

**B.Tech – Computer Science Engineering (Full Time)
Curriculum and Syllabus
2013 Regulation**

CSE Elective Stream – Database Specialization						
S.No	Sub.Code	Title of Subject	L	T	P	C
1	BCS13E01	Database Tuning	3	0	0	3
2	BCS13E02	Advanced Knowledge Management	3	0	0	3
3	BCS13E03	Infometrics	3	0	0	3
4	BCS13E04	Enterprise Application Integration	3	0	0	3
5	BCS13E05	Web Data Design & Management	3	0	0	3
6	BCS13E06	Advanced Databases	3	0	0	3

CSE Elective Stream – Networking Specialization						
S.No	Sub.Code	Title of Subject	L	T	P	C
1	BCS13E07	Mobile and Wireless Networks	3	0	0	3
2	BCS13E08	TCP / IP Design and Implementation	3	0	0	3
3	BCS13E09	Ad-hoc Networks	3	0	0	3
4	BCS13E10	3G- Networking	3	0	0	3
5	BCS13E11	Network Security and Cryptography	3	0	0	3
6	BCS13E12	Pervasive Computing	3	0	0	3

CSE Elective Stream – OS Specialization						
S.No	Sub.Code	Title of Subject	L	T	P	C
1	BCS13E13	Unix Internals	3	0	0	3
2	BCS13E14	Distributed Computing	3	0	0	3
3	BCS13E15	Real Time System Design	3	0	0	3
4	BCS13E16	Advanced Operating System	3	0	0	3
5	BCS13E17	Parallel Processing	3	0	0	3
6	BCS13E18	Fault Tolerance Systems	3	0	0	3



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CSE Elective Stream – Computational Theory Specialization						
S.No	Sub.Code	Title of Subject	L	T	P	C
1	BCS13E19	Design of Algorithms	3	0	0	3
2	BMA13E31	Optimization Techniques	3	0	0	3
3	BCS13E20	Theory of Computation	3	0	0	3
4	BCS13E21	Algorithmic graph Theory	3	0	0	3
5	BCS13E22	Principles of Programming Languages	3	0	0	3
6	BCS13E23	Natural Language Processing	3	0	0	3

CSE Elective Stream – VLSI & Embedded Specialization						
S.No	Sub.Code	Title of Subject	L	T	P	C
1	BEC13E31	VLSI Technology	3	0	0	3
2	BEC13E32	System Modeling Using Hardware Description Languages	3	0	0	3
3	BEC13E33	VLSI Design	3	0	0	3
4	BEC13E34	Computer Aided Design of VLSI	3	0	0	3
5	BCS13E24	Embedded System Design	3	0	0	3
6	BEC13E35	Micro Controller Architecture & Design	3	0	0	3

CSE Elective Stream – Bio Informatics Specialization						
S.No	Sub.Code	Title of Subject	L	T	P	C
1	BBT13E31	Bio Informatics	3	0	0	3
2	BBT13E32	Biological Database and Data Analysis	3	0	0	3
3	BBT13E33	Cell Biology and Genetics	3	0	0	3
4	BCS13E25	Programming in PERL	3	0	0	3
5	BBT13E34	Machine Learning Models in Bio Informatics	3	0	0	3
6	BBT13E35	Advance Techniques for Sequence and Structure Analysis	3	0	0	3

CSE Elective Stream – Digital Image Processing Specialization						
S.No	Sub.Code	Title of Subject	L	T	P	C
1	BCS13E26	Digital Image Processing	3	0	0	3
2	BCS13E27	Pattern Recognition and Neural Networks	3	0	0	3
3	BCS13E28	Medical Imaging Techniques	3	0	0	3
4	BCS13E29	Digital Image Processing Algorithms	3	0	0	3
5	BCS13E30	Intelligent Image Databases	3	0	0	3

CSE Elective Stream – Artificial Intelligence Specialization						
S.No	Sub.Code	Title of Subject	L	T	P	C
1	BCS13E34	Software Agents	3	0	0	3
2	BCS13E35	Knowledge Engineering	3	0	0	3
3	BCS13E36	Parallel Algorithms	3	0	0	3
4	BCS13E37	Speech Processing	3	0	0	3
5	BCS13E38	Soft Computing	3	0	0	3
6	BCS13E39	Machine Learning	3	0	0	3
6	BCS13E33	Geographical Information System	3	0	0	3

CSE Elective Stream – Hardware Specialization						
S.No	Sub.Code	Title of Subject	L	T	P	C
1	BEC13E36	Digital Signal Processing	3	0	0	3
2	BCS13E40	Advanced Computer Architecture	3	0	0	3
3	BCS13E41	Robotics	3	0	0	3
4	BCS13E42	Multi Core Architecture and Programming	3	0	0	3
5	-	Special Elective - I	3	0	0	3
6	-	Special Elective - II	3	0	0	3

