

FACULTY OF ENGINEERING & TECHNOLOGY

U.V. PATEL COLLEGE OF ENGINEERING

BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE AND BUSINESS SYSTEMS (B.TECH-CSBS)

Syllabus Details

Effective Year 2024-2025

Program : B.TECH-CSBS

Semester : I

Total Course : 6

Total Regular Course : 6

Total Elective Course : 0

Total Open Course : 0

Total Audit Course : 0

#	CourseCode	Course Title	Teaching Scheme				Examination Scheme				
			CREDIT			TOTAL HOURS	TH		PR		TOTAL
			TH	PR/TW	TOTAL		Internal	External	Internal	External	
1	2HS107	DISCRETE MATHEMATICS	4.00	0.00	4.00	4.00	0/40	0/60	-	-	100
2	2HS108	INTRODUCTORY TOPICS IN STATISTICS, PROBABILITY AND CALCULUS	3.00	0.00	3.00	3.00	0/40	0/60	-	-	100
3	2CS101	FUNDAMENTALS OF COMPUTER SCIENCE	3.00	2.00	5.00	7.00	0/40	0/60	0/30	0/20	150
4	2ES117	PRINCIPLES OF ELECTRICAL ENGINEERING	2.00	1.00	3.00	4.00	0/40	0/60	0/30	0/20	150
5	2ES118	PHYSICS FOR COMPUTING SCIENCE	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
6	2HS106	BUSINESS COMMUNICATION AND VALUE SCIENCE - I	2.00	0.00	2.00	2.00	0/40	0/60	-	-	100
			17.00	4.00	21.00	25.00					750

Examination Grade Range & Value

Marks/Perc. Range	Grade (Regular)	Grade Point (Regular)	Grade (Remedial)	Grade Point (Remedial)
90>=	A+	10	A	9
80 To 89	A	9	B+	8
70 To 79	B+	8	B	7
60 To 69	B	7	C+	6
50 To 59	C+	6	C	5
40 To 49	C	5	C	5
<40	F	0	F	0

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Syllabus Details

Effective Year 2024-2025

Program : B.TECH-CSBS

Total Course : 7

Total Elective Course : 1

Total Audit Course : 0

Semester : II

Total Regular Course : 6

Total Open Course : 0

#	CourseCode	Course Title	Teaching Scheme				Examination Scheme				
			CREDIT			TOTAL HOURS	TH		PR		TOTAL
			TH	PR/TW	TOTAL		Internal	External	Internal	External	
1	2HS203	LINEAR ALGEBRA	4.00	0.00	4.00	4.00	0/40	0/60	-	-	100
2	2HS204	STATISTICAL METHODS	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
3	2CS201	DATA STRUCTURES AND ALGORITHMS	3.00	2.00	5.00	7.00	0/40	0/60	0/30	0/20	150
4	2ES201	PRINCIPLES OF ELECTRONICS ENGINEERING	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
5	2HS201	FUNDAMENTALS OF ECONOMICS	2.00	0.00	2.00	2.00	0/40	0/60	-	-	100
6	2HS202	BUSINESS COMMUNICATION AND VALUE SCIENCE - II	2.00	0.00	2.00	2.00	0/40	0/60	-	-	100
7		ELECTIVE SUBJECT - 1 (UHV_Elective-I)	2.00	0.00	2.00	2.00	0/100	-	-	-	100
			19.00	4.00	23.00	27.00					850

List of Elective Subjects

Group Name	Course Code	Name of Course
UHV_ELECTIVE-I	UHV1IPDC1	UNIVERSAL HUMAN VALUE (INTEGRATED PERSONALITY DEVELOPMENT COURSE-1)
	UHV3DYSBG1	UNIVERSAL HUMAN VALUE (DISCOVER YOURSELF THROUGH BHAGAVAD GITA-1)

Examination Grade Range & Value

Marks/Perc. Range	Grade (Regular)	Grade Point (Regular)	Grade (Remedial)	Grade Point (Remedial)
90>=	A+	10	A	9
80 To 89	A	9	B+	8
70 To 79	B+	8	B	7
60 To 69	B	7	C+	6
50 To 59	C+	6	C	5
40 To 49	C	5	C	5
<40	F	0	F	0

