Credits	Semester
			L	T	P		
1	PE-EC505A	Nano Electronics	3	0	0	3	V
2	PE-EC505B	Speech and Audio Processing	3	0	0	3	
3	PE-EC505C	Power Electronics	3	0	0	3	
4	PE-EC505D	Scientific Computing	3	0	0	3	
5	PE-EC603A	Introduction to MEMS	3	0	0	3	VI
6	PE-EC603B	Bio-Medical Electronics	3	0	0	3	
7	PE-EC603C	CMOS VLSI Design	3	0	0	3	
8	PE-EC603D	Information Theory & Coding	3	0	0	3	
9	PE-EC701A	Microwave Theory and Techniques	3	0	0	3	VII
10	PE-EC701B	Satellite Communication	3	0	0	3	
11	PE-EC701C	Mobile Communication and Networks	3	0	0	3	
12	PE-EC702A	Adaptive Signal Processing	3	0	0	3	
13	PE-EC702B	Digital Image and Video Processing	3	0	0	3	
14	PE-EC702C	Neural Network and Fuzzy Logic Control	3	0	0	3	
15	PE-EC703A	Embedded System	3	0	0	3	
16	PE-EC703B	Wireless Sensor Networks	3	0	0	3	
17	PE-EC703C	Wavelet Transforms	3	0	0	3	VIII
18	PE-EC801A	Antennas and Propagation	3	0	0	3	
19	PE-EC801B	Fibre Optic Communication	3	0	0	3	
20	PE-EC801C	Error Correcting Codes	3	0	0	3	
21	PE-EC802A	Mixed Signal Design	3	0	0	3	
22	PE-EC802B	Industrial Automation and Control	3	0	0	3	
23	PE-EC802C	VLSI Design Automation	3	0	0	3	

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List of Open Elective

Sl No.	Course Code	Course Title	Hours/week			Credits	Semester
			L	T	P		
1	OE-EC506A	Soft Skill and Interpersonal Communication	3	0	0	3	V
2	OE-EC506B	Cyber Law & Intellectual Property Rights	3	0	0	3	
3	OE-EC506C	Human Resource Management	3	0	0	3	
4	OE-EC604A	Electronic Measurements and Measuring Instruments	3	0	0	3	VI
5	OE-EC604B	Operating System	3	0	0	3	
6	OE-EC604C	Object Oriented Programming	3	0	0	3	
7	OE-EC704A	Web Technology	3	0	0	3	VII
8	OE-EC704B	Optimisation Technique	3	0	0	3	
9	OE-EC704C	Entrepreneurship	3	0	0	3	
10	OE-EC803A	Internet of Things(IoT)	3	0	0	3	VIII
11	OE-EC803B	Big Data Analysis	3	0	0	3	
12	OE-EC803C	Cyber Security	3	0	0	3	
13	OE-EC804A	Artificial Intelligence	3	0	0	3	
14	OE-EC804B	Microwave Integrated Circuits	3	0	0	3	
15	OE-EC804C	Organisational Behaviour	3	0	0	3	

Syllabus for B.Tech(Electrical Engineering) Up to Fourth Year

Revised Syllabus of B.Tech EE (for the students who were admitted in Academic Session 2010-2011)



3rd Semester

Theory:

Sl. No.	CODE	Paper	Contacts periods Per weeks			Total Contact Hrs	Credits
			L	T	P		
1	M (CS) 301	Numerical Methods	2	1	0	3	2
2	M302	Mathematics-III	3	1	0	4	4
3	EC(EE)301	Analog Electronic circuits	3	0	0	3	3
4	EC(EE)302	Digital Electronic circuit	3	0	0	3	3
5	EE-301	Electric Circuit theory	3	1	0	4	4
6	EE-302	Field theory	3	1	0	4	4
						21	20

Practical / Sessional:

Sl. No.	CODE	Paper	Contacts periods Per weeks			Total Contact Hrs	Credits
			L	T	P		
1	EC(EE)391	Analog & Digital Electronic circuit	0	0	3	3	2
2	M (CS)391	Numerical Methods	0	0	2	2	1
3	EE-391	Electric Circuit Theory	0	0	3	3	2
4	HU-381	TECHNICAL REPORT WRITING & LANGUAGE LABORATORY PRACTICE	0	0	3	3	2
Total of Practical / Sessional						11	7
TOTAL OF SEMESTER:						32	27

4th Semester

Theory:

Sl. No.	CODE	Paper	Contacts periods Per weeks			Total Contact Hrs	Credits
			L	T	P		
1	HU-401	Values and Ethics in Profession	3	0	0	3	3
2	PH(EE)-401	Physics-II	3	1	0	4	4
3	ME(EE)411	Thermal Power Engineering	3	0	0	3	3
4	CH-401	Basic Environmental Engineering & Elementary Biology	3	0	0	3	3
5	EE-401	Electric Machine-I	3	1	0	4	4
6	EE-402	Electrical & Electronic measurement	3	0	0	3	3
						20	20