CSE Elective Stream – Societal Specialization						
S.No	Sub.Code	Title of Subject	L	T	P	C
1	BMG13E01	Disaster Management	3	0	0	3
2	BMG13E02	Professional Ethics	3	0	0	3
3	BMG13E03	Economics for Engineers	3	0	0	3
4	BCS13E43	Social Computing (Web 2.0)	3	0	0	3
5	BMG13E04	Global Strategy and Technology	3	0	0	3
6	BMG13E05	Human Values and Human Rights	3	0	0	3

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

**B.Tech – Computer Science and Engineering (Full Time)
Curriculum - Regulation 2017**

Open Electives E- I OE (6th Sem)								
Course Code	Prerequisite Course Code	Course Title	Category	C	L	T/S Lr	P/R	Ty / Lb/ ETL
BCS17OE1	NIL	Web Design	OE	3	3	0/0	0/0	Ty
BCS17OE2	NIL	Cyber Security Essentials	OE	3	3	0/0	0/0	Ty
BCS17OE3	NIL	Electronic Waste Management	OE	3	3	0/0	0/0	Ty
BCS17OE4	NIL	Software Testing	OE	3	3	0/0	0/0	Ty
BCS17OE5	NIL	Information Security Management	OE	3	3	0/0	0/0	Ty

6th sem Electives E- II (Common to CSE&IT)								
Course Code	Prerequisite Course Code	Course Title	Category	C	L	T/S Lr	P/R	Ty / Lb/ ETL
BCS17005	BCS17001	Design and Analysis of Algorithms (Only for IT)	PE	3	3	0/0	0/0	Ty
BCS17E01	BCS17ET1	Image Processing	PE	3	3	0/0	0/0	Ty
BCS17E02	NIL	Geographical Information Systems	PE	3	3	0/0	0/0	Ty
BCS17E03	BCS17004	Database Tuning	PE	3	3	0/0	0/0	Ty
BCS17E04	BCS17ET2 BCS17012	Component Based Technology	PE	3	3	0/0	0/0	Ty
BCS17E05	BIT17I02	E-Commerce	PE	3	3	0/0	0/0	Ty
BCS17E06	NIL	Artificial Intelligence	PE	3	3	0/0	0/0	Ty
BCS17E07	NIL	Human Computer Interaction	PE	3	3	0/0	0/0	Ty
BCS17E08 /BIS15005	BIT17I01	Wireless and Mobile Networking	PE	3	3	0/0	0/0	Ty

7th Sem Electives – E- III and E-IV (Common to CSE&IT)								
Course Code	Prerequisite Course Code	Course Title	Category	C	L	T/S Lr	P/R	Ty / Lb/ ETL
BCS17E09	BCS17011	Web Mining	PE	3	3	0/0	0/0	Ty
BCS17E10	BIT17I02	Web Data Design and Management	PE	3	3	0/0	0/0	Ty
BCS17E11	NIL	Risk Management	PE	3	3	0/0	0/0	Ty
BCS17E12	BIT17I02	M-Commerce	PE	3	3	0/0	0/0	Ty
BCS17E13	BIT17I01	Cryptography and Network Security	PE	3	3	0/0	0/0	Ty
BCS17E14	BIT17I01	Mobile Adhoc Networks	PE	3	3	0/0	0/0	Ty
BCS17E15	BIT17I01	TCP/IP Design and Implementation	PE	3	3	0/0	0/0	Ty
BCS17E16	BCS17OE5	Cyber Forensics and Internet Security	PE	3	3	0/0	0/0	Ty
BCS17E17	BCS17004	Database Security	PE	3	3	0/0	0/0	Ty
BCS17E18	BCS17006	Real Time Systems	PE	3	3	0/0	0/0	Ty
BCS17E19	BIT17I01 BCS17006	Distributed Computing	PE	3	3	0/0	0/0	Ty
BCS17E20	NIL	Optimization Techniques	PE	3	3	0/0	0/0	Ty
BCS17E21	BCS17004	Management Information Systems	PE	3	3	0/0	0/0	Ty