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Syllabus Details

Effective Year 2024-2025

Program : B.TECH-CSBS

Total Course : 6

Total Elective Course : 1

Total Audit Course : 0

Semester : III

Total Regular Course : 5

Total Open Course : 0

#	CourseCode	Course Title	Teaching Scheme				Examination Scheme				
			CREDIT			TOTAL HOURS	TH		PR		TOTAL
			TH	PR/TW	TOTAL		Internal	External	Internal	External	
1	2CSBS3101	FORMAL LANGUAGE AND AUTOMATA THEORY	3.00	0.00	3.00	3.00	0/40	0/60	-	-	100
2	2CSBS3102	COMPUTER ORGANIZATION AND ARCHITECTURE	3.00	2.00	5.00	7.00	0/40	0/60	0/30	0/20	150
3	2CSBS3103	OBJECT ORIENTED PROGRAMMING	2.00	2.00	4.00	6.00	0/40	0/60	0/30	0/20	150
4	2CSBS3104	COMPUTATIONAL STATISTICS	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
5	2CSBS3105	DATABASE MANAGEMENT SYSTEM	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
6		ELECTIVE SUBJECT - 1 (UHV_Elective-II)	2.00	0.00	2.00	2.00	0/100	-	-	-	100
			16.00	6.00	22.00	28.00					800

List of Elective Subjects

Group Name	Course Code	Name of Course
UHV_ELECTIVE-II	UHV2IPDC2	UNIVERSAL HUMAN VALUE (INTEGRATED PERSONALITY DEVELOPMENT COURSE-2)
	UHV4DYSBG2	UNIVERSAL HUMAN VALUE (DISCOVER YOURSELF THROUGH BHAGAVAD GITA-2)

Examination Grade Range & Value

Marks/Perc. Range	Grade (Regular)	Grade Point (Regular)	Grade (Remedial)	Grade Point (Remedial)
90>=	A+	10	A	9
80 To 89	A	9	B+	8
70 To 79	B+	8	B	7
60 To 69	B	7	C+	6
50 To 59	C+	6	C	5
40 To 49	C	5	C	5
<40	F	0	F	0

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BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE AND BUSINESS SYSTEMS (B.TECH-CSBS)

Syllabus Details

Effective Year 2024-2025

Program : B.TECH-CSBS

Semester : IV

Total Course : 7

Total Regular Course : 7

Total Elective Course : 0

Total Open Course : 0

Total Audit Course : 0

#	CourseCode	Course Title	Teaching Scheme				Examination Scheme				
			CREDIT			TOTAL HOURS	TH		PR		TOTAL
			TH	PR/TW	TOTAL		Internal	External	Internal	External	
1	2CSBS4101	OPERATING SYSTEM	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
2	2CSBS4102	DESIGN AND ANALYSIS OF ALGORITHMS	3.00	2.00	5.00	7.00	0/40	0/60	0/30	0/20	150
3	2CSBS4103	SOFTWARE ENGINEERING	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
4	2CSBS4104	INTRODUCTION TO INNOVATION, IP MANAGEMENT AND ENTREPRENEURSHIP	3.00	0.00	3.00	3.00	0/40	0/60	-	-	100
5	2CSBS4105	DESIGN THINKING	2.00	1.00	3.00	4.00	0/40	0/60	0/30	0/20	150
6	2CSBS4106	OPERATIONS RESEARCH	2.00	1.00	3.00	4.00	0/40	0/60	0/30	0/20	150
7	2CSBS4107	MARKETING RESEARCH & MARKETING MANAGEMENT	2.00	0.00	2.00	2.00	0/40	0/60	-	-	100
			18.00	6.00	24.00	30.00					950

Examination Grade Range & Value

Marks/Perc. Range	Grade (Regular)	Grade Point (Regular)	Grade (Remedial)	Grade Point (Remedial)
90>=	A+	10	A	9
80 To 89	A	9	B+	8
70 To 79	B+	8	B	7
60 To 69	B	7	C+	6
50 To 59	C+	6	C	5
40 To 49	C	5	C	5
<40	F	0	F	0