Practical / Sessional:

Sl. No.	CODE	Paper	Contacts periods Per weeks			Total Contact Hrs	Credits
			L	T	P		
1	PH(EE)-491	Physics-II	0	0	3	3	2
2	ME(EE)481	Thermal power Engineering Lab	0	0	3	3	2
3	EE-491	Electric Machine-I	0	0	3	3	2
4	EE-492	Electrical & Electronic measurement	0	0	3	3	2
Total of Practical / Sessional						12	8
TOTAL OF SEMESTER:						32	28

Syllabus for B.Tech(Electrical Engineering) Up to Fourth Year

Revised Syllabus of B.Tech EE (for the students who were admitted in Academic Session 2010-2011)



5th Semester

Theory:

Sl. No.	CODE	Paper	Contacts periods Per weeks			Total Contact Hrs	Credits
			L	T	P		
1	HU-501	Economics for Engineers	3	0	0	3	3
2	EE-501	Electric machine-II	3	1	0	4	4
3	EE-502	Power system-I	3	1	0	4	4
4	EE-503	Control system-I	3	1	0	4	4
5	EE-504	A. Data structure & algorithm B. Computer Organization C. Micro Processor & Micro controller	3	0	0	3	3
						18	18

Practical / Sessional:

Sl. No.	CODE	Paper	Contacts periods Per weeks			Total Contact Hrs	Credits
			L	T	P		
1	EE-591	Electric machine-II	0	0	3	3	2
2	EE-592	Power system-I	0	0	3	3	2
3	EE-593	Control system-I	0	0	3	3	2
4	EE-594	a. Data structure & algorithm b. Computer Organization c. Micro Processor & Microcontroller	0	0	3	3	2
5	EE-581	Seminar	0	0	3	3	2
		Total of Practical / Sessional				15	10
TOTAL OF SEMESTER:						33	28

EE 6th Semester

Theory:

Sl. No.	CODE	Paper	Contact periods Per week			Total Contact Hrs	Credits
			L	T	P		
1	HU-601	Principle of Management	2	0	0	2	2
2	EE-601	Control System-II	3	1	0	4	4
3	EE-602	Power System-II	3	1	0	4	4
4	EE-603	Power Electronics	3	1	0	4	4
5	EE-604	a. Software Engineering b. Data Base Management System c. Object Oriented Programming d. Embedded Systems.	3	0	0	3	3
6	EE-605	a. Digital Signal Processing b. Communication Engineering. c. VLSI & Microelectronics	3	0		3	3
						20	20

Practical / Sessional:

Sl. No.	CODE	Paper	Contact period Per week			Total Contact Hrs	Credits
			L	T	P		
1	EE-691	Control System-II	0	0	3	3	2
2	EE-692	Power System-II	0	0	3	3	2
3	EE-693	Power Electronics	0	0	3	3	2
4	EE-694	a. Software Engineering b. Data Base Management System c. Object Oriented Programming d. Embedded Systems	0	0	3	3	2
		Total of Practical / Sessional				12	8
TOTAL OF SEMESTER:						32	28

Industrial training conducted after 6th Semester.

Syllabus for B.Tech(Electrical Engineering) Up to Fourth Year

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7th Semester

Theory:

Sl. No.	CODE	Paper	Contacts periods Per weeks			Total Contact Hrs	Credits
			L	T	P		
1	EE-701	Electric drive	4	0	0	4	4
2	EE-702	Utilization of Electric power	3	1	0	4	4
3	EE-703	A. Power system-III B. Control system-III C. Electric Machine-III	3	0	0	3	3
4	EE-704	A. High voltage Engineering B. Power Plant Engineering C. Power generation and economics D. Renewable & Non conventional Energy	3	0	0	3	3
5	EE-705	A. Computer Network B. AI & Soft Computing C. Digital Communication D. Digital Image Processing	3	0	0	3	3
						17	17

Practical / Sessional:

Sl. No.	CODE	Paper	Contacts periods Per weeks			Total Contact Hrs	Credits
			L	T	P		
1	EE-781	Seminar on industrial training	0	0	3	3	2
2	EE-791	Electric Drive	0	0	3	3	2
3	EE-792	A. Computer Network B. AI & Soft Computing C. Digital Communication D. Digital Image Processing	0	0	3	3	2
4	EE-782	Electrical system design-I	0	0	3	3	2
5	EE-783	Project-I	0	0	3	3	2
Total of Practical / Sessional						9	10
TOTAL OF SEMESTER:			18	02	09	29	27

8th Semester

Theory:

Sl. No.	CODE	Paper	Contacts periods Per weeks			Total Contact Hrs	Credits
			L	T	P		
1	HU-801A	Organizational Behaviour	2	0	0	2	2
2	EE-801	A. HVDC transmission B. Illumination Engineering C. Energy management & audit D. DIGITAL SPEECH SIGNAL PROCESSING	3	0	0	3	3
3	EE-802	A. Power plant instrumentation & Control B. Sensors & Transducers C. Biomedical Instrumentation D. Process control	3	0	0	3	3
TOTAL						08	08

