Guru Nanak Dev Engineering College, Ludhiana
Department of Computer Science and Engineering
B.Tech. CSE (Scheme-2024)

THIRD SEMESTER												
S. No.	**Module Name**	**Course Category**	**Course Code**	**Course Title**	**Theory/ Integrated/ Practical**	**Contact Hours Per Week**			**Internal Marks**	**External Marks**	**Total Marks**	**Credits**
						L	**T**	**P**				
1	Algorithms and Programming	Professional Core Course	CCS101	Object Oriented Programming	Integrated	2	0	4	90	60	150	4
2	Algorithms and Programming	Professional Core Course	CCS102	Data Structures	Integrated	3	1	4	90	60	150	6
3	System Architecture, Design and Administration	Professional Core Course	CCS103	Computer Architecture	Theory	3	1	0	40	60	100	4
4	Basic Sciences and Engineering	Engineering Sciences Courses	ESCS101	Digital Electronics	Integrated	3	0	2	90	60	150	4
5	Basic Sciences and Engineering	Basic Sciences Course	BSCS101	Applied Mathematics	Theory	3	1	0	40	60	100	4
6	Technical Communication	Project Work, Seminar and Internship	SMCS101	Seminar and Technical Report Writing for Engineers	Practical	0	0	2	50	-	50	1
7	Constitutional Studies	Mandatory Courses (Non-Credit)	MC101	Indian Constitution*	Theory	2	0	0	50	0	50	0
8	Experiental Learning	Project Work, Seminar and Internship	TRCS101	Training-I**	Practical	0	0	40	60	40	100	1
9	Life Skills	Mentoring and Professional Development	MPD102	Mentoring and Professional Development#	Practical	0	0	1	-	-	-	0
Total						**16**	**3**	**13+40**	**510**	**340**	**850**	**24**

*For non-credit courses students have obtain at least 40% marks in Continuous Assessment (CA) to qualify

**Student will undergo 04 weeks Institutional/Industrial training after 1st year

There will be one period per week for Mentoring and Professional Development; final evaluation of this course will be done based on the combined assessment of odd and even semester of respective year of study.

FOURTH SEMESTER												
S. No.	**Module Name**	**Course Category**	**Course Code**	**Course Title**	**Theory/ Integrated /Practical**	**Contact Hours Per Week**			**Internal Marks**	**External Marks**	**Total Marks**	**Credits**
						L	**T**	**P**				
1.	Data Science	Professional Core Course	CCS104	Database Management Systems	Integrated	3	0	2	90	60	150	4
2.	System Architecture, Design and Administration	Professional Core Course	CCS105	Operating System	Integrated	3	0	2	90	60	150	4
3.	Networks and Internet of Things (IoT)	Professional Core Course	CCS106	Computer Networks	Integrated	3	1	2	90	60	150	5
4.	Basic Sciences and Engineering	Professional Core Course	CCS107	Discrete Mathematics	Theory	3	1	0	40	60	100	4
5.	Artificial Intelligence and Machine Learning	Professional Core Course	CCS108	Artificial Intelligence	Integrated	3	0	2	90	60	150	4
6.	Data Science	Professional Core Course	LCCS109	Data Analytics Tools	Practical	0	0	2	50	0	50	1
7.	Business Management	Humanities, Social Sciences and Management Course	HSMC103	Business Essentials for Engineers	Theory	2	0	0	40	60	100	2
8.	Environmental Studies	Mandatory Courses (Non-Credit)	MCCS101	Environmental Sciences and Sustainability*	Theory	2	0	0	50	0	50	0
9.	Life Skills	Mentoring and Professional Development	MPD102	Mentoring and Professional Development#	Practical	0	0	1	100	-	100	1
Total						**19**	**2**	**11**	**640**	**360**	**1000**	**25**

*For non-credit courses students have obtain at least 40% marks in Continuous Assessment (CA) to qualify

There will be one period per week for Mentoring and Professional Development; final evaluation of this course will be done based on the combined assessment of odd and even semester of respective year of study.