



**P.E. Society's
Modern College of Arts,
Science & Commerce
(Autonomous) Ganeshkhind, Pune-16.**

Three Year B.Sc. Degree Program in Computer Science

(Faculty of Science & Technology)

F.Y.B.Sc. (Computer Science)

**Choice Based Credit System Syllabus To
be implemented from Academic Year
2022-2023**

Titles of Papers, Credit Allocation and Scheme of Evaluation

Semester I (Total credits=22)

Course Type	Paper Code	Paper title	Credits		Evaluation		
			T	P	IA	CE	TOTAL
CC-I	22-CS-111	Problem Solving using Computer and 'C' Programming	2		15	35	50
	22-CS-112	Database Management Systems	2		15	35	50
	22-CS-113	Practical course based on 22-CS-111 And 22-CS-112		1.5	15	35	50
CC-II	22-MTC-111	Matrix Algebra	2		15	35	50
	22-MTC-112	Discrete Mathematics	2		15	35	50
	22-MTC-113	Mathematics Practical		1.5	15	35	50
CC-III	22-ELC-111	Semiconductor Devices and Basic Electronic Systems	2		15	35	50
	22-ELC-112	Principles of Digital Electronics	2		15	35	50
	22-ELC-113	Electronics Lab IA		1.5	15	35	50
CC-IV	22-CSST-111	Descriptive Statistics I	2		15	35	50
	22-CSST-112	Methods of Applied Statistics	2		15	35	50
	22-CSST-113	Statistics Practical Paper I		1.5	15	35	50

Semester II (Total credits=22)

Course type	Paper Code	Paper title	Credits		Evaluation		
			T	P	IA	CE	TOTAL
CC-V	22-CS-121	Advanced 'C' Programming	2		15	35	50
	22-CS-122	Relational Database Management Systems	2		15	35	50
	22-CS-123	Practical course based on 22-CS-121 and 22-CS-122		1.5	15	35	50
CC-VI	22-MTC-121	Linear Algebra	2		15	35	50
	22-MTC-122	Graph Theory	2		15	35	50
	22-MTC-123	Mathematics Practical		1.5	15	35	50
CC-VII	22-ELC-121	Instrumentation System	2		15	35	50
	22-ELC-122	Basics of Computer Organization	2		15	35	50
	22-ELC-123	Electronics Lab IB		1.5	15	35	50
CC-VIII	22-CSST-121	Mathematical Statistics	2		15	35	50
	22-CSST-122	Continuous Probability Distributions and Testing of Hypothesis	2		15	35	50
	22-CSST-123	Statistics Practical Paper I		1.5	15	35	50



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Semester III (Total credits=22)

Course Type	Paper Code	Paper title	Credits		Evaluation		
			T	P	IA	CE	TOTAL
CC-VIII	23-CS-231	Data Structures and Algorithms - I	2		15	35	50
	23-CS-232	Software Engineering	2		15	35	50
	23-CS-233	Practical Course on 23-CS-231 and 23-CS-232		2	15	35	50
CC-IX	23-MTC-231	Groups and Coding Theory	2		15	35	50
	23- MTC -232	Numerical Techniques	2		15	35	50
	23- MTC -233	Mathematics Practical: Python Programming Language I		2	15	35	50
CC-X	23- ELC -231	Microcontroller Architecture and Programming	2		15	35	50
	23- ELC -232	Digital Communication and Networking	2		15	35	50
	23- ELC -233	Practical Course I		2	15	35	50
AECC-I	23-23921	Environment Science I	2				
AECC-II	23-23922	Language Communication I	2				

Semester IV (Total credits=22)

Course type	Paper Code	Paper title	Credits		Evaluation		
			T	P	IA	CE	TOTAL
CC-XI	23-CS-241	Data Structures and Algorithms - II	2		15	35	50
	23-CS-242	Computer Networks - I	2		15	35	50
	23-CS-243	Practical Course on 23-CS-241 and 23-CS-242		2	15	35	50
CC-XII	23-MTC-241	Computational Geometry	2		15	35	50
	23- MTC -242	Operations Research	2		15	35	50
	23- MTC -243	Mathematics Practical: Python Programming Language II		2	15	35	50
CC-XIII	23- ELC -241	Embedded System Design	2		15	35	50
	23- ELC -242	Wireless Communication and Internet of Things	2		15	35	50
	23- ELC -243	Practical Course (ELC-243)		2	15	35	50
AECC-I	23-24921	Environment Science II	2				
AECC-II	23-24922	Language Communication II	2				



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T.Y.B.Sc. (Computer Science)

Choice Based Credit System Syllabus

To be implemented from Academic Year 2022 – 2023

T.Y.B.Sc. (Computer Science)**Semester V (Total credits=22)**

Course type	Paper Code	Paper title	Credits		Evaluation		
			T	P	IA	CA	TOTAL
DSEC - I	24-CS-351	Operating Systems – I	2		15	35	50
	24-CS-352	Computer Networks – II	2		15	35	50
	24-CS-357	Practical course based on CS 351		2	15	35	50
DSEC - II	24-CS-353	Web Technologies – I	2		15	35	50
	24-CS-354	Foundations of Data Science	2		15	35	50
	24-CS-358	Practical course based on CS 353 and CS 354		2	15	35	50
DSEC - III	24-CS-355	Object Oriented Programming using Java - I	2		15	35	50
	24-CS-356	Theoretical Computer Science	2		15	35	50
	24-CS-359	Practical Course based on CS 355		2	15	35	50
SECC - I	24-CS-3510	Python Programming	2	0	15	35	50
SECC - II	24-CS-3511	Blockchain Technology	2	0	15	35	50

Semester VI (Total credits=22)

Course type	Paper Code	Paper title	Credits		Evaluation		
			T	P	IA	CA	TOTAL
DSEC - I	24-CS-361	Operating Systems – II	2		15	35	50
	24-CS-362	Software Testing	2		15	35	50
	24-CS-367	Practical course based on CS 361		2	15	35	50
DSEC - II	24-CS-363	Web Technologies – II	2		15	35	50
	24-CS-364	Data Analytics	2		15	35	50
	24-CS-368	Practical course based on CS 363 and CS 364		2	15	35	50
DSEC - III	24-CS-365	Object Oriented Programming using Java - II	2		15	35	50
	24-CS-366	Compiler Construction	2		15	35	50
	24-CS-369	Practical Course based on CS 365		2	15	35	50
SECC - III	24-CS-3610	Software Testing Tools	2	0	15	35	50
SECC - IV	24-CS-3611	Project	2	0	15	35	50

IA- Internal Assessment

CA-College Assessment