Practical / Sessional:

Sl. No.	CODE	Paper	Contacts periods Per weeks			Total Contact Hrs	Credits
			L	T	P		
1	EE-881	Project	0	0	12	12	6
2	EE-882	Electrical system Lab-II	0	0	6	6	4
3	EE-883	Grand Viva					3
Total of Practical / Sessional						18	13
TOTAL SEMESTER						26	21

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3rd Semester

Theory:

Sl. No.	CODE	Paper	Contact periods Per week			Total Contact Hrs	Credits
			L	T	P		
1	PC-EE 301	Electric Circuit Theory	3	1	0	4	4
2	PC-EE 302	Analog Electronics	3	0	0	3	3
3	PC-EE 303	Electromagnetic field theory	3	0	0	3	3
4	ES-ME 301	Engineering Mechanics	3	0	0	3	3
5	BS-M 301	Mathematics-III	3	0	0	3	3
6	BS-EE301	Biology for Engineers	3	0	0	3	3
7	MC-EE 301	Indian Constitution	3	0	0	3	0
		TOTAL OF SEMESTER:				22	19

Practical / Sessional:

Sl. No.	CODE	Paper	Contact periods Per week			Total Contact Hrs	Credits
			L	T	P		
1	PC-EE 391	Electric Circuit Theory Laboratory	0	0	2	2	1
2	PC-EE 392	Analog Electronics laboratory	0	0	2	2	1
3	PC-CS 391	Numerical Methods laboratory	0	0	2	2	1
		Total of Practical / Sessional				06	3
TOTAL OF SEMESTER:						28	22

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4th Semester

Theory:

Sl. No.	CODE	Paper	Contact periods Per week			Total Contact Hrs	Credits
			L	T	P		
1	PC-EE 401	Electric machine-I	3	0	0	3	3
2	PC-EE 402	Digital Electronic	3	0	0	3	3
3	PC-EE 403	Electrical and Electronics Measurement	3	0	0	3	3
4	ES-EE 401	Thermal Power Engineering	3	0	0	3	3
5	HM-EE401	Values and Ethics in profession	3	0	0	3	3
6	MC- EE401	Environmental Science	3	0	0	3	0
TOTAL OF SEMESTER:						18	15

Practical / Sessional:

Sl. No.	CODE	Paper	Contact periods Per week			Total Contact Hrs	Credits
			L	T	P		
1	PC-EE 491	Electric Machine-I laboratory	0	0	2	2	1
2	PC-EE 492	Digital Electronics laboratory	0	0	2	2	1
3	PC-EE 493	Electrical and electronic measurement laboratory	0	0	2	2	1
4	ES-ME 491	Thermal Power Engineering laboratory	0		2	2	1
Total of Practical / Sessional						08	4
TOTAL OF SEMESTER:						26	19

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5th Semester

Theory:

Sl. No.	CODE	Paper	Contact periods Per week			Total Contact Hrs	Credits
			L	T	P		
1	PC-EE 501	Electric machine-II	3	0	0	3	3
2	PC-EE 502	Power System-I	3	0	0	3	3
3	PC-EE 503	Control system	3	0	0	3	3
4	PC-EE 504	Power Electronics	3	0	0	3	3
5	PE-EE 501 A/B/C	Elective I	3	0	0	3	3
6	OE 501 A/B/C	Elective II(Open Elective)	3	0	0	3	3
TOTAL OF SEMESTER:						18	18

Practical / Sessional:

Sl. No.	CODE	Paper	Contact periods Per week			Total Contact Hrs	Credits
			L	T	P		
1	PC-EE 591	Electric Machine-II laboratory	0	0	2	2	1
2	PC-EE 592	Power system-I laboratory	0	0	2	2	1
3	PC-EE 593	Control system laboratory	0	0	2	2	1
4	PC-EE 594	Power Electronics laboratory	0	0	2	2	1
		Total of Practical / Sessional				08	4
TOTAL OF SEMESTER:						26	22

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6th Semester

Theory:

Sl. No.	CODE	Paper	Contact periods Per week			Total Contact Hrs	Credits
			L	T	P		
1	PC-EE 601	Power System-II	3		0	3	3
2	PC-EE-602	Micro processor & micro controller	3	0	0	3	3
3	PE-EE 601A/B/C	Digital control system/HVDC Transmission/Electrical Machine Design	3	0	0	3	3
4	PE-EE 602A/B/C	Electrical And Hybrid Vehicle/ Power Quality And Facts/ Industrial Electrical Systems	3	0	0	3	3
5	OE-EE 601A/B/C	Digital Signal Processing/ Communication Engineering/ VLSI And Micro Electronics	3	0	0	3	3
6	HM-EE-601	Economics For Engineers	3	0	0	3	3
TOTAL OF SEMESTER:						18	18

Practical / Sessional:

