MIT Art, Design and Technology University, Pune

MIT School of Engineering

SYLLABUS STRUCTURE

FOR

FIRST to SECOND YEAR

M.TECH. (INFORMATION TECHNOLOGY) – CYBER SECURITY

MTIC

2018-19

FACULTY OF ENGINEERING

(BOARD OF STUDIES IN INFORMATION TECHNOLOGY)

Prof. (Dr.) Rajneeshkaur Sachdeo

Dean Engineering

Office Seal

About program structure

Overall curriculum synopsis (At-a-Glance) LTP mode
Semester wise course work details with credit points
Assessment structure of the program
Detailed program outline with reference books

Follow In

(Minimum Credits to be earned: 74)

Coding for course/ subject: 18MTIC101, Where; **18** = Year of BOS, **MTIC** = Branch Code, **1**= Semester No.,**01 to N** = Sequence No of Subject.

SEMESTER-I

Course Code	Course Name	Hours/week				Maximum Marks		
		Lecture	Tutorial	Practical	Credits	CA	FE	Total
18MTIC101	Research Methodology	3	0	0	3	40	60	100
18MTMT102	Linear Algebra And Statistical Techniques	3	1	0	4	40	60	100
18MTIC103	Advanced Algorithms	3	1	0	3	40	60	100
18MTIC104	Information Security Foundations	3	0	0	3	40	60	100
18MTIC1__	Professional Elective-I	3	0	0	3	40	60	100
18MTIC111	Lab Practice I	0	0	4	2	40	60**	100
18MTIC112	Technical Seminar-I	0	0	4	2	100	--	100
Total		**15**	**2**	**8**	**21**	**340**	**360**	**700**

SEMESTER-II

Course Code	Course Name	Hours/week				Maximum Marks		
		Lecture	Tutorial	Practical	Credits	CA	FE	Total
18MTIC201	Advanced Machine Learning	3	1	0	4	40	60	100
18MTIC202	Network & Wireless Security	3	0	0	3	40	60	100
18MTIC203	Data Science & Analytics	3	1	0	4	40	60	100
18MTIC204	Cyber Security Laws	3	0	0	3	40	60	100
18MTIC2__	Professional Elective-II	3	0	0	3	40	60	100
18MTIC211	Lab Practice II	0	0	4	2	40	60**	100
18MTIC220	Minor Project	0	0	4	2	100	--	100
Total		**15**	**2**	**8**	**21**	**340**	**360**	**700**

CA = Continuous Assessment, FE= Final Examination,

Final Lab exam will be conducted with viva-voce of the respective practical (50 exam +10 viva = 60)

Coding for course/ subject: 18MTIC101, Where; **18** = Year of BOS, MTIC = Branch Code, **1**= Semester No.

SEMESTER-III

Course Code	Course Name	Hours/week				Maximum Marks		
		Lecture	Tutorial	Practical	Credits	CA	FE	Total
18MTIC301	Digital Forensics	3	1	0	4	40	60	100
18MTIC302	Secure Programming	3	0	2	4	40	60	100
18MTIC3___	Professional Elective-III	3	1	0	4	40	60	100
18MTIC3__	Professional Elective-IV	3	1	0	4	40	60	100
18MTIC 311	Technical Seminar-II	0	0	4	2	40	60**	100
18MTIC320	Project Phase-I	0	0	4	2	40	60**	100
Total		**12**	**3**	**10**	**20**	**240**	**360**	**600**

SEMESTER-IV

Course Code	Course Name	Hours/week				Maximum Marks		
		Lecture	Tutorial	Practical	Credits	CA	FE	Total
18MTIC420	Project Phase-II	0	0	28	14	100	200	300
Total		**0**	**0**	**28**	**14**	**100**	**200**	**300**

CA = Continuous Assessment, FE= Final Examination,

Final Lab exam will be conducted with viva-voce of the respective practical (50 exam +10 viva = 60)

Coding for course/ subject: 18MTIC101, Where; **18** = Year of BOS, MTIC = Branch Code, **1**= Semester No.

LIST OF ELECTIVES

Elective		Course Name
Elective-I	**18MTIC131**	**Web Technologies and Web Services**
	18MTIC132	Advanced Operating Systems
	18MTIC133	Mobile Computing
	18MTIC134	Open Source Technologies
Elective-II	**18MTIC231**	IT Security Metrics
	18MTIC232	Distributed & Cloud Computing
	18MTIC233	Information systems Audit
	18MTIC234	Security Vulnerability Analysis
Elective-III	**18MTIC331**	Intrusion Detection and Prevention system
	18MTIC332	Cloud Security and Privacy
	18MTIC333	Agent Technology
	18MTIC334	Digital Watermarking and Steganography
Elective –IV	**18MTIC335**	Distributed Systems Security
	18MTIC336	Bio-metric Security
	18MTIC337	Applied Cryptography
	18MTIC338	Intellectual Property Rights