



First Year Teaching Scheme

Admission Year 2026-27

Admission Year 2026-27
Bachelor of Technology
ECE (VLSI Design and Technology)

Faculty of Engineering & Technology

Parul University

Vadodara, Gujarat, India

Semester - 1

| | | | | | | Internal Marks | | | External Marks | | Passing Marks (Theory + CE) | Passing Marks (Practical) | Total Marks |
|------------------|---|-----------|-----------|-----------|-----|----------------|----|----|----------------|----|--------------------------------|------------------------------|-------------|
| Code | Subject | Credit | Lect | Lab | Tut | T | P | CE | T | P | Int. + Ext. | Int. + Ext. | |
| 03019701P C01 | Foundations of Digital Design and Its Applications | 4 | 3 | 2 | - | 20 | 20 | 20 | 60 | 30 | 40 | 25 | 150 |
| | Basic Science Course (BSC)-I (2025-26) | 4 | 3 | 2 | - | 20 | 20 | 20 | 60 | 30 | 40 | 25 | 150 |
| | Basic Science Course (BSC)-II (2025-26) | 4 | 4 | - | - | 20 | - | 20 | 60 | - | 40 | - | 100 |
| | Engineering Science Course (ESC)-I (2025-26) | 4 | 3 | 2 | - | 20 | 20 | 20 | 60 | 30 | 40 | 25 | 150 |
| | Engineering Science Course (ESC)-II (2025-26) | 4 | 3 | 2 | - | 20 | 20 | 20 | 60 | 30 | 40 | 25 | 150 |
| | Humanities and Social Science, including Management Course (HSMC)-I (2025-26) | 1 | - | 2 | - | - | 20 | - | - | 30 | - | 25 | 50 |
| | Mandatory Course (MNC)-I (2025-26) | 0 | 12 | - | - | - | - | 50 | - | - | 20 | - | 50 |
| | Total | 21 | 16 | 10 | | | | | | | | | 800 |

Semester - 1 : Basic Science Course (BSC)-I (2025-26)

| | | | | | | Internal Marks | | | External Marks | | Passing Marks (Theory + CE) | Passing Marks (Practical) | Total Marks |
|------------------|---------------------------|--------|------|-----|-----|----------------|----|----|----------------|----|--------------------------------|------------------------------|-------------|
| Code | Subject | Credit | Lect | Lab | Tut | T | P | CE | T | P | Int. + Ext. | Int. + Ext. | |
| 03019201B S01 | Physics of Semiconductors | 4 | 3 | 2 | - | 20 | 20 | 20 | 60 | 30 | 40 | 25 | 150 |

Semester - 1 : Basic Science Course (BSC)-II (2025-26)

| | | | | | | Internal Marks | | | External Marks | | Passing Marks (Theory + CE) | Passing Marks (Practical) | Total Marks |
|------------------|-----------------------------|--------|------|-----|-----|----------------|---|----|----------------|---|--------------------------------|------------------------------|-------------|
| Code | Subject | Credit | Lect | Lab | Tut | T | P | CE | T | P | Int. + Ext. | Int. + Ext. | |
| 03019101B S02 | Linear Algebra and Calculus | 4 | 4 | - | - | 20 | - | 20 | 60 | - | 40 | - | 100 |

Semester - 1 : Engineering Science Course (ESC)-I (2025-26)

| | | | | | | Internal Marks | | | External Marks | | Passing Marks (Theory + CE) | Passing Marks (Practical) | Total Marks |
|------------------|-------------------|--------|------|-----|-----|----------------|----|----|----------------|----|--------------------------------|------------------------------|-------------|
| Code | Subject | Credit | Lect | Lab | Tut | T | P | CE | T | P | Int. + Ext. | Int. + Ext. | |
| 03010701E S01 | Basic Electronics | 4 | 3 | 2 | - | 20 | 20 | 20 | 60 | 30 | 40 | 25 | 150 |