Sl. No.	CODE	Paper	Contact periods Per week			Total Contact Hrs	Credits
			L	T	P		
1	PC-EE 691	Power system-II laboratory	0	0	2	2	1
2	PC-EE692	Micro processor & microcontroller laboratory	0	0	2	2	1
2	PC-EE 681	Electrical & Electronic design laboratory	1	0	4	5	3
		Total of Practical / Sessional				09	05
TOTAL OF SEMESTER:						27	23

Summer Internship of 3-week duration after 6th semester. Students will be assessed based on submission of report on internship and presentation in a seminar in 7th semester

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7th Semester

Theory:

Sl. No.	CODE	Paper	Contact periods Per week			Total Contact Hrs	Credits
			L	T	P		
1	PC-EE 701	Electric Drive	3	0	0	3	3
2	PE-EE 701		3	0	0	3	3
3	OE-701		3	0	0	3	3
4	OE-702		3		0	3	3
5	HM-701		3	0	0	3	3
		TOTAL OF SEMESTER:				15	15

Practical / Sessional:

Sl. No.	CODE	Paper	Contact periods Per week			Total Contact Hrs	Credits
			L	T	P		
1	PC-EE 791	Electric Drive laboratory	0	0	2	2	1
2	PW-EE 781	Project stage-I	0	0	4	4	2
3	PW-EE782	Seminar	0	0	0	0	1
		Total of Practical / Sessional				06	04
		TOTAL OF SEMESTER:				21	19

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8th Semester

Theory:

Sl. No.	CODE	Paper	Contact periods Per week			Total Contact Hrs	Credits
			L	T	P		
1	PC-EE 801	Utilization of Electric Power	3	0	0	3	3
2	PE- EE 801		3	0	0	3	3
3	OE-801		3	0	0	3	3
		TOTAL OF SEMESTER:				09	09

Practical / Sessional:

Sl. No.	CODE	Paper	Contact periods Per week			Total Contact Hrs	Credits
			L	T	P		
1	PW-EE 881	Project stage-II	0	0	16	16	8
		Total of Practical / Sessional				16	08
		TOTAL OF SEMESTER:				25	17

Syllabus for B.Tech(Information Technology) Up to Fourth Year

Revised Syllabus of B.Tech IT (for the students who were admitted in Academic Session 2010-2011)



IT

Second Year - Third Semester

A. THEORY							
Sl.No.	Field	Theory	Contact Hours/Week				Cr. Points
			L	T	P	Total	
1	HU301	Values & Ethics in Profession	3	0	0	3	3
2	PH301	Physics-2	3	1	0	4	4
3	CH301	Basic Environmental Engineering & Elementary Biology;	3	0	0	3	3
4	CS301	Analog & Digital Electronics	3	0	0	3	3
5	CS302	Data Structure & Algorithm	3	1	0	4	4
6	CS303	Computer Organisation	3	1	0	4	4
Total of Theory						21	21
B. PRACTICAL							
7	PH391	Physics-2	0	0	3	3	2
8	CS391	Analog & Digital Electronics	0	0	3	3	2
9	CS392	Data Structure & Algorithm	0	0	3	3	2
10	CS393	Computer Organisation	0	0	3	3	2
Total of Practical						12	8
Total of Semester						33	29

Second Year - Fourth Semester

A. THEORY							
Sl.No.	Field	Theory	Contact Hours/Week				Cr. Points
			L	T	P	Total	
1	M(CS)401	Numerical Methods	2	1	0	3	2
2	M401	Mathematics-3	3	1	0	4	4
3	CS401	Communication Engg & Coding Theory	2	0	0	3	3
4	CS402	Formal Language & Automata Theory	3	1	0	4	4
5	IT401	Object Oriented Programming & UML	3	1	0	4	4
Total of Theory						18	17
B. PRACTICAL							
6	HU481	Technical Report Writing & Language Lab Practice	0	0	3	3	2
7	M(CS)491	Numerical Methods	0	0	2	2	1
8	CS491	Communication Engg & Coding Theory	0	0	3	3	2
9	CS492	Software Tools	0	0	3	3	2
10	IT491	Object Oriented Programming & UML (IT)	0	0	3	3	2
Total of Practical						14	9
Total of Semester						32	26

Syllabus for B.Tech(Information Technology) Up to Fourth Year

Revised Syllabus of B.Tech IT (for the students who were admitted in Academic Session 2010-2011)