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BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE AND BUSINESS SYSTEMS (B.TECH-CSBS)

Syllabus Details

Effective Year 2024-2025

Program : B.TECH-CSBS

Semester : V

Total Course : 8

Total Regular Course : 6

Total Elective Course : 2

Total Open Course : 0

Total Audit Course : 0

#	CourseCode	Course Title	Teaching Scheme				Examination Scheme				
			CREDIT			TOTAL HOURS	TH		PR		TOTAL
			TH	PR/TW	TOTAL		Internal	External	Internal	External	
1	2CSBS5101	SOFTWARE DESIGN WITH UML	2.00	1.00	3.00	4.00	0/40	0/60	0/30	0/20	150
2	2CSBS5102	COMPILER DESIGN	3.00	2.00	5.00	7.00	0/40	0/60	0/30	0/20	150
3	2CSBS5103	FUNDAMENTALS OF MANAGEMENT	2.00	0.00	2.00	2.00	0/40	0/60	-	-	100
4	2CSBS5104	BUSINESS STRATEGY	2.00	0.00	2.00	2.00	0/40	0/60	-	-	100
5	2CSBS5105	BUSINESS COMMUNICATION & VALUE SCIENCE-III	2.00	0.00	2.00	2.00	0/40	0/60	-	-	100
6		ELECTIVE SUBJECT - 1 (ELECTIVE-I)	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
7		ELECTIVE SUBJECT - 1 (ELECTIVE-II)	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
8	2CSBS5106	MINI PROJECT	0.00	1.00	1.00	2.00	-	-	0/50	0/50	100
			17.00	6.00	23.00	29.00					1000

List of Elective Subjects

Group Name	Course Code	Name of Course
ELECTIVE-I	2CSBSPE5101	CONVERSATIONAL SYSTEMS
	2CSBSPE5102	CLOUD, MICROSERVICES & APPLICATION
	2CSBSPE5103	MACHINE LEARNING
ELECTIVE-II	2CSBSPE5104	BEHAVIOURAL ECONOMICS
	2CSBSPE5105	COMPUTATIONAL FINANCE & MODELING
	2CSBSPE5106	INDUSTRIAL PSYCHOLOGY

Examination Grade Range & Value

Marks/Perc. Range	Grade (Regular)	Grade Point (Regular)	Grade (Remedial)	Grade Point (Remedial)
90>=	A+	10	A	9
80 To 89	A	9	B+	8
70 To 79	B+	8	B	7
60 To 69	B	7	C+	6
50 To 59	C+	6	C	5
40 To 49	C	5	C	5
<40	F	0	F	0

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BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE AND BUSINESS SYSTEMS (B.TECH-CSBS)

Syllabus Details

Effective Year 2024-2025

Program : B.TECH-CSBS

Semester : VI

Total Course : 7

Total Regular Course : 5

Total Elective Course : 2

Total Open Course : 0

Total Audit Course : 0

#	CourseCode	Course Title	Teaching Scheme				Examination Scheme				
			CREDIT			TOTAL HOURS	TH		PR		TOTAL
			TH	PR/TW	TOTAL		Internal	External	Internal	External	
1	2CSBS6101	COMPUTER NETWORKS	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
2	2CSBS6102	INFORMATION SECURITY	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
3	2CSBS6103	ARTIFICIAL INTELLIGENCE	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
4	2CSBS6104	FINANCIAL & COST ACCOUNTING	2.00	0.00	2.00	2.00	0/40	0/60	-	-	100
5	2CSBS6105	BUSINESS COMMUNICATION & VALUE SCIENCE-IV	2.00	1.00	3.00	4.00	0/40	0/60	0/30	0/20	150
6		ELECTIVE SUBJECT - 1 (ELECTIVE-III)	2.00	1.00	3.00	4.00	0/40	0/60	0/30	0/20	150
7		ELECTIVE SUBJECT - 1 (ELECTIVE-IV)	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
			18.00	6.00	24.00	30.00					1000

