



**SARVAJANIK  
UNIVERSITY**

INCLUSIVE | INTEGRATED | INNOVATIVE

**Sarvajani University**  
**Sarvajani College of Engineering and Technology**  
**Teaching scheme of Accelerated B. Tech.**  
**(Information Technology)**  
**Effective from 2025-26**



| SEMESTER 1 |          |              |                                          |                            |   |    |               |             |                           |     |     |
|------------|----------|--------------|------------------------------------------|----------------------------|---|----|---------------|-------------|---------------------------|-----|-----|
| Sr. No.    | Category | Subject Code | Subject Name                             | Teaching Scheme (In Hours) |   |    | Total Credits | Total Hours | Evaluation Scheme (Marks) |     |     |
|            |          |              |                                          | L                          | T | P  |               |             | C                         | H   | CCE |
| 1.         | MC       | BTMD27101    | Induction Program                        | -                          | - | -  | 0             | 21 Days     | -                         | -   | -   |
| 2.         | HSMC     | BTAS20101    | Technical Communication                  | 2                          | 0 | 0  | 2             | 2           | 50                        | 50  | 100 |
| 3.         | HSMC     | BTAS20102    | Technical Communication Lab              | 0                          | 0 | 2  | 1             | 2           | 25                        | 25  | 50  |
| 4.         | HSMC     | BTAS20103    | Universal Human Values                   | 2                          | 0 | 0  | 2             | 2           | 50                        | 50  | 100 |
| 5.         | ESC      | BTME22105    | Manufacturing Practices and Workshop     | 0                          | 0 | 2  | 1             | 2           | 25                        | 25  | 50  |
| 6.         | ESC      | BTCO22101    | Python Programming                       | 2                          | 0 | 0  | 2             | 2           | 50                        | 50  | 100 |
| 7.         | ESC      | BTCO22102    | Python Programming Lab                   | 0                          | 0 | 2  | 1             | 2           | 25                        | 25  | 50  |
| 8.         | ESC      | BTEC22101    | Applied Electronics                      | 3                          | 0 | 0  | 3             | 3           | 50                        | 50  | 100 |
| 9.         | ESC      | BTEC22102    | Applied Electronics Lab                  | 0                          | 0 | 2  | 1             | 2           | 25                        | 25  | 50  |
| 10.        | BSC      | BTAS21105    | Mathematics – 1                          | 3                          | 1 | 0  | 4             | 4           | 50                        | 50  | 100 |
| 11.        | BSC      | BTAS21103    | Semiconductor Physics                    | 2                          | 0 | 0  | 2             | 2           | 50                        | 50  | 100 |
| 12.        | BSC      | BTAS21104    | Semiconductor Physics Lab                | 0                          | 0 | 2  | 1             | 2           | 25                        | 25  | 50  |
| TOTAL      |          |              |                                          | 14                         | 1 | 10 | 20            | 25          | 425                       | 425 | 850 |
| SEMESTER 2 |          |              |                                          |                            |   |    |               |             |                           |     |     |
| Sr. No.    | Category | Subject Code | Subject Name                             | Teaching Scheme (In Hours) |   |    | Total Credits | Total Hours | Evaluation Scheme (Marks) |     |     |
|            |          |              |                                          | L                          | T | P  |               |             | C                         | H   | CCE |
| 1.         | ESC      | BTCH22101    | Energy and Environmental Engineering     | 2                          | 0 | 0  | 2             | 2           | 50                        | 50  | 100 |
| 2.         | ESC      | BTCH22102    | Energy and Environmental Engineering Lab | 0                          | 0 | 2  | 1             | 2           | 25                        | 25  | 50  |
| 3.         | ESC      | BTGN22101    | Design Thinking                          | 0                          | 0 | 2  | 1             | 2           | 25                        | 25  | 50  |
| 4.         | ESC      | BTCO22103    | Programming for Problem Solving          | 2                          | 0 | 0  | 2             | 2           | 50                        | 50  | 100 |
| 5.         | ESC      | BTCO22104    | Programming for Problem Solving Lab      | 0                          | 0 | 2  | 1             | 2           | 25                        | 25  | 50  |
| 6.         | ESC      | BTME22101    | Engineering Graphics and Design          | 1                          | 0 | 0  | 1             | 1           | 25                        | 25  | 50  |
| 7.         | ESC      | BTME22102    | Engineering Graphics and Design Lab      | 0                          | 0 | 4  | 2             | 4           | 50                        | 50  | 100 |
| 8.         | ESC      | BTGN22102    | Electrical-Electronics Workshop          | 0                          | 0 | 2  | 1             | 2           | 25                        | 25  | 50  |
| 9.         | ESC      | BTEL22101    | Basic Electrical Engineering             | 3                          | 0 | 0  | 3             | 3           | 50                        | 50  | 100 |
| 10.        | ESC      | BTEL22102    | Basic Electrical Engineering Lab         | 0                          | 0 | 2  | 1             | 2           | 25                        | 25  | 50  |
| 11.        | BSC      | BTAS21107    | Physics-Quantum Mechanics                | 3                          | 0 | 0  | 3             | 3           | 50                        | 50  | 100 |
| 12.        | BSC      | BTAS21201    | Mathematics – 2                          | 3                          | 1 | 0  | 4             | 4           | 50                        | 50  | 100 |
| Total      |          |              |                                          | 14                         | 1 | 14 | 22            | 29          | 450                       | 450 | 900 |