Third Year - Fifth Semester

A. THEORY							
Sl.No	Field	Theory	Contact Hours/Week				Cr. Pts
			L	T	P	Total	
1	HU501	Economics for Engineers	3	0	0	3	3
2	IT501	Design & Analysis of Algorithm	3	1	0	4	4
3	IT502	Computer Architecture	3	1	0	4	4
4	IT503	Operating System	3	0	0	3	3
5	F. E.						
	IT504A	Circuit Theory & Network (EE)					
	IT504B	Data Communication (ECE)					
	IT504C	Digital Signal Processing (ECE)					
	IT504D	Operation Research (M)					
	IT504E	Microprocessors & Microcontrollers(CSE)	3	0/1	0	3/4	3/4
IT504F		Programming Practices using C++					
Total of Theory						17/18	17-18
B. PRACTICAL							
6	IT591	Algorithm Lab	0	0	3	3	2
7	IT592	Computer Architecture	0	0	3	3	2
8	IT593	Operating System Lab	0	0	3	3	2
9	F.E.		0	0	3	3	2
	IT594A	A. Circuit Theory & Network (EE)					
	IT594B	B. Data Communication (ECE)					
	IT594C	C. Digital Signal Processing (ECE)					
	IT594D	D. Operation Research (M)					
	IT594E	E. Microprocessors & Microcontrollers(CSE)					
IT594F	F. Programming Practices using C++						
Total of Practical						12	8
Total of Semester						29/30	25-26

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Third Year - Sixth Semester

A. THEORY							
Sl.No.	Field	Theory	Contact Hours/Week				Cr. Pts
			L	T	P	Total	
1	HU601	Principles of Management	2	0	0	2	2
2	IT.601	Data Base Management System	3	0	0	3	3
3	IT602	Computer Networking	3	0	0	3	3
4	IT603	Software Engg	3	0	0	3	3
5	P.E. IT604A IT604B IT604C IT604D	Information Theory & Coding Computer Graphics Pattern Recognition ERP	3	0	0	3	3
6	F. E. IT605A IT605B IT605C IT605D	Discrete Mathematics (M) Human Resource Management (HSS) Compiler Design (CSE) Artificial Intelligence (CSE)	3	0/1	0	3/4	3/4
Total of Theory						17/18	17-18
B. PRACTICAL							
7	IT691	Data Base Management System	0	0	3	3	2
8	IT692	Lab	0	0	3	3	2
9	IT693	Computer Networking Software Engineering	0	0	3	3	2
10	IT681	Seminar	0	0	3	3	2
Total of Practical						12	8
Total of Semester						29/30	25-26

Syllabus for B.Tech(Information Technology) Up to Fourth Year

Revised Syllabus of B.Tech IT (for the students who were admitted in Academic Session 2010-2011)



Fourth Year - Seventh Semester

2.1.1.1.1. A. THEORY								
Sl. No.	Field	Theory	Contact Hours/Week				Cr. Pts	
			L	T	P	Total		
1	IT701	Internet Technology	3	0	0	3	3	
2	IT702	Multimedia	3	0	0	3	3	
3	IT703	A. E-Commerce B. Soft Computing	3	0	0	3	3	
4	IT704	C. Image Processing A. Distributed Operating System B. Cloud Computing C. Data Warehousing & Data Mining D. Sensor Networks E. Mobile Computing	3	0	0	3	3	
5	IT705	A. Bio Informatics (BI) B. Control System (EE) C. Modelling & Simulation (M) D. Microelectronics & VLSI Design(ECE) E. Advanced Data Communication & Coding	3	0	0	3	3	
Total of Theory						15	15	
B. PRACTICAL								
6	HU781	Group Discussion	0	0	3	3	2	
7	IT791	Internet Technology	0	0	3	3	2	
8	IT792	Multimedia	0	0	3	3	2	
9	IT793	A. E-Commerce B. Soft Computing C. Image Processing	0	0	3	3	2	
10	IT794	Industrial training	4 wks during 6 th -7 th Sem-break					2
11	IT795	Project-1				3	2	
Total of Practical						15	12	
Total of Semester						30	27	

Syllabus for B.Tech(Information Technology) Up to Fourth Year

Revised Syllabus of B.Tech IT (for the students who were admitted in Academic Session 2010-2011)



Fourth Year - Eighth Semester

2.1.1.1.2. A. THEORY								
Sl. No.	Field	Theory	Contact Hours/Week				Cr. Pts	
			L	T	P	Total		
1	HU801A HU801B	A. Organisational Behaviour B. Project Management	2	0	0	2	2	
2	IT801	A. Advanced Computer Architecture B. Parallel Computing C. Natural Language Processing D. Cryptography & Network Security)	3	0	0	3	3	
3	IT802	A. Technology Management (HSS) B. Cyber Law & Security Policy (HSS) C. Optical Networking (ECE) D. Low Power Circuits & Systems (ECE) E. Business Analytics(CSE) F. Robotics(EE & ME	3	0	0	3	3	
Total of Theory						8	8	
2.1.1.1.3. B. PRACTICAL								
4	IT891	Design Lab / Industrial problem related practical training	0	0	6	6	4	
5	IT892	Project-2	0	0	12	12	6	
6	IT893	Grand Viva					3	
Total of Practical						18	13	
Total of Semester						26	21	