7 th Semester – Special Elective –Technology Based (ES - EV) (Common to CSE&IT)								
Course Code	Prerequisite Course Code	Course Title	Category	C	L	T/S Lr	P/R	Ty / Lb/ ETL
BCS17E22	BCS17ET2	Mobile Application Development	SE	3	3	0/0	0/0	Ty
BCS17E23	BCS17004	Data Science and Big Data Analytics	SE	3	3	0/0	0/0	Ty
BIT17007	BIT17I01	Cloud Technology (only for CSE)	SE	3	3	0/0	0/0	Ty
BCS17E24	BIT17I01	Network Forensics	SE	3	3	0/0	0/0	Ty
BCS17E25	NIL	Internet of Things	SE	3	3	0/0	0/0	Ty
BCS17E26	NIL	Social Computing	SE	3	3	0/0	0/0	Ty
BCS17E27	NIL	Enterprise Architecture	SE	3	3	0/0	0/0	Ty

BCS17EXX	NIL	Any other that is important time to time based on Industry Demand	SE	3	3	0/0	0/0	Ty
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8th Sem Electives E-VI and E-VII (CSE & IT)								
Course Code	Prerequisite Course Code	Course Title	Category	C	L	T/S Lr	P/R	Ty / Lb/ ETL
BCS17E28	BCS17004	Information Storage Management	PE	3	3	0/0	0/0	Ty
BCS17E29	BIT17I01	Network Infrastructure Management	PE	3	3	0/0	0/0	Ty
BCS17E30	BCS17007	Foundations of Parallel Programming	PE	3	3	0/0	0/0	Ty
BCS17E31	BIT17007	Virtualization	PE	3	3	0/0	0/0	Ty
BCS17E32	BCS17006	Hadoop Distributed File System	PE	3	3	0/0	0/0	Ty
BCS17E33	BCS17004	Mobile Databases	PE	3	3	0/0	0/0	Ty
BCS17E34	BIT17I02	Web Engineering	PE	3	3	0/0	0/0	Ty
BCS17E35	BIT17I01	4G Networks	PE	3	3	0/0	0/0	Ty
BCS17E36	NIL	Enterprise Resource Planning	PE	3	3	0/0	0/0	Ty
BCS17E37	NIL	Supply Chain Management	PE	3	3	0/0	0/0	Ty
BCS17E38	BCS17004	Mainframe Computing	PE	c	3	0/0	0/0	Ty
BCS17E39	BCS17E06	Neuro Fuzzy Computing	PE	3	3	0/0	0/0	Ty
BCS17E40	BCS17E09	Web Content Management	PE	3	3	0/0	0/0	Ty
BCS17E41	BCS17E06	Machine Learning	PE	3	3	0/0	0/0	Ty

C: Credits L : Lecture T : Tutorial S.Lr : Supervised Learning P : Problem / Practical R : Research
Ty/Lb/ETL/EVL : Theory/Lab/Embedded Theory and Lab/Evaluation

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

**B.Tech – Computer Science and Engineering (Full Time)
Curriculum - Regulation 2018**

ELECTIVE -I (Common to CSE&IT)							
S.NO.	SUBJECT CODE	SUBJECT NAME	Ty/ Lb/ ETL	L	T/ S.Lr	P/R	C
1	BCS18E01	Image Processing	Ty	3	0/0	0/0	3
2	BCS18E02	Geographical Information Systems	Ty	3	0/0	0/0	3
3	BCS18E03	Database Tuning	Ty	3	0/0	0/0	3
4	BCS18E04	Component Based Technology	Ty	3	0/0	0/0	3
5	BCS18E05	E-Commerce	Ty	3	0/0	0/0	3
6	BCS18E06	Artificial Intelligence	Ty	3	0/0	0/0	3
7	BCS18E07	Human Computer Interaction	Ty	3	0/0	0/0	3
8	BCS18E08	Wireless and Mobile Networking	Ty	3	0/0	0/0	3

ELECTIVE -II							
S.NO.	SUBJECT CODE	SUBJECT NAME	Ty/ Lb/ ETL	L	T/ S.Lr	P/R	C
1	BCS18E09	Web Mining	Ty	3	0/0	0/0	3
2	BCS18E10	Web Data Design and Management	Ty	3	0/0	0/0	3
3	BCS18E11	Risk Management	Ty	3	0/0	0/0	3
4	BCS18E12	Cryptography and Network Security	Ty	3	0/0	0/0	3
5	BCS18E13	Mobile Adhoc Networks	Ty	3	0/0	0/0	3
6	BCS18E14	TCP/IP Design and Implementation	Ty	3	0/0	0/0	3
7	BCS18E15	Cyber Forensics and Internet Security	Ty	3	0/0	0/0	3
8	BCS18E16	Database Security	Ty	3	0/0	0/0	3
9	BCS18E17	Management Information Systems	Ty	3	0/0	0/0	3