Semester - 1 : Engineering Science Course (ESC)-II (2025-26)

| | | | | | | Internal Marks | | | External Marks | | Passing Marks (Theory + CE) | Passing Marks (Practical) | Total Marks |
|------------------|---------------------------------|--------|------|-----|-----|----------------|----|----|----------------|----|--------------------------------|------------------------------|-------------|
| Code | Subject | Credit | Lect | Lab | Tut | T | P | CE | T | P | Int. + Ext. | Int. + Ext. | |
| 03010501E S01 | Programming for Problem Solving | 4 | 3 | 2 | - | 20 | 20 | 20 | 60 | 30 | 40 | 25 | 150 |

Semester - 1 : Humanities and Social Science, including Management Course (HSMC)-I (2025-26)

| | | | | | | Internal Marks | | | External Marks | | Passing Marks (Theory + CE) | Passing Marks (Practical) | Total Marks |
|------------------|------------------------------------|--------|------|-----|-----|----------------|----|----|----------------|----|--------------------------------|------------------------------|-------------|
| Code | Subject | Credit | Lect | Lab | Tut | T | P | CE | T | P | Int. + Ext. | Int. + Ext. | |
| 03010001H M01 | Principles of Communication Skills | 1 | - | 2 | - | - | 20 | - | - | 30 | - | 25 | 50 |

Semester - 1 : Mandatory Course (MNC)-I (2025-26)

| | | | | | | Internal Marks | | | External Marks | | Passing Marks (Theory + CE) | Passing Marks (Practical) | Total Marks |
|------------------|---|--------|------|-----|-----|----------------|---|----|----------------|---|--------------------------------|------------------------------|-------------|
| Code | Subject | Credit | Lect | Lab | Tut | T | P | CE | T | P | Int. + Ext. | Int. + Ext. | |
| 03010001M C01 | Student Induction Program with Essence of Indian Knowledge System | 0 | 12 | - | - | - | - | 50 | - | - | 20 | - | 50 |

Lect - Lecture, Tut - Tutorial, Lab - Lab, T - Theory, P - Practical, CE - CE, T - Theory, P - Practical
Theory Passing % : 40 Practical Passing % : 50

Semester - 2

| | | | | | | Internal Marks | | | External Marks | | Passing Marks (Theory + CE) | Passing Marks (Practical) | Total Marks |
|------------------|--|-----------|-----------|-----------|-----|----------------|----|----|----------------|----|--------------------------------|------------------------------|-------------|
| Code | Subject | Credit | Lect | Lab | Tut | T | P | CE | T | P | Int. + Ext. | Int. + Ext. | |
| 03019702P C01 | Digital Design For VLSI | 4 | 3 | 2 | - | 20 | 20 | 20 | 60 | 30 | 40 | 25 | 150 |
| 03019702P C02 | Electronic Devices and Circuits | 4 | 3 | 2 | - | 20 | 20 | 20 | 60 | 30 | 40 | 25 | 150 |
| | Basic Science Course (BSC)-III (2025-26) | 4 | 4 | - | - | 20 | - | 20 | 60 | - | 40 | - | 100 |
| | Engineering Science Course (ESC)-III (2025-26) | 3 | 2 | 2 | - | 20 | 20 | 20 | 60 | 30 | 40 | 25 | 150 |
| | Engineering Science Course (ESC)-IV (2025-26) | 4 | 3 | 2 | - | 20 | 20 | 20 | 60 | 30 | 40 | 25 | 150 |
| | Humanities and Social Science, including Management Course (HSMC)-II (2025-26) | 2 | 1 | 2 | - | 40 | 20 | - | 60 | 30 | 40 | 25 | 150 |
| | Mandatory Course (MNC)-II (2025-26) | 0 | 1 | - | - | - | - | 50 | - | - | 20 | - | 50 |
| | Multidisciplinary Open Professional Electives Course (MOPEC)-I (2025-26) | 3 | 3 | - | - | 20 | - | 20 | 60 | - | 40 | - | 100 |
| | Total | 24 | 20 | 10 | | | | | | | | | 1000 |

