

**B.E. in Mechanical & Smart Manufacturing  
Scheme of Teaching and Examinations 2025**

Outcome-Based Education (OBE) and Choice-Based Credit System (CBCS) (Effective from the academic year 2025-26)

**III SEMESTER**

| Sl. No. | Course | Course Code | Course Title                                                  | Teaching Department (TD) and Question Paper Setting Board (PSB) |                 | Teaching & Learning Scheme |    |    |          | Examination |                   |           |           | Credits |             |
|---------|--------|-------------|---------------------------------------------------------------|-----------------------------------------------------------------|-----------------|----------------------------|----|----|----------|-------------|-------------------|-----------|-----------|---------|-------------|
|         |        |             |                                                               |                                                                 |                 | CI                         |    | LI | #TW & SL | # TH/S      | Duration in hours | CIE Marks | SEE Marks |         | Total Marks |
|         |        |             |                                                               |                                                                 |                 |                            |    |    |          |             |                   |           |           |         |             |
| 1       | ASC    | 1BMATM301   | Transforms and Statistics                                     | Mathematics Department                                          |                 | 42                         | 28 | 0  | 50       | 120         | 3                 | 50        | 50        | 100     | 4           |
| 2       | IPCC   | 1BME302     | Material Science and Metallurgy                               | Mechanical Engineering                                          |                 | 42                         | 0  | 28 | 50       | 120         | 3                 | 50        | 50        | 100     | 4           |
| 3       | PCC    | 1BMM303     | Engineering Thermodynamics                                    | Mechanical Engineering                                          |                 | 42                         | 0  | 0  | 48       | 90          | 3                 | 50        | 50        | 100     | 3           |
| 4       | PCC    | 1BME304     | Mechanics of Materials                                        | Mechanical Engineering                                          |                 | 42                         | 0  | 0  | 48       | 90          | 3                 | 50        | 50        | 100     | 3           |
| 5       | PCC    | 1BME305     | Manufacturing Technology - I                                  | Mechanical Engineering                                          |                 | 42                         | 0  | 0  | 48       | 90          | 3                 | 50        | 50        | 100     | 3           |
| 6       | PCCL   | 1BMEL306    | Computer Aided Machine Drawing Lab                            | Mechanical Engineering                                          |                 | 0                          | 0  | 56 | 4        | 60          | 2                 | 50        | 50        | 100     | 2           |
| 7       | AEC    | 1BMEL307x   | Ability Enhancement Course Laboratory                         | Mechanical Engineering                                          |                 | 0                          | 0  | 28 | 2        | 30          | 2                 | 50        | 50        | 100     | 1           |
| 8       | SDC    | 1BCP308     | Community Project (Project-Based Learning) / Societal Project | Mechanical Engineering                                          |                 | 0                          | 0  | 0  | 30       | 30          | 2                 | 50        | 50        | 100     | 1           |
| 9       | NCMC   | 1BNSS309    | National Service Scheme (NSS)                                 | Campus                                                          | NSS coordinator | 0                          | 0  | 0  | 28       | 28          | --                | 100       | ---       | 100     | PP          |
|         |        | 1BPE309     | Physical Education (PE) (Sports and Athletics)                |                                                                 |                 |                            |    |    |          |             |                   |           |           |         |             |
|         |        | 1BYOG309    | Yoga                                                          |                                                                 |                 |                            |    |    |          |             |                   |           |           |         |             |
|         |        | 1BMUK309    | Music                                                         |                                                                 |                 |                            |    |    |          |             |                   |           |           |         |             |
| Total   |        |             |                                                               |                                                                 |                 |                            |    |    |          |             |                   | 500       | 400       | 900     | 21          |
| 10      | NCMC   | 1BMATDIP310 | Mathematics course for Lateral Entry Students                 | Mathematics Department                                          |                 | 14                         | 0  | 0  | 14       | 28          | 3                 | 100       | ---       | 100     | PP          |
| Total   |        |             |                                                               |                                                                 |                 |                            |    |    |          | 686         |                   | 600       | 400       | 1000    | 21          |

# TH/S- Total Hours per Semester, TW & SL- Term Work & Self Learning

| Ability Enhancement Course (Laboratory) (1BMEL307x) |                                    |                  |                            |
|-----------------------------------------------------|------------------------------------|------------------|----------------------------|
| <b>1BMEL307A</b>                                    | MATLAB for Engineering Computation | <b>1BMEL307C</b> | Spread Sheet for Engineers |
| <b>1BMEL307B</b>                                    | Virtual Reality                    | <b>1BMEL307D</b> | Prompt Engineering         |