ELECTIVE -III							
S.NO.	SUBJECT CODE	SUBJECT NAME	Ty/ Lb/ ETL	L	T/ S.Lr	P/R	C
1	BCS18E41	Mobile Application Development(only for CSE)	Ty	3	0/0	0/0	3
2	BCS18E18	Data Science and Big Data Analytics	Ty	3	0/0	0/0	3
3	BIT18006	Cloud Technology (only for CSE)	Ty	3	0/0	0/0	3
4	BCS18E19	Network Forensics	Ty	3	0/0	0/0	3

5	BCS18E20	Internet of Things	Ty	3	0/0	0/0	3
6	BCS18E21	Social Computing	Ty	3	0/0	0/0	3
7	BCS18E22	Enterprise Architecture	Ty	3	0/0	0/0	3
8	BCS18EXX	Subject based on Industry Demand	Ty	3	0/0	0/0	3
9	BCS18E23	Optimization Techniques	Ty	3	0/0	0/0	3

ELECTIVE –IV & V							
S.NO.	SUBJECT CODE	SUBJECT NAME	Ty/ Lb/ ETL	L	T/ S.Lr	P/R	C
1	BCS18E24	Information Storage Management	Ty	3	0/0	0/0	3
2	BCS18E25	Network Infrastructure Management	Ty	3	0/0	0/0	3
3	BCS18E26	Foundations of Parallel Programming	Ty	3	0/0	0/0	3
4	BCS18E27	Virtualization	Ty	3	0/0	0/0	3
5	BCS18E28	Hadoop Distributed File System	Ty	3	0/0	0/0	3
6	BCS18E29	Mobile Databases	Ty	3	0/0	0/0	3
7	BCS18E30	Web Engineering	Ty	3	0/0	0/0	3
8	BCS18E31	4G Networks	Ty	3	0/0	0/0	3
9	BCS18E32	Enterprise Resource Planning	Ty	3	0/0	0/0	3
10	BCS18E33	Supply Chain Management	Ty	3	0/0	0/0	3
11	BCS18E34	Mainframe Computing	Ty	3	0/0	0/0	3
12	BCS18E35	Neuro Fuzzy Computing	Ty	3	0/0	0/0	3
13	BCS18E36	Web Content Management	Ty	3	0/0	0/0	3
14	BCS18E37	Machine Learning	Ty	3	0/0	0/0	3
15	BCS18E38	M-Commerce	Ty	3	0/0	0/0	3
16	BCS18E39	Real Time Systems	Ty	3	0/0	0/0	3
17	BCS18E40	Distributed Computing	Ty	3	0/0	0/0	3

Open Electives							
S.NO.	SUBJECT CODE	SUBJECT NAME	Ty / Lb / ETL	L	T/ S.Lr	P/R	C
1	BCS18OE1	Cyber Security & Forensics	Ty	3	0/0	0/0	3
2	BCS18OE2	Artificial Intelligence and Expert System	Ty	3	0/0	0/0	3
3	BCS18OE3	Python Programming	Ty	3	0/0	0/0	3
4	BCS18OE4	Computer Hardware and Maintenance	Ty	3	0/0	0/0	3
5	BCS18OE5	Data Base Concepts	Ty	3	0/0	0/0	3
6	BCS18OE6	Introduction to Machine Learning	Ty	3	0/0	0/0	3

Open Lab							
S.NO.	SUBJECT CODE	SUBJECT NAME	Ty / Lb / ET L	L	T/ S.Lr	P/R	C
1	BCS18OL1	Visual Programming Lab	Lb	0	0/0	3/0	1
2	BCS18OL2	Web Design Lab	Lb	0	0/0	3/0	1
3	BCS18OL3	Python Programming Lab	Lb	0	0/0	3/0	1
4	BCS18OL4	Computer Network Lab	Lb	0	0/0	3/0	1
5	BCS18OL5	PHP / MySQL Programming Lab	Lb	0	0/0	3/0	1