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| SEMESTER 3   |          |                 |                                         |                            |          |          |               |             |                           |            |            |
|--------------|----------|-----------------|-----------------------------------------|----------------------------|----------|----------|---------------|-------------|---------------------------|------------|------------|
| Sr. No.      | Category | Subject Code    | Subject Name                            | Teaching Scheme (In Hours) |          |          | Total Credits | Total Hours | Evaluation Scheme (Marks) |            |            |
|              |          |                 |                                         | L                          | T        | P        |               |             | CCE                       | SEE        | Total      |
| 1.           | MC       | BTMD27301       | Indian Constitution                     | 2                          | 0        | 0        | 0             | 2           | 50                        | 0          | 50         |
| 2.           | BSC      | BTAS21306       | Probability and Statistics              | 3                          | 1        | 0        | 4             | 4           | 50                        | 50         | 100        |
| 3.           | PCC      | BTCO23305       | Database Management Systems             | 3                          | 0        | 0        | 3             | 3           | 50                        | 50         | 100        |
| 4.           | PCC      | BTCO23306       | Database Management Systems Lab         | 0                          | 0        | 2        | 1             | 2           | 25                        | 25         | 50         |
| 5.           | PCC      | BTIT23301       | Data Structures                         | 3                          | 0        | 0        | 3             | 3           | 50                        | 50         | 100        |
| 6.           | PCC      | BTIT23302       | Data Structures Lab                     | 0                          | 0        | 2        | 1             | 2           | 25                        | 25         | 50         |
| 7.           | PCC      | BTIT23303       | Object-Oriented Analysis and Design     | 3                          | 0        | 0        | 3             | 3           | 50                        | 50         | 100        |
| 8.           | PCC      | BTIT23304       | Object-Oriented Analysis and Design Lab | 0                          | 0        | 2        | 1             | 2           | 25                        | 25         | 50         |
| 9.           | PCC      | BTIT23305       | Computer Organization and Architecture  | 3                          | 0        | 0        | 3             | 3           | 50                        | 50         | 100        |
| 10.          | PCC      | BTIT233##M (A1) | MOOC – 1 (8 Weeks NPTEL Course)         | 2                          | 0        | 0        | 2             | 0           | 50                        | 50         | 100        |
| <b>TOTAL</b> |          |                 |                                         | <b>19</b>                  | <b>1</b> | <b>6</b> | <b>21</b>     | <b>24</b>   | <b>425</b>                | <b>375</b> | <b>800</b> |

| NPTEL Courses (A1) |                                                     |
|--------------------|-----------------------------------------------------|
| BTIT23301M         | Data Science for Engineers                          |
| BTIT23302M         | Programing with Generative AI                       |
| BTIT23303M         | Data Mining                                         |
| BTIT233##M         | Or any other relevant course approved by department |