Semester - 2 : Basic Science Course (BSC)-III (2025-26)

| | | | | | | Internal Marks | | | External Marks | | Passing Marks (Theory + CE) | Passing Marks (Practical) | Total Marks |
|------------------|--|--------|------|-----|-----|----------------|---|----|----------------|---|--------------------------------|------------------------------|-------------|
| Code | Subject | Credit | Lect | Lab | Tut | T | P | CE | T | P | Int. + Ext. | Int. + Ext. | |
| 03019102B S02 | Differential Equations and Vector Calculus | 4 | 4 | - | - | 20 | - | 20 | 60 | - | 40 | - | 100 |

Semester - 2 : Engineering Science Course (ESC)-III (2025-26)

| | | | | | | Internal Marks | | | External Marks | | Passing Marks (Theory + CE) | Passing Marks (Practical) | Total Marks |
|--------------|------------------------------------|--------|------|-----|-----|----------------|----|----|----------------|----|-----------------------------|---------------------------|-------------|
| Code | Subject | Credit | Lect | Lab | Tut | T | P | CE | T | P | Int. + Ext. | Int. + Ext. | |
| 03010702ES02 | Practical Electronics with Arduino | 3 | 2 | 2 | - | 20 | 20 | 20 | 60 | 30 | 40 | 25 | 150 |

Semester - 2 : Engineering Science Course (ESC)-IV (2025-26)

| | | | | | | Internal Marks | | | External Marks | | Passing Marks (Theory + CE) | Passing Marks (Practical) | Total Marks |
|--------------|------------------------------------|--------|------|-----|-----|----------------|----|----|----------------|----|-----------------------------|---------------------------|-------------|
| Code | Subject | Credit | Lect | Lab | Tut | T | P | CE | T | P | Int. + Ext. | Int. + Ext. | |
| 03010901ES01 | Elements of Mechanical Engineering | 4 | 3 | 2 | - | 20 | 20 | 20 | 60 | 30 | 40 | 25 | 150 |

Semester - 2 : Humanities and Social Science, including Management Course (HSMC)-II (2025-26)

| | | | | | | Internal Marks | | | External Marks | | Passing Marks (Theory + CE) | Passing Marks (Practical) | Total Marks |
|--------------|---|--------|------|-----|-----|----------------|----|----|----------------|----|-----------------------------|---------------------------|-------------|
| Code | Subject | Credit | Lect | Lab | Tut | T | P | CE | T | P | Int. + Ext. | Int. + Ext. | |
| 03010002HM01 | Advanced Communication and Interpersonal Skills | 2 | 1 | 2 | - | 40 | 20 | - | 60 | 30 | 40 | 25 | 150 |

Semester - 2 : Mandatory Course (MNC)-II (2025-26)

| | | | | | | Internal Marks | | | External Marks | | Passing Marks (Theory + CE) | Passing Marks (Practical) | Total Marks |
|--------------|-----------------------|--------|------|-----|-----|----------------|---|----|----------------|---|-----------------------------|---------------------------|-------------|
| Code | Subject | Credit | Lect | Lab | Tut | T | P | CE | T | P | Int. + Ext. | Int. + Ext. | |
| 03010002MC01 | Environmental Science | 0 | 1 | - | - | - | - | 50 | - | - | 20 | - | 50 |

Semester - 2 : Multidisciplinary Open Professional Electives Course (MOPEC)-I (2025-26)

| | | | | | | Internal Marks | | | External Marks | | Passing Marks (Theory + CE) | Passing Marks (Practical) | Total Marks |
|--------------|--|--------|------|-----|-----|----------------|---|----|----------------|---|--------------------------------|------------------------------|-------------|
| Code | Subject | Credit | Lect | Lab | Tut | T | P | CE | T | P | Int. + Ext. | Int. + Ext. | |
| 03M10002UE01 | Privacy and Security in Online Social Media | 3 | 3 | - | - | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 03M10002UE02 | Design, Technology and Innovation | 3 | 3 | - | - | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 06M10102UE02 | Indian Economy: Some Contemporary Perspectives | 3 | 3 | - | - | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 06M10202UE01 | Principles of Management | 3 | 3 | - | - | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 06M10502UE03 | Intellectual Property | 3 | 3 | - | - | 20 | - | 20 | 60 | - | 40 | - | 100 |

Lect - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical

Theory Passing % : 40 Practical Passing % : 50