B.TECH (INFORMATION SECURITY AND DIGITAL FORENSICS)**Regulations - 2015**

Electives						
S.No	Sub.Code	Title of	L	T	P	C
1	BIS15E01	RDBMS & SQL	3	0	0	3
2	BIS15E02	Incidence Response & Log Management	3	0	0	3
3	BIS15E03	Cyber Laws & IPR	3	0	0	3
4	BIS15E04	Information Security Audits	3	0	0	3
5	BIS15E05	IT Risk Management	3	0	0	3
6	BIS15E06	Data Privacy	3	0	0	3
7	BIS15E07	Frauds in BFSI & Telecom Frauds	3	0	0	3
8	BIS15E08	Identity & Access Management	3	0	0	3
9	BIS15E09	Malware Analysis	3	0	0	3
10	BIS15E10	Critical Infrastructure Protection	3	0	0	3
11	BIS15E11	Professional Ethics	3	0	0	3
12	BIS15E12	Secure Social Networks	3	0	0	3
13	BIS15E13	Mobile Forensics	3	0	0	3
14	BIS15E14	Protocol Filtering and Analysis	3	0	0	3
15	BIS15E15	Data Carving	3	0	0	3
16	BIS15E16	Digital Forensic Life Cycle	3	0	0	3
17	BIS15E17	Data Structures DDL,DML& DCL	3	0	0	3
18	BIS15E18	IOT Security & Smart City Security	3	0	0	3
19	BIS15E19	Criminal Justice Administration	3	0	0	3
20	BIS15E20	Virtualization	3	0	0	3
21	BIS15E21	Cyber Terrorism & Cyber Warfare	3	0	0	3
22	BIS15E22	Forensic Investigation	3	0	0	3
23	BIS15E23	Digital Evidence (CPAR)	3	0	0	3
24	BIS15E24	Cyber Criminology	3	0	0	3
25	BIS15E25	Cloud Computing and Security	3	0	0	3

B.TECH (INFORMATION SECURITY AND DIGITAL FORENSICS)**Regulations – 2018**

ELECTIVE -I							
S.NO.	SUBJECT CODE	SUBJECT NAME	C	L	T/SLr	P/R	Ty/Lb/ETL
1	BIS18E01	Protocol Filtering and Analysis	3	3	0/0	0/0	Ty
2	BIS18E02	Digital Forensic Lifecycle	3	3	0/0	0/0	Ty
3	BIS18E03	Network Infrastructure	3	3	0/0	0/0	Ty
4	BIS18E04	Digital Evidence	3	3	0/0	0/0	Ty

ELECTIVE -II							
S.NO.	SUBJECT CODE	SUBJECT NAME	C	L	T/SLr	P/R	Ty/Lb/ETL
1	BIS18E05	Incident Response	3	3	0/0	0/0	Ty
2	BIS18E06	Mobile Forensics	3	3	0/0	0/0	Ty
3	BIS18E07	IT Risk Management	3	3	0/0	0/0	Ty
4	BIS18E08	Malware Analysis	3	3	0/0	0/0	Ty

ELECTIVE -III							
S.NO.	SUBJECT CODE	SUBJECT NAME	C	L	T/SLr	P/R	Ty/Lb/ETL
1	BIS18E09	Identity and Access Management	3	3	0/0	0/0	Ty
2	BIS18E10	Virtualization	3	3	0/0	0/0	Ty
3	BIS18E11	Cloud Computing & Governance	3	3	0/0	0/0	Ty
4	BIS18E12	IOT Security & Smart City Security	3	3	0/0	0/0	Ty

ELECTIVE -IV							
S.NO.	SUBJECT CODE	SUBJECT NAME	C	L	T/SLr	P/R	Ty/Lb/ETL
1	BIS18E13	Cyber Law	3	3	0/0	0/0	Ty
2	BIS18E14	Information Security Audits	3	3	0/0	0/0	Ty
3	BIS18E15	Data Carving	3	3	0/0	0/0	Ty
4	BIS18E16	Professional Ethics	3	3	0/0	0/0	Ty

ELECTIVE -V							
S.NO.	SUBJECT CODE	SUBJECT NAME	C	L	T/ SLr	P/R	Ty/ Lb/ ETL
1	BIS18E17	Intellectual Property Rights	3	3	0/0	0/0	Ty
2	BIS18E18	General Forensic Science	3	3	0/0	0/0	Ty
3	BIS18E19	BFSI& Telecom Frauds	3	3	0/0	0/0	Ty
4	BIS18E20	Cyber Terrorism	3	3	0/0	0/0	Ty

ELECTIVE -VI							
S.NO.	SUBJECT CODE	SUBJECT NAME	C	L	T/ SLr	P/R	Ty/ Lb/ ETL
1	BIS18E21	Threats in Social Media	3	3	0/0	0/0	Ty
2	BIS18E22	Data Privacy	3	3	0/0	0/0	Ty
3	BIS18E23	Social Network Analysis	3	3	0/0	0/0	Ty
4	BIS18E24	Criminal Justice Administration	3	3	0/0	0/0	Ty

M-TECH COMPUTER SCIENCE AND ENGINEERING (2016-REGULATION)

Elective I						
S.No	Sub.Code	Title of Subject	L	T	P	C
1	MCS16CE01	Mobile and Pervasive Computing	3	0	0	3
2	MCS16CE02	Internet of Things	3	0	0	3
3	MCS16I001	Information Security Management Systems	3	0	0	3
4	MCS16IE04 *	Business Continuity and Disaster Recovery	3	0	0	3

