



ST. VINCENT PALLOTTI COLLEGE OF ENGINEERING & TECHNOLOGY, NAGPUR

(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

B. Tech. Scheme of Examination & Syllabus 2024-25

COMPUTER SCIENCE AND BUSINESS SYSTEMS

GROUP 3 : SEMESTER I

SrNo	Course Category	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		
				L	T	P		Continual Assessment	EndSem Examination	Total
1	BSC	24ES111T	Discrete Mathematics	3	-	-	3	30	70	100
2	BSC	24ES111P	Discrete Mathematics Lab	-	-	2	1	25	25	50
3	BSC	24ES112T	Introductory Topics in Statistics, Probability and Calculus	3	-	-	3	30	70	100
4	PCC	24CB103T	Fundamentals of Computer Science	3	-	-	3	30	70	100
5	PCC	24CB103P	Fundamentals of Computer Science Lab	-	-	4	2	25	25	50
6	ESC	24ES113T	Principles of Electrical Engineering	2	-	-	2	15	35	50
7	ESC	24ES113P	Principles of Electrical Engineering Lab	-	-	2	1	25	25	50
8	BSC	24ES114T	Physics for Computing Science	2	-	-	2	15	35	50
9	BSC	24ES114P	Physics for Computing Science Lab	-	-	2	1	25	25	50
10	BSC	24ES115T	Business Communication & Value Science - I	1	-	-	1	15	35	50
11	BSC	24ES115P	Business Communication & Value Science - I	-	-	2	1	25	25	50
12	CC	24ES108T	Co-curricular Courses - I	2			2	50		50
Total				16	0	12	22	310	440	750

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GROUP 3 : SEMESTER II

Sr No	Course Category	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		
				L	T	P	Credit	Continual Assessment	End Sem Examination	Total
1	BSC	24ES211T	Linear Algebra	3	-	-	3	30	70	100
2	BSC	24ES211P	Linear Algebra Lab	-	-	2	1	25	25	50
3	BSC	24ES212T	Statistical Methods & Modelling	3	-	-	3	30	70	100
4	BSC	24ES212P	Statistical Methods & Modelling Lab	-	-	2	1	25	25	50
5	PCC	24CB203T	Data Structures & Algorithms	3	-	-	3	30	70	100
6	PCC	24CB203P	Data Structures & Algorithms Lab	-	-	4	2	25	25	50
7	ESC	24ES213T	Principles of Electronics	2	-	-	2	15	35	50
8	ESC	24ES213P	Principles of Electronics Lab	-	-	2	1	25	25	50
9	BSC	24ES214T	Fundamentals of Economics	2	-	-	2	15	35	50
10	BSC	24ES215T	Business Communication & Value Science – II	2	-	-	2	15	35	50
11	BSC	24ES216T	Environmental Sciences	2	-	-	-	Audit Course		
12	CC	24ES208T	Co-curricular Courses - II	2	-	-	2	50		50
Total				19	0	10	22	285	415	700

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THIRD SEMESTER

Sr No	Course Category	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		
				L	T	P		Continual Assessment	End Sem Examination	Total
1	PCC	24CB301T	Formal Language and Automata Theory	3	-	-	3	40	60	100
2	PCC	24CB302T	Computer Organization & Architecture	3	-	-	3	40	60	100
3	PCC	24CB303T	Object Oriented Programming	3	-	-	3	40	60	100
4	PCC	24CB303P	Object-Oriented Programming Lab	-	-	2	1	25	25	50
5	PCC	24CB304T	Computational Statistics	3	-	-	3	40	60	100
6	PCC	24CB304P	Computational Statistics Lab	-	-	2	1	25	25	50
7	PCC	24CB305T	Software Engineering	3	-	-	3	40	60	100
8	PCC	24CB305P	Software Engineering Lab	-	-	2	1	25	25	50
9	PEC	24CB306T	Financial Management	2	-	-	2	20	30	50
10	PEC	24CB307T	Human Resource Management	2	-	-	2	20	30	50
11	MDM	24CB331M	Multidisciplinary Minor -I	2	-	-	2	20	30	50
12	SEC	24H103	Constitution of India	2	-	-	-	Audit Course		
Total				23	0	6	24	335	465	800

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FOURTH SEMESTER

Sr No	Course Category	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		
				L	T	P		Continual Assessment	End Sem Examination	Total
1	PCC	24CB401T	Operating Systems	3	-	-	3	30	70	100
2	PCC	24CB401P	Operating Systems Lab	-	-	2	1	25	25	50
3	PEC	24CB402T	Introduction to Innovation, IP Management & Entrepreneurship	2	-	-	2	15	35	50
4	PEC	24CB403T	Operations Research	2	-	-	2	15	35	50
5	PEC	24CB404T	Marketing Research & Marketing Management	2	-	-	2	15	35	50
6	PCC	24CB405T	Database Management Systems	3	-	-	3	30	70	100
7	PCC	24CB405P	Database Management Systems Lab	-	-	2	1	25	25	50
8	PCC	24CB406T	Software Design with UML	2	-	-	2	15	35	50
9	PCC	24CB406P	Software Design with UML Lab	-	-	2	1	25	25	50
10	AEC	24CB407T	Business Communication & Value Science – III	2	-	-	2	15	35	50
11	IKS	24ES106T	Indian Knowledge System	2	-	-	2	15	35	50
12	MDM	24CB431M	Multidisciplinary Minor - II	3	-	-	3	30	70	100
Total				20	0	06	24	255	495	750

