

FACULTY OF ENGINEERING & TECHNOLOGY

U.V. PATEL COLLEGE OF ENGINEERING

BACHELOR OF TECHNOLOGY IN INFORMATION TECHNOLOGY (B.TECH-IT)

Syllabus Details

Effective Year 2025-2026

Program : B.TECH-IT

Total Course : 7

Total Elective Course : 0

Total Audit Course : 1

Semester : I

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	2BS1101	MATHEMATICS - I	4.00	0.00	4.00	4.00	0/40	0/60	-	-	100
2	2ES1101	ENGINEERING GRAPHICS	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
3	2ES1103	BASIC ELECTRICAL ENGINEERING	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
4	2ES1109	BASICS OF WEB TECHNOLOGY	2.00	2.00	4.00	6.00	0/40	0/60	0/30	0/20	150
5	2ES1110	IT PERIPHERALS & TOOLS	0.00	2.00	2.00	4.00	-	-	0/30	0/20	50
6	2HS1102	SEMINAR	0.00	1.00	1.00	2.00	-	-	0/30	0/20	50
7		AUDIT SUBJECT - 1	0.00	0.00	0.00	2.00	-	-	-	-	0
			12.00	7.00	19.00	28.00					650

List of Audit Subjects

Group Name	Course Code	Name of Course
AUDIT	2AC1103	ENVIRONMENTAL STUDIES AND DISASTER MANAGEMENT

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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U.V. PATEL COLLEGE OF ENGINEERING
BACHELOR OF TECHNOLOGY IN INFORMATION TECHNOLOGY (B.TECH-IT)

Syllabus Details

Effective Year 2025-2026

Program : B.TECH-IT
 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	2BS1102	MATHEMATICS - II	4.00	0.00	4.00	4.00	0/40	0/60	-	-	100
2	2BS1103	PHYSICS	2.00	1.00	3.00	4.00	0/40	0/60	0/30	0/20	150
3	2HS1201	COMMUNICATION SKILLS	3.00	0.00	3.00	3.00	0/40	0/60	-	-	100
4	2ES1102	WORKSHOP PRACTICE	0.00	2.00	2.00	4.00	-	-	0/30	0/20	50
5	2ES1104	PROGRAMMING FOR PROBLEM SOLVING	2.00	2.00	4.00	6.00	0/40	0/60	0/30	0/20	150
6	2ES1111	IT WORKSHOP	0.00	2.00	2.00	4.00	-	-	0/30	0/20	50
7		ELECTIVE SUBJECT - 1 (UHV_Elective-I)	2.00	0.00	2.00	2.00	0/100	-	-	-	100
			13.00	7.00	20.00	27.00					700

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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BACHELOR OF TECHNOLOGY IN INFORMATION TECHNOLOGY (B.TECH-IT)

Syllabus Details

Effective Year 2025-2026

Program : B.TECH-IT
 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	2BS3102	DISCRETE MATHEMATICS & PROBABILITY	4.00	0.00	4.00	4.00	0/40	0/60	-	-	100
2	2CEIT301	DIGITAL ELECTRONICS	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
3	2CEIT302	OBJECT ORIENTED PROGRAMMING	3.00	2.00	5.00	7.00	0/40	0/60	0/30	0/20	150
4	2CEIT303	DATABASE MANAGEMENT SYSTEM	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
5	2CEIT304	DATA STRUCTURES	3.00	2.00	5.00	7.00	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
			18.00	6.00	24.00	30.00					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 INFORMATION TECHNOLOGY (B.TECH-IT)

Syllabus Details

Effective Year 2025-2026

Program : B.TECH-IT
 Total Course : 7
 Total Elective Course : 0
 Total Audit Course : 0

Semester : IV
 Total Regular Course : 7
 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	2BS4101	MATHEMATICS FOR COMPUTER ENGINEERING & INFORMATION TECHNOLOGY	4.00	0.00	4.00	4.00	0/40	0/60	-	-	100
2	2CEIT401	OPERATING SYSTEMS	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
3	2CEIT402	DESIGN AND ANALYSIS OF ALGORITHMS	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
4	2CEIT404	PROGRAMMING WITH PYTHON	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
5	2CEIT405	NOSQL DATABASE SYSTEMS	0.00	1.00	1.00	2.00	-	-	0/30	0/20	50
6	2CEIT406	SOFTWARE ENGINEERING AND PROJECT MANAGEMENT	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
7	2CEIT407	DESIGN THINKING	0.00	1.00	1.00	2.00	-	-	0/30	0/20	50
			16.00	6.00	22.00	28.00					800

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 INFORMATION TECHNOLOGY (B.TECH-IT)

Syllabus Details

Effective Year 2025-2026

Program : B.TECH-IT

Total Course : 7

Total Elective Course : 2

Total Audit Course : 0

Semester : V

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	2CEIT507	COMPUTER ARCHITECTURE & ORGANIZATION	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
2	2CEIT503	COMPUTER NETWORKS	4.00	1.00	5.00	6.00	0/40	0/60	0/30	0/20	150
3	2CEIT505	CAPSTONE PROJECT-I	0.00	1.00	1.00	2.00	-	-	0/30	0/20	50
4	2CEIT506	MACHINE LEARNING	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
5		ELECTIVE SUBJECT - 1 (ELECTIVE-I)	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
6		ELECTIVE SUBJECT - 1 (ELECTIVE-II)	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
7	2HS5201	APTITUDE & SKILL BUILDING-I	0.00	1.00	1.00	2.00	-	-	0/30	0/20	50
			16.00	7.00	23.00	30.00					850