Elective II, III and IV						
S.No	Sub.Code	Title of Subject	L	T	P	C
1	MCS16CE03	Secure Network Design	3	0	0	3
2	MCS16CE04	Big Data Technology	3	0	0	3
3	MCS16CE05	Soft Computing	3	0	0	3
4	MCS16CE06 *	Ethical Hacking and Digital Forensics	3	0	0	3
5	MCS16CE07 *	Natural Language Processing	3	0	0	3
6	MCS16CE08 *	Pattern Recognition	3	0	0	3
7	MCS16CE09 *	Multi Core Programming	3	0	0	3
8	MCS16CE10	Advanced Wireless Technologies	3	0	0	3
9	MCS16CE11 *	Service Oriented Architecture	3	0	0	3
10	MCS16IE09	Internet Security	3	0	0	3
11	MCS16CE12	Ad- hoc and Wireless Sensor Networks	3	0	0	3
12	MCS16CE13	Social Network Analysis	3	0	0	3
13	MCS16CE14	Principles of Secure Coding	3	0	0	3
14	MCS16CC005 *	Data cloud and Storage Technology	3	0	0	3
15	MCS16CE15	High Speed Networks and Security	3	0	0	3
16	MCS16CE16	Virtualization Technologies	3	0	0	3
17	MCS16CE17	Research Methodology	3	0	0	3
18	MCS16CE18	Cryptography And Network Security	3	0	0	3

M-TECH COMPUTER SCIENCE AND ENGINEERING (2018-REGULATION)

Elective I						
S.No	Sub.Code	Title of Subject	L	T	P	C
1	MCS18CE01	Mobile and Pervasive Computing	3	0	0	3
2	MCS18CE02	Internet of Things	3	0	0	3
3	MCS18IE001	Information Security Management Systems	3	0	0	3
4	MCS18IE04	Business Continuity and Disaster Recovery	3	0	0	3

Elective II, III and IV						
S.No	Sub.Code	Title of Subject	L	T	P	C
1	MCS18CE03	Secure Network Design	3	0	0	3
2	MCS18CE04	Big Data Technology	3	0	0	3
3	MCS18CE05	Soft Computing	3	0	0	3
4	MCS18CE06	Ethical Hacking and Digital Forensics	3	0	0	3
5	MCS18CE07	Natural Language Processing	3	0	0	3
6	MCS18CE08	Pattern Recognition	3	0	0	3
7	MCS18CE09	Multi Core Programming	3	0	0	3
8	MCS18CE10	Advanced Wireless Technologies	3	0	0	3
9	MCS18CE11	Service Oriented Architecture	3	0	0	3
10	MCS18IE09	Internet Security	3	0	0	3
11	MCS18CE12	Ad- hoc and Wireless Sensor Networks	3	0	0	3
12	MCS18CE13	Social Network Analysis	3	0	0	3
13	MCS18CE14	Principles of Secure Coding	3	0	0	3
14	MCS18CE15	High Speed Networks and Security	3	0	0	3
15	MCS18CE16	Virtualization Technologies	3	0	0	3
16	MCS18CE17	Research Methodology	3	0	0	3
17	MCS18CE18	Cryptography and Network Security	3	0	0	3
18	MCS18CE19	Data cloud and Storage Technology	3	0	0	3

M-TECH COMPUTER SCIENCE AND ENGINEERING (2020-REGULATION)

Elective I						
S.No	Sub.Code	Title of Subject	L	T	P	C
1	MCS20E01	Advanced computer network	3	0	0	3
	MCS20EL01	Advanced computer network Lab	0	0	4	2
2	MCS20E02	Network security and cryptography	3	0	0	3
	MCS20EL02	Network security and cryptography Lab	0	0	4	2
3	MCS20E03	Advanced data science	3	0	0	3
	MCS20EL03	Advanced data science Lab	0	0	4	2

Elective II						
S.No	Sub.Code	Title of Subject	L	T	P	C
1	MCS20E04	Introduction to intelligent system	3	0	0	3
2	MCS20E05	Advanced Computer Architecture	3	0	0	3
3	MCS20E06	Grid and cloud Computing	3	0	0	3

Elective III						
S.No	Sub.Code	Title of Subject	L	T	P	C
1	MCS20E07	Computer vision	3	0	0	3
2	MCS20E08	Human computer interaction	3	0	0	3
3	MCS20E09	Natural language processing	3	0	0	3

Elective IV						
S.No	Sub.Code	Title of Subject	L	T	P	C
1	MCS20E10	Data preparation and analysis	3	0	0	3
	MCS20EL10	Data preparation and analysis Lab	0	0	4	2
2	MCS20E11	Formal language and automata theory	3	0	0	3
	MCS20EL11	Formal language and automata theory lab	0	0	4	2
3	MCS20E12	Digital forensics and investigation	3	0	0	3
	MCS20EL12	Digital forensics investigation lab	0	0	4	2