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Curriculum Structure

Semester III (Second year)							
Sl. No.	Type of course	Code	Course Title	Hours per week			Credits
				L	T	P	
Theory							
1	Engineering Science Course	ESC 301	Analog and Digital Electronics	3	0	0	3
2	Professional Core Courses	PCC-CS301	Data Structure & Algorithms	3	0	0	3
3	Professional Core Courses	PCC-CS302	Computer Organisation	3	0	0	3
4	Basic Science course	BSC 301	Mathematics-III (Differential Calculus)	2	0	0	2
5	Humanities & Social Sciences including Management courses	HSMC 301	Economics for Engineers (Humanities-II)	3	0	0	3
Practical							
6	Professional Core Courses	PCC-CS393	IT Workshop (Sci Lab/MATLAB/Python/R)	0	0	4	2
7	Engineering Science Course	ESC 391	Analog and Digital Electronics	0	0	4	2
8	Professional Core Courses	PCC-CS391	Data Structure & Algorithms	0	0	4	2
9	Professional Core Courses	PCC-CS392	Computer Organisation	0	0	4	2
Total credits							22
Semester IV (Second year)							
Sl. No.	Type of course	Code	Course Title	Hours per week			Credits
				L	T	P	
Theory							
1	Professional Core Courses	PCC-CS401	Discrete Mathematics	3	1	0	4
2	Professional Core Courses	PCC-CS 402	Computer Architecture	3	0	0	3
3	Professional Core Courses	PCC-CS403	Formal Language & Automata Theory	3	0	0	3

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4	Professional Core Courses	PCC-CS404	Design & Analysis of Algorithms	3	0	0	3
5	Basic Science courses	BSC 401	Biology	2	1	0	3
6	Mandatory Courses	MC401	Environmental Sciences	1	-	-	0
Practical							
7	Engineering Science Course	PCC-CS 492	Computer Architecture	0	0	4	2
8	Professional Core Courses	PCC-CS494	Design & Analysis of Algorithms	0	0	4	2
						Total credits	20

Semester V (Third year)							
Sl. No.	Type of course	Code	Course Title	Hours per week			Credits
				L	T	P	
1	Engineering Science Course	ESC501	Software Engineering	3	0	0	3
2	Professional Core Courses	PCC-CS501	Compiler Design	3	0	0	3
3	Professional Core Courses	PCC-CS502	Operating Systems	3	0	0	3
4	Professional Core Courses	PCC-CS503	Object Oriented Programming	3	0	0	3
5	Humanities & Social Sciences including Management courses	HSMC-501	Introduction to Industrial Management (Humanities III)	3	0	0	3
6	Professional Elective	PEC-IT 501A/B/C/D	(Elective-I) Theory of	3	0	0	3

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	courses		Computation/Artificial Intelligence/ Advanced Computer Architecture/ Computer Graphics				
7	Mandatory Courses	MC- CS501	Constitution of India/ Essence of Indian Knowledge Tradition	-	-	-	0
Practical							
8	Professional Core Courses	ESC- 591	Software Engineering		0	4	2
9	Professional Core Courses	PCC- CS592	Operating Systems		0	4	2
10	Professional Core Courses	PCC- CS593	Object Oriented Programming		0	4	2
Total credits							24

Semester VI (Third year)							
Sl. No.	Type of course	Code	Course Title	Hours per week			Credits
				L	T	P	
1	Professional Core Courses	PCC- CS601	Database Management Systems	3	0	0	3
2	Professional Core Courses	PCC- CS602	Computer Networks	3	0	0	3
3	Professional Elective courses	PEC- IT601A/B/C/D	(Elective-II) Advanced Algorithms/ Distributed Systems/ Signals & Systems / Image Processing	3	0	0	3
4	Professional Elective courses	PEC- IT602A/B/C/D	(Elective-III) Parallel and Distributed Algorithms/ Data Warehousing & Data Mining/ Human Computer Interaction/Pattern	3	0	0	3

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			Recognition				
5	Open Elective courses	OEC-IT601A/B	(Open Elective-) Numerical Methods/ Human Resource Development and Organizational Behavior	3	0	0	3
6	Project	PROJ-CS601	Research Methodology	3	0	0	3
Practical							
7	Professional Core Courses	PCC-CS691	Database Management Systems	0	0	4	2
8	Professional Core Courses	PCC-CS692	Computer Networks	0	0	4	2
Total credits							22

Semester VII (Fourth year)

Sl. No.	Type of course	Code	Course Title	Hours per week			Credits
				L	T	P	
1	Professional Elective courses	PEC-IT701A/B/C/D	(Elective-IV) Internet Technology/Quantum Computing/ Cloud Computing/Machine learning	3	0	0	3
2	Professional Elective courses	PEC-IT702A/B/C/D/E/F	(Elective-V) Multimedia Technology/Neural Networks and Deep Learning/Soft Computing/ Ad-Hoc and Sensor Networks/Information Theory and Coding/Cyber Security	3	0	0	3
3	Open Elective courses	OEC-IT701A/B/C	(Open Elective-II) Operations Research/Introduction to Philosophical Thoughts/ Soft Skill & Interpersonal Communication	3	0	0	3
4	Humanities & Social Sciences including	HSMC 701	Project Management and Entrepreneurship	2	1	0	3

