

SHRI G S INSTITUTE OF TECHNOLOGY & SCIENCE, INDORE
DEPARTMENT OF INFORMATION TECHNOLOGY

SUMMARY OF CREDITS			
YEAR	SEMESTER		Credits
	A	B	
I	20	20	40
II	23	22	45
III	24	22	46
IV	16	14	30
Total	83	78	161

Additional	*	As per department Choice	General Proficiency (Communication Skill, Professionalism, Presentation Skill, etc..)	
	*	As per department Choice	Professional Practice (Technical visit, Expert lectures, poster presentation, technical exhibition, Alumni interaction, participation in Hackethon, Coding Plateform ranking, Technical events outside the institute, Idea Lab, IIC activity etc.)	
Grand Total		161 + 02*		

S.No.	Subject Category	Subject Code	Subject Name	Hours/Week			Credits		Maximum Marks				Total Marks	Total Credits
				L	T	P	T	P	Theory		Practical			
									Th.	CW	Pr.	SW		
1	BSC	MA28005	Mathematics - III	3	-	-	3	-	70	30	-	-	100	3
2	PCC	IT28018	Data Structures	3	1	-	4	-	70	30	-	-	100	4
3	PCC	IT28011	Object Oriented Programming	3	-	-	3	-	70	30	-	-	100	3
4	PCC	IT28009	Computer Organization & Architecture	3	-	-	3	-	70	30	-	-	100	3
5	ESC	EC28012	Digital System Design	3	-	-	3	-	70	30	-	-	100	3
6	HSMC	HU28481	Values, Humanities and Professional Ethics	-	2	-	2	-	-	100	-	-	100	2
7	PCC	IT28401	Data Structures Lab	-	-	2	-	1	-	-	60	40	100	1
8	PCC	IT28402	Object Oriented Programming Lab	-	-	2	-	1	-	-	60	40	100	1
9	ESC	EC28403	Digital System Design Lab	-	-	2	-	1	-	-	60	40	100	1
10	PCC	IT28404	Basic Linux & Shell Programming	-	-	2	-	1	-	-	60	40	100	1
11	MC	ITM2002	Environmental Science*	2	-	-	-	-	-	50			50	0
12	MC	IT_____	Design Thinking	-	-	-	1	-	-	30	-	-	30	1
			Total	17	3	8	19	4	350	330	240	160	1080	23

* Mandatory non credit course

S.No.	Subject Category	Subject Code	Subject Name	Hours/Week			Credits		Maximum Marks				Total Credits	
				L	T	P	T	P	Theory		Practical			
									Th.	CW	Pr.	SW		
1	PCC	IT28511	Discrete Structures	3	1	-	4	-	70	30	-	-	100	4
2	PCC	IT28504	Design and Analysis of Algorithms	3	1	-	4	-	70	30	-	-	100	4
3	PCC	IT28513	Software Engineering	3	-	-	3	-	70	30	-	-	100	3
4	HSMC	HU28507	Economics for Engineers	3	-	-	3	-	70	30	-	-	100	3
5	ESC	EC28505	Data Communication	3	-	-	3	-	70	30	-	-	100	3
6	PCC	IT28801	Design and Analysis of Algorithms Lab	-	-	2	-	1	-	-	60	40	100	1
7	PCC	IT28802	Software Engineering Lab	-	-	2	-	1	-	-	60	40	100	1
8	PCC	IT28803	Python Programming Lab	-	-	2	-	1	-	-	60	40	100	1
9	PCC	IT28804	Skill Lab-I (Web Programming)	-	1	2	1	1	-	-	60	40	100	2
10	MC	HUM2052	Essence of Indian Knowledge Tradition*	2	-		-	-	-	50			50	0
			Total	17	3	8	18	4	350	200	240	160	950	22
* Mandatory non credit course														
Diploma in Information Technology will be awarded after acquiring additional 10 credit out of which 06 credit as three months industrial training within five years														
** 2 weeks training during semester break after IV sem is mandatory.														