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| SEMESTER 4 |          |                 |                                                     |                            |   |   |               |             |                           |     |      |
|------------|----------|-----------------|-----------------------------------------------------|----------------------------|---|---|---------------|-------------|---------------------------|-----|------|
| Sr. No.    | Category | Subject Code    | Subject Name                                        | Teaching Scheme (In Hours) |   |   | Total Credits | Total Hours | Evaluation Scheme (Marks) |     |      |
|            |          |                 |                                                     | L                          | T | P |               |             | C                         | H   | CCE  |
| 1.         | HSMC     | BTAS20301       | Fundamentals of Management for Engineers            | 3                          | 0 | 0 | 3             | 3           | 50                        | 50  | 100  |
| 2.         | ESC      | BTCO22409       | Discrete Mathematics                                | 3                          | 1 | 0 | 4             | 4           | 50                        | 50  | 100  |
| 3.         | PCC      | BTCO23401       | Design and Analysis of Algorithms                   | 3                          | 0 | 0 | 3             | 3           | 50                        | 50  | 100  |
| 4.         | PCC      | BTCO23402       | Design and Analysis of Algorithms Lab               | 0                          | 0 | 2 | 1             | 2           | 25                        | 25  | 50   |
| 5.         | PCC      | BTCO23403       | Operating Systems                                   | 3                          | 0 | 0 | 3             | 3           | 50                        | 50  | 100  |
| 6.         | PCC      | BTCO23404       | Operating Systems Lab                               | 0                          | 0 | 2 | 1             | 2           | 25                        | 25  | 50   |
| 7.         | PCC      | BTIT23401       | Web Technologies                                    | 2                          | 0 | 0 | 2             | 2           | 50                        | 50  | 100  |
| 8.         | PCC      | BTIT23402       | Web Technologies Lab                                | 0                          | 0 | 2 | 1             | 2           | 25                        | 25  | 50   |
| 9.         | PCC      | BTIT23403       | Java Programming                                    | 3                          | 0 | 0 | 3             | 3           | 50                        | 50  | 100  |
| 10.        | PCC      | BTIT23404       | Java Programming Lab                                | 0                          | 0 | 2 | 1             | 2           | 25                        | 25  | 50   |
| 11.        | OEC      | BTXX254##       | Open Elective - 1                                   | 3                          | 0 | 0 | 3             | 3           | 50                        | 50  | 100  |
| 12.        | PROJ     | BTMD26401       | Summer Internship / Training/ Project – 1 (2 Weeks) | -                          | - | - | 0             | -           | -                         | -   | -    |
| 13.        | PCC      | BTIT2341#M (A2) | MOOC – 2 (12-Week NPTEL Course)                     | 3                          | 0 | 0 | 3             | 0           | 50                        | 50  | 100  |
| 14.        | PCC      | BTIT2342#M (A3) | MOOC – 3 (12-Week NPTEL Course)                     | 3                          | 0 | 0 | 3             | 0           | 50                        | 50  | 100  |
| TOTAL      |          |                 |                                                     | 26                         | 1 | 8 | 31            | 29          | 550                       | 550 | 1100 |

| NPTEL Courses (A2) |                                                     |
|--------------------|-----------------------------------------------------|
| BTIT23411M         | Big Data Computing                                  |
| BTIT23412M         | Statistical Foundation for Big Data Analysis        |
| BTIT2341#M         | Or any other relevant course approved by department |

