

## FACULTY OF ENGINEERING &amp; TECHNOLOGY

U.V. PATEL COLLEGE OF ENGINEERING  
BACHELOR OF TECHNOLOGY IN COMPUTER ENGINEERING (B.TECH-CE)

## Syllabus Details

Effective Year 2025-2026

Program : B.TECH-CE  
 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<br>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 &amp; 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                      |

## FACULTY OF ENGINEERING &amp; TECHNOLOGY

U.V. PATEL COLLEGE OF ENGINEERING  
BACHELOR OF TECHNOLOGY IN COMPUTER ENGINEERING (B.TECH-CE)

## Syllabus Details

Effective Year 2025-2026

Program : B.TECH-CE  
 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<br>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 &amp; Value

| Marks/Perc.<br>Range | Grade<br>(Regular) | Grade Point<br>(Regular) | Grade<br>(Remedial) | Grade Point<br>(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                         |

## FACULTY OF ENGINEERING &amp; TECHNOLOGY

U.V. PATEL COLLEGE OF ENGINEERING  
BACHELOR OF TECHNOLOGY IN COMPUTER ENGINEERING (B.TECH-CE)

## Syllabus Details

Effective Year 2025-2026

Program : B.TECH-CE

Semester : V

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<br>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 &amp; Value

| <b>Marks/Perc.<br/>Range</b> | <b>Grade<br/>(Regular)</b> | <b>Grade Point<br/>(Regular)</b> | <b>Grade<br/>(Remedial)</b> | <b>Grade Point<br/>(Remedial)</b> |
|------------------------------|----------------------------|----------------------------------|-----------------------------|-----------------------------------|
| 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                                 |

## FACULTY OF ENGINEERING &amp; TECHNOLOGY

U.V. PATEL COLLEGE OF ENGINEERING  
BACHELOR OF TECHNOLOGY IN COMPUTER ENGINEERING (B.TECH-CE)

## Syllabus Details

Effective Year 2025-2026

Program : B.TECH-CE  
 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<br>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 &amp; Value

| <b>Marks/Perc.<br/>Range</b> | <b>Grade<br/>(Regular)</b> | <b>Grade Point<br/>(Regular)</b> | <b>Grade<br/>(Remedial)</b> | <b>Grade Point<br/>(Remedial)</b> |
|------------------------------|----------------------------|----------------------------------|-----------------------------|-----------------------------------|
| 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                                 |

## FACULTY OF ENGINEERING &amp; TECHNOLOGY

## U.V. PATEL COLLEGE OF ENGINEERING

## BACHELOR OF TECHNOLOGY IN COMPUTER ENGINEERING (B.TECH-CE)

## Syllabus Details

Effective Year 2025-2026

Program : B.TECH-CE

Semester : VII

Total Course : 4

Total Regular Course : 3

Total Elective Course : 1

Total Open Course : 0

Total Audit Course : 0

| # | CourseCode | Course Title                       | Teaching Scheme |       |       |                | Examination Scheme |          |          |          |       |
|---|------------|------------------------------------|-----------------|-------|-------|----------------|--------------------|----------|----------|----------|-------|
|   |            |                                    | CREDIT          |       |       | TOTAL<br>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 &amp; Value

| Marks/Perc.<br>Range | Grade<br>(Regular) | Grade Point<br>(Regular) | Grade<br>(Remedial) | Grade Point<br>(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                         |

## FACULTY OF ENGINEERING &amp; TECHNOLOGY

**U.V. PATEL COLLEGE OF ENGINEERING**  
**BACHELOR OF TECHNOLOGY IN COMPUTER ENGINEERING (B.TECH-CE)**

## Syllabus Details

Effective Year 2025-2026

Program : B.TECH-CE  
 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<br>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        |
|   |            |                                  | <b>0.00</b>     | <b>20.00</b> | <b>20.00</b> | <b>40.00</b>   |                    |          |          |          | <b>400</b> |

## Examination Grade Range &amp; Value

| Marks/Perc.<br>Range | Grade<br>(Regular) | Grade Point<br>(Regular) | Grade<br>(Remedial) | Grade Point<br>(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                         |