



# ST. VINCENT PALLOTTI COLLEGE OF ENGINEERING & TECHNOLOGY, NAGPUR

(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

## B. Tech. Scheme of Examination & Syllabus 2024-25

### MECHANICAL ENGINEERING

#### ANNEXURE – I Credit Structure for Undergraduate programs

| Sr. No. | Category Code | Category  | Credits |
|---------|---------------|---|---------|
| 1       | HSSM          | Ability Enhancement Course (AEC), Indian Knowledge System (IKS), Value Education Course (VEC), Entrepreneurship/Economics/Management courses                        | 10      |
| 2       | BSC           | Basic Science courses   | 14      |
| 3       | ESC           | Engineering Science courses including workshop, drawing, basics of electrical/mechanical/computer etc.  | 16*     |
| 4       | PCC           | Professional core courses   | 70*     |
| 5       | PEC           | Professional Elective courses relevant to chosen specialization/branch  |         |
| 6       | OE            | Open subjects – Electives from other technical and /or emerging subjects  | 08      |
| 7       | ELC           | Project work, seminar and internship in industry or elsewhere, Industry Training and Skill Development, Capstone Course   | 20*     |
| 8       | VSEC          | Vocations Skill Courses (VSC) , Skill Enhancement Courses(SEC)  | 10      |
| 9       | CC            | Co-curricular Courses (CC) such as Health and Wellness, Yoga education sports, and fitness, Cultural Activities, NSS/NCC and Fine/ Applied/ Visual/ Performing Arts | 04      |
| 10      | MDM           | Compulsory Multidisciplinary Minor  | 14      |
|         |               | TOTAL   | 166*    |

|                |                  |                 |         |                           |
|----------------|------------------|-----------------|---------|---------------------------|
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**B. Tech. Scheme of Examination & Syllabus 2024-25**

**MECHANICAL ENGINEERING**

**GROUP 2(CV,EE,ET,ME,II): SEMESTER I**

| SrNo         | Course Category | Course Code | Course Title                         | Hours per Week |          |           | Credits   | Maximum Marks       |                      |                     |            | No of Hours for ESE |
|--------------|-----------------|-------------|--------------------------------------|----------------|----------|-----------|-----------|---------------------|----------------------|---------------------|------------|---------------------|
|              |                 |             |                                      | L              | T        | P         |           | Mid-Sem Examination | Continual Assessment | End Sem Examination | Total      |                     |
| 1            | BSC             | 24ME101T    | Applied Physics                      | 2              | -        | -         | 2         | 10                  | 10                   | 30                  | 50         | 1.5                 |
| 2            | BSC             | 24ME101P    | Applied Physics Lab                  | -              | -        | 2         | 1         | -                   | 25                   | 25                  | 50         | -                   |
| 3            | BSC             | 24ME102T    | <b>Linear Algebra &amp; Calculus</b> | 3              | 1        | -         | 4         | 20                  | 20                   | 60                  | 100        | 3                   |
| 4            | ESE             | 24ME103T    | Engineering Graphics                 | 3              | -        | -         | 3         | 20                  | 20                   | 60                  | 100        | 3                   |
| 5            | ESE             | 24ME103P    | Engineering Graphics Lab             | -              | -        | 2         | 1         | -                   | 25                   | 25                  | 50         | -                   |
| 6            | PCC             | 24ME104T    | Manufacturing Processes              | 3              | -        | -         | 3         | 20                  | 20                   | 60                  | 100        | 3                   |
| 7            | PCC             | 24ME104P    | Manufacturing Processes Lab          | -              | -        | 2         | 1         | -                   | 25                   | 25                  | 50         | -                   |
|              | ESE             | 24ME105P    | Logic Building with C                | -              | -        | 2         | 1         | -                   | 25                   | 25                  | 50         | -                   |
| 9            | AEC             | 24ME106P    | Business Communication Skills-I Lab  | -              | -        | 2         | 1         | -                   | 25                   | 25                  | 50         | -                   |
| 10           | ESC             | 24ME107T    | Design Thinking                      | 2              | -        | -         | 2         | 10                  | 10                   | 30                  | 50         | -                   |
| 11           | SEC             | 24ME141P    | Career Development-I                 | -              | -        | 2         | 1         | -                   | 50                   | -                   | 50         | -                   |
| 12           | CC              | 24ME108T    | Co-curricular Courses-I              | 2              |          |           | 2         | -                   | 50                   |                     | 50         | -                   |
| <b>Total</b> |                 |             |                                      | <b>15</b>      | <b>1</b> | <b>12</b> | <b>22</b> | <b>80</b>           | <b>305</b>           | <b>365</b>          | <b>750</b> | <b>10.5</b>         |

|                |                  |                 |         |                           |
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**B. Tech. Scheme of Examination & Syllabus 2024-25**