List of Elective Subjects

Group Name	Course Code	Name of Course
ELECTIVE-III	2CSBSPE6101	MODERN DAY ROBOTICS AND ITS INDUSTRIAL APPLICATIONS
	2CSBSPE6102	MODERN WEB APPLICATIONS
	2CSBSPE6103	DATA MINING & ANALYTICS
ELECTIVE-IV	2CSBSPE6104	ENTERPRISE SYSTEMS
	2CSBSPE6105	ADVANCE FINANCE
	2CSBSPE6106	IMAGE PROCESSING AND PATTERN RECOGNITION

Examination Grade Range & Value

Marks/Perc. Range	Grade (Regular)	Grade Point (Regular)	Grade (Remedial)	Grade Point (Remedial)
90>=	A+	10	A	9
80 To 89	A	9	B+	8
70 To 79	B+	8	B	7
60 To 69	B	7	C+	6
50 To 59	C+	6	C	5
40 To 49	C	5	C	5
<40	F	0	F	0

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Syllabus Details

Effective Year 2024-2025

Program : B.TECH-CSBS

Semester : VII

Total Course : 6

Total Regular Course : 4

Total Elective Course : 2

Total Open Course : 0

Total Audit Course : 0

#	CourseCode	Course Title	Teaching Scheme				Examination Scheme				
			CREDIT			TOTAL HOURS	TH		PR		TOTAL
			TH	PR/TW	TOTAL		Internal	External	Internal	External	
1	2CSBS7101	USABILITY DESIGN OF SOFTWARE APPLICATIONS	2.00	1.00	3.00	4.00	0/40	0/60	0/30	0/20	150
2	2CSBS7102	IT WORKSHOP SKYLAB/MATLAB	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
3	2CSBS7103	IT PROJECT MANAGEMENT	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
4	2CSBS7104	DATA VISUALIZATION	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
5		ELECTIVE SUBJECT - 1 (ELECTIVE-V)	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
6		ELECTIVE SUBJECT - 1 (ELECTIVE-VI)	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
			17.00	6.00	23.00	29.00					900

List of Elective Subjects

Group Name	Course Code	Name of Course
ELECTIVE-V	2CSBS7PE1	COGNITIVE SCIENCE & ANALYTICS
	2CSBS7PE3	CRYPTOLOGY
	2CSBS7PE5	INTRODUCTION TO IOT
	2CSBS7PE7	GENERATIVE AI
ELECTIVE-VI	2CSBS7PE4	ADVANCE SOCIAL, TEXT AND MEDIA ANALYTICS
	2CSBS7PE8	INFORMATION RETRIEVAL
	2CSBS7PE6	MOBILE COMPUTING
	2CSBS7PE2	QUANTUM COMPUTATION & QUANTUM INFORMATION

Examination Grade Range & Value

Marks/Perc. Range	Grade (Regular)	Grade Point (Regular)	Grade (Remedial)	Grade Point (Remedial)
90>=	A+	10	A	9
80 To 89	A	9	B+	8
70 To 79	B+	8	B	7
60 To 69	B	7	C+	6
50 To 59	C+	6	C	5
40 To 49	C	5	C	5
<40	F	0	F	0

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BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE AND BUSINESS SYSTEMS (B.TECH-CSBS)

Syllabus Details

Effective Year 2024-2025

Program : B.TECH-CSBS

Semester : VIII

Total Course : 1

Total Regular Course : 1

Total Elective Course : 0

Total Open Course : 0

Total Audit Course : 0

#	CourseCode	Course Title	Teaching Scheme				Examination Scheme				
			CREDIT			TOTAL HOURS	TH		PR		TOTAL
			TH	PR/TW	TOTAL		Internal	External	Internal	External	
1	2CSBS8101	PROJECT	0.00	12.00	12.00	24.00	-	-	0/200	0/200	400
			0.00	12.00	12.00	24.00					400

Examination Grade Range & Value

Marks/Perc. Range	Grade (Regular)	Grade Point (Regular)	Grade (Remedial)	Grade Point (Remedial)
90>=	A+	10	A	9
80 To 89	A	9	B+	8
70 To 79	B+	8	B	7
60 To 69	B	7	C+	6
50 To 59	C+	6	C	5
40 To 49	C	5	C	5
<40	F	0	F	0