| NPTEL Courses (A3) |                                                     |
|--------------------|-----------------------------------------------------|
| BTIT23421M         | Software Project Management                         |
| BTIT23422M         | Software Engineering                                |
| BTIT2342#M         | Or any other relevant course approved by department |



| SEMESTER 5 |          |                   |                                              |                            |   |   |               |             |                           |     |     |
|------------|----------|-------------------|----------------------------------------------|----------------------------|---|---|---------------|-------------|---------------------------|-----|-----|
| Sr. No.    | Category | Subject Code      | Subject Name                                 | Teaching Scheme (In Hours) |   |   | Total Credits | Total Hours | Evaluation Scheme (Marks) |     |     |
|            |          |                   |                                              | L                          | T | P |               |             | C                         | H   | CCE |
| 1.         | HSMC     | BTGN20501         | Foundations of Research and Innovation       | 2                          | 1 | 0 | 3             | 3           | 50                        | 50  | 100 |
| 2.         | PCC      | BTCO23503         | Computer Networks                            | 3                          | 0 | 0 | 3             | 3           | 50                        | 50  | 100 |
| 3.         | PCC      | BTCO23504         | Computer Networks Lab                        | 0                          | 0 | 2 | 1             | 2           | 25                        | 25  | 50  |
| 4.         | PCC      | BTIT23501         | Artificial Intelligence and Applications     | 3                          | 0 | 0 | 3             | 3           | 50                        | 50  | 100 |
| 5.         | PCC      | BTIT23502         | Artificial Intelligence and Applications Lab | 0                          | 0 | 2 | 1             | 2           | 25                        | 25  | 50  |
| 6.         | PCC      | BTIT23503         | Automata Theory and Compiler Design          | 3                          | 0 | 0 | 3             | 3           | 50                        | 50  | 100 |
| 7.         | PCC      | BTIT23504         | Automata Theory and Compiler Design Lab      | 0                          | 0 | 2 | 1             | 2           | 25                        | 25  | 50  |
| 8.         | PEC      | BTIT245##         | Professional Elective – 1                    | 3                          | 0 | 0 | 3             | 3           | 50                        | 50  | 100 |
| 9.         | OEC      | BTXX255##         | Open Elective - 2                            | 3                          | 0 | 0 | 3             | 3           | 50                        | 50  | 100 |
| 10.        | PEC      | BTIT247##<br>(A4) | Professional Elective - 4                    | 3                          | 0 | 0 | 3             | 3           | 50                        | 50  | 100 |
| TOTAL      |          |                   |                                              | 20                         | 1 | 6 | 24            | 27          | 425                       | 425 | 850 |

| Professional Elective - 4 (A4) |                                        |
|--------------------------------|----------------------------------------|
| BTIT24701                      | Soft Computing Techniques              |
| BTIT24702                      | Social Network Analysis                |
| BTIT24703                      | Cloud Computing                        |
| BTIT24704                      | Blockchain Technology and Applications |