Elective V						
S.No	Sub.Code	Title of Subject	L	T	P	C
1	MCS20E13	Internet of Things	3	0	0	3

2	MCS20E14	Cloud computing	3	0	0	3
3	MCS20E15	Game Theory	3	0	0	3

Audit course I						
S.No	Sub.Code	Title of Subject	L	T	P	C
1	MET20AC01	English for Research Paper Writing	2	0	0	0
2	MET20AC02	Disaster Management	2	0	0	0
3	MET20AC03	Value Education	2	0	0	0
4	MET20AC04	Sanskrit for Technical Knowledge	2	0	0	0

Audit course II						
S.No	Sub.Code	Title of Subject	L	T	P	C
1	MET20AC05	Constitution of India and Fundamental Rights	2	0	0	0
2	MET20AC06	Pedagogy Studies	2	0	0	0
3	MET20AC07	Personality Development through life Enlightenment Skills	2	0	0	0
4	MET20AC08	Stress Management by Yoga	2	0	0	0

Open electives						
S.No	Sub.Code	Title of Subject	L	T	P	C
1	MET20OE01	Business Analytics	3	0	0	3
2	MET20OE02	Industrial Safety	3	0	0	3
3	MET20OE03	Operations Research	3	0	0	3
4	MET20OE04	Cost Management of Engineering Projects	3	0	0	3
5	MET20OE05	Composite Materials	3	0	0	3
6	MET20OE06	Waste to Energy	3	0	0	3

M.Tech – INFORMATION SECURITY AND CYBER FORENSICS-2016-Regulation

ELECTIVE – I						
S.No	Sub. Code	Title of Subject	L	T	P	C
1	MCS16IE01	Virtualization and Cloud Security	3	0	0	3
2	MCS16IE02	Database Design and Security	3	0	0	3
3	MCS16IE03	Mobile Forensics	3	0	0	3
4	MCS16IE04 *	Business continuity and Disaster Recovery	3	0	0	3

ELECTIVES – II,III, IV						
S.No	Sub. Code	Title of Subject	L	T	P	C
1.	MCS16IE05	Malware Forensics	3	0	0	3
2.	MCS16IE06	Network Forensics	3	0	0	3
3.	MCS16IE07	Intrusion Detection and Prevention Systems	3	0	0	3
4.	MCS16IE08 *	Threat Modeling and Security Architecture Design	3	0	0	3
5.	MCS16IE09	Internet Security	3	0	0	3
6.	MCS16IE10	Financial Frauds	3	0	0	3
7.	MCS16CE08 *	Pattern Recognition	3	0	0	3
8.	MCS16CE13	Social Network Analysis	3	0	0	3
9.	MCS16CE14	Principles of Secure Coding	3	0	0	3
10.	MCS16CE15	High Speed Networks and Security	3	0	0	3
11.	MCS16CE03	Secure Network Design	3	0	0	3
12.	MCS16CE17	Research methodology	3	0	0	3

M.Tech – INFORMATION SECURITY AND CYBER FORENSICS-2018-Regulation

ELECTIVE – I						
S.No	Sub. Code	Title of Subject	L	T	P	C
1	MCS18IE01	Virtualization and Cloud Security	3	0	0	3
2	MCS18IE02	Database Design and Security	3	0	0	3
3	MCS18IE03	Mobile Forensics	3	0	0	3
4	MCS18IE04	Business Continuity and Disaster Recovery	3	0	0	3

ELECTIVES – II,III, IV						
S.No	Sub. Code	Title of Subject	L	T	P	C
1.	MCS18IE05	Malware Forensics	3	0	0	3
2.	MCS18IE06	Network Forensics	3	0	0	3
3.	MCS18IE07	Intrusion Detection and Prevention Systems	3	0	0	3
4.	MCS18IE08	Threat Modeling and Security Architecture Design	3	0	0	3
5.	MCS18IE09	Internet Security	3	0	0	3
6.	MCS18IE10	Financial Frauds	3	0	0	3
7.	MCS18CE08	Pattern Recognition	3	0	0	3
8.	MCS18CE13	Social Network Analysis	3	0	0	3
9.	MCS18CE14	Principles of Secure Coding	3	0	0	3
10.	MCS18CE15	High Speed Networks and Security	3	0	0	3
11.	MCS18CE03	Secure Network Design	3	0	0	3
12.	MCS18CE17	Research Methodology	3	0	0	3