Semester : V

S.No.	Category	Subject Code	Subject Name	Hours/Week			Credits		Maximum Marks Alloted				Total Credits
				L	T	P	T	P	Theory		Practical		
									End	CW	End	SW	
1	PCC	IT38__	Computer Networks	3	0	-	3		70	30	-	-	3
2	PCC	IT38__	Data Base Management Systems	3	1	-	4		70	30	-	-	4
3	PCC	IT38__	Operating Systems	3	-	-	3	-	70	30	-	-	3
4	OEC	<u>IT38__</u>	Open Elective-I	3	1	-	4		70	30	-	-	4
5	PCC	IT38__	Theory of Computation	3	1	-	4	-	70	30	-	-	4
6	PCC	IT38__	Computer Networks Lab	-	0	2	-	1	-	-	60	40	1
7	PCC	IT38__	Data Base Management Systems	-	0	2	-	1	-	-	60	40	1
8	PCC	IT38__	Operating Systems Lab	-	0	2	-	1	-	-	60	40	1
9	PCC	IT38__	Skill Lab -II (Mobile Application	-	0	2	-	1	-	-	60	40	1
10	INT	IT38__	Industrial Training*	-	0	0	-	2	-	-	-	100	2
11	MC	HUM3802	Constitution of India*	-	2		-	-	-	50			0
			Total	15	3	8	18	6	350	150	240	260	24

Semester : VI

S.No.	Category	Subject Code	Subject Name	Hours/Week			Credits		Maximum Marks Alloted				Total Credits
				L	T	P	T	P	Theory		Practical		
									End	CW	End	SW	
1	PEC	IT38____	Advanced Computer Networks	3	-	-	3	-	70	30	-	-	3
2	PCC	IT38____	Compiler Design	3	-	-	3	-	70	30	-	-	3
3	PCC	IT38____	Cloud Computing	3	-	-	3	-	70	30	-	-	3
4	PCC	IT38____	Machine Learning	3	-	-	3	-	70	30	-	-	3
5	PEC	_____	Elective – I	3	-	-	3	-	70	30	-	-	3
6	PCC	IT38____	Advanced Computer Networks Lab	-	-	2	-	1	-	-	60	40	1
7	PCC	IT38____	Cloud Computing Lab	-	-	2	-	1	-	-	60	40	1
8	PCC	IT38____	Machine Learning Lab	-	-	2	-	1	-	-	60	40	1
9	PRO	IT38____	Minor Project	-	-	8	-	4	-	-	60	40	4
			Total	15	0	14	15	7	350	150	240	160	22

**** 2 weeks training during semester break after VI sem is mandatory.**

Diploma in Information Technology will be awarded after acquiring additional 10 credit out of which 06 credit as three months industrial

Elective – I				
	IT38__	Object Oriented Analysis and Design		IT38__ Statistics & Probability
	IT38__	Social Networking (NPTEL)		IT38__ Embeded System (NPTEL)

Semester : VIII

S.No.	Category	Subject Code	Subject Name	Hours/Week			Credits		Maximum Marks Alloted				Total Credits
				L	T	P	T	P	Theory		Practical		
									End Sem	CW	End Sem	SW	
1	PEC	IT48____	Elective – III	3	-	-	3	-	70	30	-	-	3
2	PEC	IT48____	Elective – IV	3	-	-	3	-	70	30	-	-	3
3	INT	IT48____	Industrial Training/ Internship *	-	-	-	-	8	-	-		100	8
OR													
4	INT	Code 4	Industrial Training/ Internship **	-	-	-	-	14	-	-		100	14
Grand Total									-	-	-	-	14
	Note: *Student require to complete 6-8 weeks of industrial training/internship during the semester												
	Note: **Student require to complete 12-16 weeks of industrial training/internship during the semester break												

LIST OF ELECTIVES

Elective – III		
S.No.	Sub Code	Subject Name
1	IT48____	Cyber Security & IT Laws
2	IT48____	Large Language Models (NPTEL)
3	IT48____	Business Analytics & Text Mining (NPTEL)
4	IT48____	Introduction to industry 4.0 and industry 5.0 (NPTEL)

Elective – IV		
S.No.	Sub. Code	Subject Name
1	IT48____	UI/UX Design (NPTEL)
2	IT48____	Real Time Operating Systems
3	IT48____	GIS Drone and Machine Learning (NPTEL)
4	IT48____	Blockchain and its Application (NPTEL)

Exit Clause Subjects (As per NEP-2020)**I Year**

S.No.	Subject Code	Subject Name	Hours/Week			Credits		Total Credits
			L	T	P	T	P	
1	IT28.....	Data Structures	2	-	-	2	-	2
2	IT28.....	Data Structures Lab	-	-	4	-	2	2
3	IT28.....	Internship & Industrial Training	-	-	12	-	6	6
							Total	10