List of Elective Subjects

Group Name	Course Code	Name of Course
ELECTIVE-I	2CEIT5PE3	QUANTUM COMPUTING
	2CEIT5PE11	CRYPTOGRAPHY AND NETWORK SECURITY
	2CEIT5PE13	OBJECT ORIENTED ANALYSIS AND DESIGN
	2CEIT5PE2	COMPUTER GRAPHICS & VISUALIZATION
	2CEIT5PE9	FUNDAMENTALS OF MANAGEMENT
	2CEIT5PE17	SOFTWARE PACKAGES
ELECTIVE-II	2CEIT5PE10	3D PRINTING AND DESIGN
	2CEIT5PE12	FORENSIC AND CYBER LAW
	2CEIT5PE14	SOFTWARE VALIDATION & TESTING
	2CEIT5PE6	HUMAN COMPUTER INTERACTION
	2CEIT5PE16	INNOVATION & ENTREPRENEURSHIP
	2CEIT5PE15	PROGRAMMING WITH .NET
	2CEIT5PE1	ADVANCED JAVA
	2CEIT5PE18	MOBILE APPLICATION DEVELOPMENT

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 INFORMATION TECHNOLOGY (B.TECH-IT)

Syllabus Details

Effective Year 2025-2026

Program : B.TECH-IT
 Total Course : 7
 Total Elective Course : 2
 Total Audit Course : 0

Semester : VI
 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	2CEIT601	THEORY OF COMPUTATION	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
2	2CEIT606	ARTIFICIAL INTELLIGENCE	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
3	2CEIT603	CLOUD COMPUTING	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
4	2CEIT605	CAPSTONE PROJECT-II	0.00	1.00	1.00	2.00	-	-	0/30	0/20	50
5		ELECTIVE SUBJECT - 1 (ELECTIVE-III)	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
6		ELECTIVE SUBJECT - 1 (ELECTIVE-IV)	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
7	2HS6201	APTITUDE & SKILL BUILDING-II	0.00	1.00	1.00	2.00	-	-	0/30	0/20	50
			15.00	7.00	22.00	29.00					850

List of Elective Subjects

Group Name	Course Code	Name of Course
ELECTIVE-III	2CEIT6PE10	BLOCKCHAIN TECHNOLOGIES
	2CEIT6PE9	INTERNET OF THINGS
	2CEIT6PE11	ROBOTICS PROCESS AUTOMATION
	2CEIT6PE13	INTRODUCTION TO GAME THEORY
	2CEIT6PE8	IT INFRASTRUCTURE & MANAGEMENT
	2CEIT6PE1	WEB TECHNOLOGY
ELECTIVE-IV	2CEIT6PE7	ETHICAL HACKING
	2CEIT6PE6	ROBOTICS
	2CEIT6PE12	ADVANCED SOFTWARE ENGINEERING
	2CEIT6PE14	AUGMENTED REALITY AND VIRTUAL REALITY
	2CEIT6PE15	FUNDAMENTALS OF ECONOMICS
	2CEIT6PE16	ADVANCED PROGRAMMING WITH.NET
	2CEIT6PE17	PROGRAMMING WITH FLUTTER

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 INFORMATION TECHNOLOGY (B.TECH-IT)

Syllabus Details

Effective Year 2025-2026

Program : B.TECH-IT

Total Course : 4

Total Elective Course : 1

Total Audit Course : 0

Semester : VII

Total Regular Course : 3

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	2CEIT701	COMPILER DESIGN	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
2	2CEIT702	BIG DATA ANALYTICS	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
3	2CEIT705	MINOR PROJECT	0.00	8.00	8.00	16.00	-	-	0/100	0/100	200
4		ELECTIVE SUBJECT - 1 (ELECTIVE-V)	3.00	1.00	4.00	5.00	0/40	0/60	0/30	0/20	150
			9.00	11.00	20.00	31.00					650

List of Elective Subjects

Group Name	Course Code	Name of Course
ELECTIVE-V	2CEIT7PE1	DEEP LEARNING
	2CEIT7PE14	BLOCKCHAIN SECURITY AND PERFORMANCE
	2CEIT7PE4	MOBILE COMPUTING
	2CEIT7PE11	FAULT TOLERANT SYSTEMS
	2CEIT7PE6	VIRTUAL REALITY
	2CEIT7PE3	FUNDAMENTALS OF IMAGE PROCESSING
	2CEIT7PE7	NATURAL LANGUAGE PROCESSING
	2CEIT7PE15	BLOCKCHAIN POLICY: LEGAL, SOCIAL AND ECONOMIC IMPACT
	2CEIT7PE10	FOG COMPUTING
	2CEIT7PE12	HIGH PERFORMANCE COMPUTING
	2CEIT7PE5	SEARCH ENGINE OPTIMIZATION
	2CEIT7PE9	ADVANCED ALGORITHMS
	2CEAI701	COMPUTER VISION

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 INFORMATION TECHNOLOGY (B.TECH-IT)

Syllabus Details

Effective Year 2025-2026

Program : B.TECH-IT
 Total Course : 1
 Total Elective Course : 0
 Total Audit Course : 0

Semester : VIII
 Total Regular Course : 1
 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	2CEIT801	INDUSTRIAL PROJECT/MAJOR PROJECT	0.00	20.00	20.00	40.00	-	-	0/200	0/200	400
			0.00	20.00	20.00	40.00					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