M.Tech – INFORMATION SECURITY AND CYBER FORENSICS-2020-Regulation

Elective I						
S.No	Sub.Code	Title of Subject	L	T	P	C
1	MCS20IE06	Vulnerability Assessment and Penetration Testing	3	0	0	3
	MCS20IEL06	Vulnerability Assessment and Penetration Testing Lab	0	0	4	2
2	MCS20IE07	Applied Cryptology	3	0	0	3
	MCS20IEL00	Applied Cryptology Lab	0	0	4	2
3	MCS20IE08	Secured programming	3	0	0	3
	MCS20IEL08	Secured programming Lab	0	0	4	2

Elective II						
S.No	Sub.Code	Title of Subject	L	T	P	C
1	MCS20IE09	Basics of Forensics Psychology	3	0	0	3
2	MCS20IE10	Operating system security	3	0	0	3
3	MCS20IE11	Advanced computer networks and security	3	0	0	3

Elective III						
S.No	Sub.Code	Title of Subject	L	T	P	C
1	MCS20IE12	Information Security	3	0	0	3
2	MCS20IE13	Cyber law and IPR	3	0	0	3
3	MCS20IE14	Biometrics	3	0	0	3

Elective IV						
S.No	Sub.Code	Title of Subject	L	T	P	C
1	MCS20IE15	Information Security Audit	3	0	0	3
	MCS20IEL15	Information Security Audit Lab	0	0	4	2
2	MCS20IE16	Cyber Crime Investigation	3	0	0	3
	MCS20IEL16	Cyber Crime Investigation Lab	0	0	4	2
3	MCS20IEL17	Data Privacy	3	0	0	3
	MCS20IEL17	Data Privacy Lab	0	0	4	2

Elective V						
S.No	Sub.Code	Title of Subject	L	T	P	C

1	MCS20IE18	Database design security	3	0	0	3
2	MCS20IE19	Web Security	3	0	0	3
3	MCS20IE20	Malware Analysis	3	0	0	3

Audit course I						
S.No	Sub.Code	Title of Subject	L	T	P	C
1	MET20AC01	English for Research Paper Writing	2	0	0	0
2	MET20AC02	Disaster Management	2	0	0	0
3	MET20AC03	Value Education	2	0	0	0
4	MET20AC04	Sanskrit for Technical Knowledge	2	0	0	0

Audit course II						
S.No	Sub.Code	Title of Subject	L	T	P	C
1	MET20AC05	Constitution of India and Fundamental Rights	2	0	0	0
2	MET20AC06	Pedagogy Studies	2	0	0	0
3	MET20AC07	Personality Development through life Enlightenment Skills	2	0	0	0
4	MET20AC08	Stress Management by Yoga	2	0	0	0

Open electives						
S.No	Sub.Code	Title of Subject	L	T	P	C
1	MET20OE01	Business Analytics	3	0	0	3
2	MET20OE02	Industrial Safety	3	0	0	3
3	MET20OE03	Operations Research	3	0	0	3
4	MET20OE04	Cost Management of Engineering Projects	3	0	0	3
5	MET20OE05	Composite Materials	3	0	0	3
6	MET20OE06	Waste to Energy	3	0	0	3

B.Sc. (Information Science and Cyber Forensics) Regulation – 2013

Elective – I						
Sub. Code	Subject Name	L	T	P	C	Page No
BSISE01	User Interface Design	3	0	0	3	
BSISE02	Data Mining and warehousing	3	0	0	3	
BSISE03/ BSCN005	Cloud Computing	3	0	0	3	

Elective – II						
Sub. Code	Subject Name	L	T	P	C	Page No
BSCNE01	Multimedia Systems	3	0	0	3	
BSISE04	Parallel computing	3	0	0	3	
BSISE05	Information Storage Management	3	0	0	3	

Elective – III						
Sub. Code	Subject Name	L	T	P	C	Page No
BSISE06	E-Commerce	3	0	0	3	
BSISE07	Software Testing	3	0	0	3	
BSISE08	Artificial Intelligence	3	0	0	3	

B.Sc. (Information Science and Cyber Forensics) Regulation – 2017

Electives					
Sub. Code	Subject Name	L	T	P	C
HBCS17C14	Fundamentals of Cloud Computing	3	1	0	4
HBCS17C11	Software Engineering	3	1	0	4
HBCF17E01	Financial Fraud	3	1	0	4
HBCS17E04	Data Mining	3	1	0	4
HBCS17E03	E-Commerce	3	1	0	4
HBCF17E02	Evidence Management	3	1	0	4
HBCS17E07	Mobile Application Development	3	1	0	4
HBCF17E03	Malware Detection and Analysis	3	1	0	4
HBCS17E09	Open Source Software	3	1	0	4



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