**B.E. in Mechanical & Smart Manufacturing**  
**Scheme of Teaching and Examinations-2025**

Outcome-Based Education (OBE) and Choice-Based Credit System (CBCS) (Effective from the academic year 2025-26)

**IV SEMESTER**

| Sl. No. | Course | Course Code | Course Title                                   | Teaching Department (TD) and Question Paper Setting Board (PSB) |                 | Teaching & Learning Scheme |    |    |          | Examination |                   |           |           | Credits |             |
|---------|--------|-------------|------------------------------------------------|-----------------------------------------------------------------|-----------------|----------------------------|----|----|----------|-------------|-------------------|-----------|-----------|---------|-------------|
|         |        |             |                                                |                                                                 |                 | CI                         |    | LI | #TW & SL | # TH/S      | Duration in hours | CIE Marks | SEE Marks |         | Total Marks |
|         |        |             |                                                |                                                                 |                 |                            |    |    |          |             |                   |           |           |         |             |
| 1       | ASC    | 1BMATM401   | Complex Analysis and Probability Distributions | Mathematics Department                                          |                 | 42                         | 0  | 0  | 48       | 90          | 3                 | 50        | 50        | 100     | 3           |
| 2       | IPCC   | 1BME402     | Manufacturing Technology - II                  | Mechanical Engineering                                          |                 | 42                         | 0  | 28 | 50       | 120         | 3                 | 50        | 50        | 100     | 4           |
| 3       | PCC    | 1BMM403     | Data Structures and Algorithms                 | Mechanical Engineering                                          |                 | 42                         | 28 | 0  | 50       | 120         | 3                 | 50        | 50        | 100     | 4           |
| 4       | PCC    | 1BME404     | Fluid Mechanics                                | Mechanical Engineering                                          |                 | 42                         | 0  | 0  | 48       | 90          | 3                 | 50        | 50        | 100     | 3           |
| 5       | PCCL   | 1BMEL405    | Mechanical Measurements and Metrology Lab      | Mechanical Engineering                                          |                 | 0                          | 0  | 28 | 02       | 30          | 2                 | 50        | 50        | 100     | 1           |
| 6       | AEC    | 1BMEL406x   | Ability Enhancement Course Laboratory          | Mechanical Engineering                                          |                 | 0                          | 0  | 28 | 02       | 30          | 2                 | 50        | 50        | 100     | 1           |
| 7       | BSC    | 1BME407     | Biology for Engineers                          | Mechanical Engineering                                          |                 | 28                         | 0  | 0  | 32       | 60          | 3                 | 50        | 50        | 100     | 2           |
| 8       | SDC    | 1BEP408     | Environmental Science Project                  | Mechanical Engineering                                          |                 | 0                          | 0  | 0  | 30       | 30          | 3                 | 50        | 50        | 100     | 1           |
| 9       | PCC    | 1BMM409     | Artificial Intelligence and Machine Learning   | Mechanical Engineering                                          |                 | 42                         | 0  | 0  | 48       | 90          | 3                 | 50        | 50        | 100     | 3           |
| 10      | NCMC   | 1BNSK409    | National Service Scheme (NSS)                  | Campus                                                          | NSS coordinator | 0                          | 0  | 0  | 28       | 28          | -                 | 100       | --        | 100     | PP          |
|         |        | 1BPEK409    | Physical Education (PE) (Sports and Athletics) |                                                                 |                 |                            |    |    |          |             |                   |           |           |         |             |
|         |        | 1BYOK409    | Yoga                                           |                                                                 |                 |                            |    |    |          |             |                   |           |           |         |             |
|         |        | 1BMUS409    | Music                                          |                                                                 |                 |                            |    |    |          |             |                   |           |           |         |             |
| Total   |        |             |                                                |                                                                 |                 |                            |    |    |          |             |                   | 550       | 450       | 1000    | 22          |
| 11      | NCMC   | 1BMATDIP410 | Mathematics course for Lateral Entry Students  | TD/PSB -Maths Dept                                              |                 | 14                         | 0  | 0  | 14       | 28          | --                | 100       | --        | 100     | PP          |
| Total   |        |             |                                                |                                                                 |                 |                            |    |    |          | 688         |                   | 650       | 450       | 1100    | 22          |

**Ability Enhancement Course (Laboratory) (1BMEL406x)**

|           |                               |           |                                 |
|-----------|-------------------------------|-----------|---------------------------------|
| 1BMEL406A | Machine Learning using Python | 1BMEL406C | Simulation of Kinematic Systems |
| 1BMEL406B | PLC and Automation            | 1BMEL406D | Surface Modelling               |