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FIFTH SEMESTER

Sr No	Course Category	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		
				L	T	P		Continual Assessment	End Sem Examination	Total
1	PCC	24CB501T	Design and Analysis of Algorithms	3	-	-	3	30	70	100
2	PCC	24CB501P	Design and Analysis of Algorithms Lab	-	-	2	1	25	25	50
3	PEC	24CB502T	Artificial Intelligence	3	-	-	3	30	70	100
4	PEC	24CB502T	Artificial Intelligence Lab	-	-	2	1	25	25	50
5	PEC	24CB503T	Fundamentals of Management	2	-	-	2	15	35	50
6	VSEC	24CB504T	Cloud, Microservices & Application	3	-	-	3	30	70	100
7	VSEC	24CB504P	Cloud, Microservices & Application Lab	-	-	2	1	25	25	50
8	PEC	24CB505T	Design Thinking	2	-	-	2	15	35	50
9	PEC	24CB506T	Professional Elective I*	2	-	-	2	15	35	50
10	PEC	24CB507T	Professional Elective II*	2	-	-	2	15	35	50
11	ELC	24CB508P	Project I	-	-	2	1	25	25	50
12	MDM	24CB531M	Multidisciplinary Minor III	3	-	-	3	30	70	100
Total				20		8	24	280	520	800

24CB506T	Professional Elective I
24CB506T(i)	PE-I Conversational Systems
24CB506T(ii)	PE-I Business Strategy
24CB506T(iii)	PE-I Compiler Design

24CB507T	Professional Elective II
24CB507T(i)	PE-II Behavioral Economics
24CB507T(ii)	PE-II Computational Finance & Modelling
24CB507T(iii)	PE-II Psychology

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SIXTH SEMESTER

Sr No	Course Category	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		
				L	T	P		Continual Assessment	End Sem Examination	Total
1	PCC	24CB601T	Computer Networks	3	-	-	3	30	70	100
2	PCC	24CB601P	Computer Networks Lab	-	-	2	1	25	25	50
3	PCC	24CB602T	Information Security	3	-	-	3	30	70	100
4	PCC	24CB602P	Information Security Lab	-	-	2	1	25	25	50
5	PCC	24CB603T	Financial & Cost Accounting	2	-	-	2	15	35	50
6	PCC	24CB604T	Business Communication & Value Science – IV	2	-	-	2	15	35	50
7	PEC	24CB605T	Professional Elective III	3	-	-	3	30	70	100
8	PEC	24CB605P	Professional Elective III Lab	-	-	2	1	25	25	50
9	PEC	24CB606T	Professional Elective IV	2	-	-	2	15	35	50
10	PEC	24CB606P	Professional Elective IV Lab	-	-	2	1	25	25	50
11	MDM	24CB631M	Multidisciplinary Minor IV	3	-	-	3	30	70	100
Total				18	0	8	22	265	485	750

24CB605T	Professional Elective III
24CB605T(i)	PE-III Robotics and Embedded Systems
24CB605T(ii)	PE-III Modern Web Applications
24CB605T(iii)	PE-III Data Mining and Analytics

24CB606T	Professional Elective IV
24CB606T(i)	PE-IV Enterprise Systems
24CB606T(ii)	PE-IV Advance Finance
24CB606T(iii)	PE-IV Image Processing and Pattern Recognition

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SEVENTH SEMESTER

Sr No	Course Category	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		
				L	T	P		Continual Assessment	End Sem Examination	Total
1	VSEC	24CB701T	Cryptology	3	-	-	3	30	70	100
2	VSEC	24CB701P	Cryptology Lab	-	-	2	1	25	25	50
3	PEC	24CB702T	Data Visualization	3	-	-	3	30	70	100
4	PEC	24CB702P	Data Visualization Lab	-	-	2	1	25	25	50
5	PCC	24CB703T	IT Project Management	3	-	-	3	30	70	100
6	PEC	24CB704T	Professional Elective V*	3	-	-	3	30	70	100
7	PEC	24CB705T	Professional Elective VI*	3	-	-	3	30	70	100
8	ELC	24CB706P	Project II	-	-	4	2	50	50	100
9	MDM	24CB731M	Multidisciplinary Minor V	3	-	-	3	30	70	100
Total				18	0	8	22	280	520	800

24CB704T	Professional Elective V
24CB704T(i)	PE V - Usability Design of Software Applications
24CB704T(ii)	PE V - IT Workshop Skylab/Matlab
24CB704T(iii)	PE V - Cognitive science & Analytics
24CB704T(iv)	PE V - Generative AI

24CB705T	Professional Elective VI
24CB705T(i)	PE VI - Quantum Computation and Quantum information
24CB705T(ii)	PE VI - Advanced social, text, media analytics
24CB705T(iii)	PE VI - Mobile Computing
24CB705T(iv)	PE VI - Information Retrieval

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EIGHTH SEMESTER

Sr No	Course Category	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		
				L	T	P		Continual Assessment	End Sem Examination	Total
1	ELC	23CB801P	Project Evaluation I	-	-	2	6	200	200	400
Total						2	6	200	200	400

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