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	Management courses						
5	Project	PROJ-IT781	Project-II	0	0	12	6
						Total credits	18

Semester VIII (Fourth year)
[Summer Industry Internship]

Sl. No.	Type of course	Code	Course Title	Hours per week			Credits
				L	T	P	
1	Professional Elective courses	PEC-IT801A/B/C/D/E	(Elective-VI) Signals and Networks/Cryptography & Network Security/ Speech and Natural Language Processing/ /Internet of Things/ Remote Sensing and GIS	3	0	0	3
2	Open Elective courses	OEC-IT801A/B/C/D/E	Open Elective-III Big Data Analysis/Cyber Law and Ethics/ Mobile Computing/Bioinformatics/ Robotics	3	0	0	3
3	Open Elective courses	OEC-IT802A/B/C	(Open Elective-IV) E-Commerce and ERP/Micro-electronics and VLSI Design/Economic Policies in India	3	0	0	3
4	Project	PROJ-CS881	Project-III	0	0	12	6
						Total credits	15

**MASTER OF BUSINESS ADMINISTRATION(MBA) Revised & Final Syllabus for the Batch starting
from the Academic Year 2008-2009**

First Semester: 8 Compulsory Courses

Code	Course Name	No. of Credits	Contact Hours	Marks
MB 101	Business Economics I	4	40	100
MB 102	Business Communication	4	40	100
MB 103	Management Information Systems I	4	40	100
MB 104	Organizational Behaviour I	4	40	100
MB 105	Quantitative Methods I	4	40	100
MB 106	Fundamentals of Accounting	4	40	100
MB 107	ISS & VA*	4	40	100
MB 108	Business Laws	4	40	100
	Total	32	320	800

- ISS – Indian Social Structure; VA – Values & Ethics in business

Second Semester: 8 Compulsory Courses

Code	Course Name	No. of Credits	Contact Hours	Marks
MB 201	Business Economics II	4	40	100
MB 202	Organizational Behaviour II	4	40	100
MB 203	Quantitative Methods II	4	40	100
MB 204	Production & Operations Management	4	40	100
MB 205	Management Information Systems II	4	40	100
MB 206	Human Resource Management	4	40	100
MB 207	Financial Management	4	40	100
MB 208	Marketing Management	4	40	100
	Total	32	320	800

MASTER OF BUSINESS ADMINISTRATION(MBA) Revised & Final Syllabus for the Batch starting from the Academic Year 2008-2009

Third Semester: 2 Compulsory, 4 Specialization Courses and Project Work

Code	Course Name	No. of Credits	Contact Hours	Marks
MB 301	Management Accounting	4	40	100
MB 302	Operations Research	4	40	100
MB 303	Project Work & Viva Voce	8	-	100
Specialization	Four courses – three from one specialization and one from another specialization	16	160	400
	Total	32	240	700

Specialization:

Code	Course Name	Code	Course Name
MM 301	SALES & DISTRIBUTION MANAGEMENT	SM 301	DATABASE MANAGEMENT
MM 302	ADVERTISING & SALES PROMOTION	SM 302	SYSTEM ANALYSIS & DESIGN
MM 303	MARKETING RESEARCH	SM 303	COMPUTER AIDED MANAGEMENT
FM 301	CORPORATE TAXATION & TAX PLANNING	HR 301	EMPLOYMENT & COMPENSATION ADMINISTRATION
FM 302	CORPORATE FINANCE	HR 302	HUMAN RESOURCE PLANNING
FM 303	SECURITY ANALYSIS & PORTFOLIO MANAGEMENT	HR 303	LABOUR LAWS
HSA301	CONCEPT OF COMMUNITY HEALTH	SD 301	Business Environment and Sustainable Development
HSA302	EPIDEMIOLOGY & ANALYSIS OF HEALTHCARE INFORMATION DATA	SD 302	System Approach to Sustainable Development
HSA303	HEALTH POLICY & NATIONAL HEALTH PROGRAMME	SD 303	Sustainable Development in the context of Human Development
SHM 301	Shipping Practice	PLM 301-	International Transport Systems
SHM 302	Commercial & Shipping Law	PLM 302	– Port / Shipping / Labour Laws
SHM 303	Shipping Economics & e-Business	PLM 303	– Port Operation Management

**MASTER OF BUSINESS ADMINISTRATION(MBA) Revised & Final Syllabus for the Batch starting
from the Academic Year 2008-2009
Fourth Semester: 2 Compulsory, 4 Specialization Courses and Project Work**

Code	Course Name	No. of Credits	Contact Hours	Marks
MB 401	Project Management & Entrepreneurship Development	4	40	100
MB 402	Strategic Management	4	40	100
MB 403	Comprehensive Viva Voce	8	-	100
Specialization	Four courses – three from one specialization and one from another specialization	16	160	400
	Total	32	240	700

Specialization:

Code	Course Name	Code	Course Name
MM 404	INTERNATIONAL MARKETING	SM 404	SOFTWARE MANAGEMENT
MM 405	SERVICE MARKETING	SM 405	E - BUSINESS
MM 406	CONSUMER BEHAVIOUR	SM 406	FUNDAMENTALS OF NETWORKING
FM 404	FINANCIAL INSTITUTES AND MARKETS.	HR 404	INDUSTRIAL RELATIONS
FM 405	INTERNATIONAL FINANCE	HR 405	ORGANIZATIONAL DEVELOPMENT
FM 406	DERIVATIVES AND RISK MANEGEMENT	HR 406	HUMAN RESOURCE DEVELOPMENT
HSA404	LAW	SD 404	Sustainable livelihood for sustainable development
HSA405	PLANNING, ORGANIZING & MANAGEMENT OF HEALTH SERVICE	SD 405	Agribusiness for sustainable development
HSA406	LOGISTICS MANAGEMENT IN HEALTH CARE UNITS & STORAGE & DISTRIBUTION	SD 406	Participatory approaches, research methods for sustainable development
SHM 401	Ship Operation Management	PLM 401	Commercial Shipping
SHM 402 –	Maritime Financial Management	PLM 402	Cargo Handling Systems Management
SHM 403 –	Maritime HR Management	PLM 403	Port Modernization & Traffic Forecasting

General Guidelines

- ❖ This MBA curriculum will be applicable from the academic year 2018 – 19.
- ❖ All rules and regulations regarding admission, examination, registration, migration and others shall be according to MAKAUT norms.

CURRICULUM

Core Courses (Six/ Semester)

Semester - I

MB - 101	Managerial Economics (Micro)
MB - 102	Organizational Behaviour
MB - 103	Business Communication
MB - 104	Legal and Business Environment(Micro and Macro)
MB - 105	Indian Ethos and Business Ethics
MB - 106	Quantitative Techniques

Semester - II

MB - 201	Indian Economy and Policy
MB - 202	Financial Reporting,Statements and Analysis
MB - 203	Marketing Management
MB - 204	Operations Management
MB - 205	Management Information System
MB - 206	Human Resource Management

Semester - III

Core Papers:

MB - 301	Entrepreneurship and Project Management
MB - 302	Corporate Strategy

Elective Papers: Two from any one Functional Area (Major) and two from a different Functional Area (Minor)

FM/ MM/HR/OM/BA/ MIS/ HCM- 301
FM/ MM/HR/OM/BA/ MIS/ HCM - 302
FM/ MM/HR/OM/BA/ MIS/ HCM - 303
FM/ MM/HR/OM/BA/ MIS/ HCM - 304

MB - 303	Internship Project and Viva Voce
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Semester - IV

Elective Papers (Four from Major Functional Area and Two from Minor Functional area) **

FM/ MM/HR/OM/BA/ MIS/ HCM - 401

FM/ MM/HR/OM/BA/ MIS/ HCM - 402
 FM/ MM/HR/OM/BA/ MIS/ HCM - 403
 FM/ MM/HR/OM/BA/ MIS/ HCM - 404
 FM/ MM/HR/OM/BA/ MIS/ HCM - 405
 FM/ MM/HR/OM/BA/ MIS/ HCM - 406

****The Major and Minor Functional areas will be same as chosen in the 3rd Semester.**

Elective Papers for Third Semester

Functional Specialization (3rd Semester)

MARKETING		OPERATIONS	
CODE	COURSE NAME	CODE	COURSE NAME
MM 301	B2B MARKETING	OM 301	SUPPLY CHAIN & LOGISTICS MANAGEMENT
MM 302	DIGITAL & SOCIAL MEDIA MARKETING	OM 302	OPERATIONS STRATEGY
MM 303	IMC/ PROMOTION STRATEGY	OM 303	QUALITY TOOLKIT FOR MANAGERS
MM 304	MARKETING RESEARCH	OM 304	PRICING & REVENUE MANAGEMENT

FINANCE		HUMAN RESOURCE	
CODE	COURSE NAME	CODE	COURSE NAME
FM 301	TAXATION	HR 301	TEAM DYNAMICS AT WORK
FM 302	PROJECT APPRAISAL & FINANCE	HR 302	HR METRICS AND ANALYTICS
FM 303	BEHAVIORAL FINANCE	HR 303	CROSS CULTURAL MANAGEMENT
FM 304	CORPORATE FINANCE	HR 304	ORGANIZATIONAL DESIGN

MIS		BUSINESS ANALYTICS	
CODE	COURSE NAME	CODE	COURSE NAME
MIS 301	DATA MINING FOR BUSINESS DECISIONS	BA 301	DATA MINING
MIS 302	E-COMMERCE & DIGITAL MARKETS	BA 302	MARKETING ANALYTICS
MIS 303	MANAGING SOFTWAREPROJECTS	BA303	BUSINESS FORECASTING
MIS 304	DATA SCIENCE USING R	BA 304	DATA SCIENCE USING R