II Year (Diploma in Information Technology)

S.No.	Subject Code	Subject Name	Hours/Week			Credits		Total Credits
			L	T	P	T	P	
1	IT38.....	Computer Networks	2	-	-	2	-	2
2	IT38.....	Mini Project	-	-	4	-	2	2
3	IT38.....	Internship & Industrial Training	-	-	12	-	6	6
							Total	10

III Year (Vocational Degree in Information Technology)

S.No.	Subject Code	Subject Name	Hours/Week			Credits		Total Credits
			L	T	P	T	P	
1	IT48.....	Information Security	2	-	-	2	-	2
2	IT48.....	Major Project	-	-	4	-	2	2
3	IT48.....	Internship & Industrial Training	-	-	12	-	6	6
							Total	10

* L=Lecture, P=Practical, T=Tutorial

Department of Information Technology
MINOR Degree in Software Engineering (NPTEL)

S.No.	Category	Subject Code	Subject Name	Hours/Week			Credits		Maximum Marks				Total Credits
				L	T	P	T	P	Theory		Practical		
									End Sem	CW	End Sem	SW	
1	-----	IT	Software Testing	-	-	-	3	1	-	-	-	-	4
2	-----	IT	Software Project Mangment	-	-	-	3	1	-	-	-	-	4
3	-----	IT	Open Source Software	-	-	-	3	1	-	-	-	-	4
4	-----	IT	Software Maintenance	-	-	-	3	1	-	-	-	-	4
5	-----	IT	DevOps	-	-	-	3	1	-	-	-	-	4
Total				0	0	0	15	5	0	0	0	0	20

IT				IT		
IT				IT		

Department of Information Technology
MINOR Degree in Machine Learning (NPTEL)

S.No.	Category	Subject Code	Subject Name	Hours/Week			Credits		Maximum			Total Credits	
				L	T	P	T	P	Theory		Practical		
									End Sem	CW	End Sem		SW
1	-----	IT	Advanced Machine	-	-	-	3	1	-	-	-	-	4
2	-----	IT	Natural Language	-	-	-	3	1	-	-	-	-	4
3	-----	IT	Programming for machine	-	-	-	3	1	-	-	-	-	4
4	-----	IT	Computer vision and	-	-	-	3	1	-	-	-	-	4
5	-----	IT	Image Processing	-	-	-	3	1	-	-	-	-	4
5	-----	IT	Generative AI	-	-	-	3	1	-	-	-	-	4
Total				0	0	0	15	5	0	0	0	0	20

IT				IT		
IT				IT		

Department of Information Technology
MINOR Degree in Core Computing IoT and Cloud System (NPTEL)

S.No.	Category	Subject Code	Subject Name	Hours/Week			Credits		Maximum Marks				Total Credits
				L	T	P	T	P	Theory		Practical		
									End Sem	CW	End Sem	SW	
1	-----	IT	Distributed System	-	-	-	3	1	-	-	-	-	4
2	-----	IT	Building Cloud and Big Data Applications	-	-	-	3	1	-	-	-	-	4
3	-----	IT	Data Analytics on Cloud Computing & Big Data	-	-	-	3	1	-	-	-	-	4
4	-----	IT	IoT	-	-	-	3	1	-	-	-	-	4
5	-----	IT	Edge and Fog Computing	-	-	-	3	1	-	-	-	-	4
Total				0	0	0	15	5	0	0	0	0	20

IT				IT		
IT				IT		

[illegible]

IT				IT		
IT				IT		

Minor Degree (Total Credite : 20)				
S.No.	Data Science	Software Engineering	Machine Learning	Core Computing IOT and Cloud System
1	Programming Using Python	Software Testing	Advanced Machine Learning	Distributed System
2	Probability & Statistics	Software Project Mangment	Natural Language Processing	Building Cloud and Big Data Applications
3	Data Mining	Open Source Software	Programming for Machine Learning	Mini-project/Hands on Cloud Computing & Big Data
4	Data Science - I (Using Python)	Software Maintenance	Computer Vision and Image processing	IOT
5	Data Science - II (Using R)	DevOps	Genrative AI	Edge and Fog Computing
6	Data Science for Engineers			
7	Advanced R Programming for Data Analytics			
8	Data Analytics			