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| SEMESTER 6   |          |                 |                                                      |                            |          |           |               |             |                           |            |             |
|--------------|----------|-----------------|------------------------------------------------------|----------------------------|----------|-----------|---------------|-------------|---------------------------|------------|-------------|
| Sr. No.      | Category | Subject Code    | Subject Name                                         | Teaching Scheme (In Hours) |          |           | Total Credits | Total Hours | Evaluation Scheme (Marks) |            |             |
|              |          |                 |                                                      | L                          | T        | P         |               |             | CCE                       | SEE        | Total       |
| 1.           | MC       | BTMD27601       | IKS - 1 / NEP Course from Online Portal              | 2                          | 0        | 0         | 0             | 2           | 50                        | 0          | 50          |
| 2.           | PCC      | BTIT23601       | Cryptography and Network Security                    | 3                          | 0        | 0         | 3             | 3           | 50                        | 50         | 100         |
| 3.           | PCC      | BTIT23602       | Cryptography and Network Security Lab                | 0                          | 0        | 2         | 1             | 2           | 25                        | 25         | 50          |
| 4.           | PCC      | BTIT23603       | Mobile Application Development                       | 2                          | 0        | 0         | 2             | 2           | 50                        | 50         | 100         |
| 5.           | PCC      | BTIT23604       | Mobile Application Development Lab                   | 0                          | 0        | 2         | 1             | 2           | 25                        | 25         | 50          |
| 6.           | PEC      | BTIT246##       | Professional Elective - 2                            | 3                          | 0        | 0         | 3             | 3           | 50                        | 50         | 100         |
| 7.           | PEC      | BTIT246##       | Professional Elective - 2 Lab                        | 0                          | 0        | 2         | 1             | 2           | 25                        | 25         | 50          |
| 8.           | PEC      | BTIT246##       | Professional Elective - 3                            | 3                          | 0        | 0         | 3             | 3           | 50                        | 50         | 100         |
| 9.           | PEC      | BTIT246##       | Professional Elective - 3 Lab                        | 0                          | 0        | 2         | 1             | 2           | 25                        | 25         | 50          |
| 10.          | OEC      | BTXX256##       | Open Elective - 3                                    | 3                          | 0        | 0         | 3             | 3           | 50                        | 50         | 100         |
| 11.          | PROJ     | BTIT26601       | Project - 1                                          | 0                          | 0        | 4         | 2             | 4           | 50                        | 50         | 100         |
| 12.          | PROJ     | BTMD26601       | Summer Internship / Training / Project – 2 (4 Weeks) | -                          | -        | -         | 0             | -           | -                         | -          | -           |
| 13.          | PCC      | BTIT237##M (A5) | MOOC – 4 (12-Week NPTEL Course)                      | 3                          | 0        | 0         | 3             | 0           | 50                        | 50         | 100         |
| 14.          | PEC      | BTIT247##M (A6) | MOOC - 5 (Professional Elective - 5)                 | 3                          | 0        | 0         | 3             | 3           | 50                        | 50         | 100         |
| <b>TOTAL</b> |          |                 |                                                      | <b>22</b>                  | <b>0</b> | <b>12</b> | <b>26</b>     | <b>31</b>   | <b>550</b>                | <b>500</b> | <b>1050</b> |

| NPTEL Courses (A5) |                                                     |
|--------------------|-----------------------------------------------------|
| BTIT23701M         | Introduction to Machine Learning                    |
| BTIT23702M         | Mathematical Foundations of Machine Learning        |
| BTIT23703M         | Deep Learning                                       |
| BTIT237##M         | Or any other relevant course approved by department |

| NPTEL Courses (A6) (Professional Elective - 5) |                                                     |
|------------------------------------------------|-----------------------------------------------------|
| BTIT24705M                                     | Secure Software Engineering                         |
| BTIT24706M                                     | Software Architecture & Patterns                    |
| BTIT24707M                                     | Human Computer Interaction                          |
| BTIT24708M                                     | Agile Development and UX Design                     |
| BTIT247##M                                     | Or any other relevant course approved by department |







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| SEMESTER 7 |          |              |                          |                            |   |    |               |             |                           |     |     |
|------------|----------|--------------|--------------------------|----------------------------|---|----|---------------|-------------|---------------------------|-----|-----|
| Sr. No     | Category | Subject Code | Subject Name             | Teaching Scheme (In Hours) |   |    | Total Credits | Total Hours | Evaluation Scheme (Marks) |     |     |
|            |          |              |                          | L                          | T | P  |               |             | C                         | H   | CEE |
| 1          | PROJ     | BTIT26701    | Project – 2              | 0                          | 0 | 8  | 4             | 8           | 50                        | 50  | 100 |
| 2          | PROJ     | BTIT26801    | Project - 3 / Internship | 0                          | 0 | 24 | 12            | 24          | 100                       | 100 | 200 |
| TOTAL      |          |              |                          | 0                          | 0 | 32 | 16            | 32          | 150                       | 150 | 300 |