**MECHANICAL ENGINEERING**

**GROUP 2(CV,EE,ET,ME,II): SEMESTER II**

| Sr No        | Course Category | Course Code | Course Title                                       | Hours per Week |          |           | Credits   | Maximum Marks       |                      |                     |            | No of Hours for ESE |
|--------------|-----------------|-------------|--|----------------|----------|-----------|-----------|---------------------|----------------------|---------------------|------------|---------------------|
|              |                 |             |  | L              | T        | P         |           | Mid-Sem Examination | Continual Assessment | End Sem Examination | Total      |                     |
| 1            | BSC             | 24ME201T    | Applied Chemistry                                  | 2              | 0        | -         | 2         | 10                  | 10                   | 30                  | 50         | 1.5                 |
| 2            | BSC             | 24ME201P    | Applied Chemistry Lab                              | -              | -        | 2         | 1         | -                   | 25                   | 25                  | 50         | -                   |
| 3            | BSC             | 24ME202T    | Statistics & Transform                             | 3              | 1        | -         | 4         | 20                  | 20                   | 60                  | 100        | 3                   |
| 4            | ESE             | 24ME203T    | Engineering Mechanics                              | 3              | -        | -         | 3         | 20                  | 20                   | 60                  | 100        | 3                   |
| 5            | ESE             | 24ME203P    | Engineering Mechanics Lab                          | -              | -        | 2         | 1         | -                   | 25                   | 25                  | 50         | -                   |
| 6            | ESE             | 24ME204T    | Basics of Electrical & Electronics Engineering     | 3              | -        | -         | 3         | 20                  | 20                   | 60                  | 100        | 3                   |
| 7            | ESE             | 24ME204P    | Basics of Electrical & Electronics Engineering Lab | -              | -        | 2         | 1         | -                   | 25                   | 25                  | 50         | -                   |
| 8            | ESE             | 24ME205P    | Problem Solving with Python Lab                    | -              | -        | 2         | 1         | -                   | 25                   | 25                  | 50         | -                   |
| 9            | AEC             | 24ME206P    | Business Communication Skills-II Lab               |                | -        | 2         | 1         |                     | 25                   | 25                  | 50         |                     |
| 10           | IKS             | 24ME207T    | Indian Knowledge System                            | 2              | -        | -         | 2         | 10                  | 10                   | 30                  | 50         |                     |
| 11           | SEC             | 24ME241P    | Career Development-II                              |                | -        | 2         | 1         |                     | 50                   | -                   | 50         |                     |
| 12           | CC              | 24ME208T    | Co-Curricular Courses-II                           | 2              |          |           | 2         |                     | 50                   |                     | 50         |                     |
| <b>Total</b> |                 |             |  | <b>15</b>      | <b>1</b> | <b>12</b> | <b>22</b> | <b>80</b>           | <b>305</b>           | <b>365</b>          | <b>750</b> | <b>10.5</b>         |

|                |                  |                 |         |                           |
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**B. Tech. Scheme of Examination & Syllabus 2024-25**

**MECHANICAL ENGINEERING**

**SEMESTER III**

| SrNo         | Course Category | Course Code     | Course Title                                 | Hours per Week |          |           | Credits   | Maximum Marks       |                      |                     |            | No of Hours for ESE |
|--------------|-----------------|-----------------|--|----------------|----------|-----------|-----------|---------------------|----------------------|---------------------|------------|---------------------|
|              |                 |                 |  | L              | T        | P         |           | Mid-Sem Examination | Continual Assessment | End Sem Examination | Total      |                     |
| 1.           | PCC             | 24ME301T        | Machining Process                            | 3              | 1        | -         | 4         | 20                  | 20                   | 60                  | 100        | 3                   |
| 2.           | PCC             | 24ME301P        | Machining Process Lab                        | -              | -        | 2         | 1         | -                   | 25                   | 25                  | 50         | -                   |
| 3.           | PCC             | 24ME302T        | Engineering Thermodynamics                   | 3              | 1        | -         | 4         | 20                  | 20                   | 60                  | 100        | 3                   |
| 4.           | PCC             | 24ME303T        | Materials Engineering                        | 3              | -        | -         | 3         | 20                  | 20                   | 60                  | 100        | 3                   |
| 5.           | PCC             | 24ME303P        | Materials Engineering Lab                    | -              | -        | 2         | 1         | -                   | 25                   | 25                  | 50         | -                   |
| 6.           | PCC             | 24ME304P        | Machine Drawing Lab                          | -              | -        | 4         | 2         | -                   | 25                   | 25                  | 50         | -                   |
| 7.           | MDM             | <b>24ME331M</b> | MDM-I Orientation course on Entrepreneurship | 2              | -        | -         | 2         | 10                  | 10                   | 30                  | 50         | 1.5                 |
| 8.           | VEC             | <b>24ES401T</b> | Economics & Management                       | 3              | -        | -         | 3         | 20                  | 20                   | 60                  | 100        | 3                   |
| 9.           | SEC             | <b>24ME341P</b> | Career Development-III                       | -              | -        | 2         | 1         | -                   | 50                   | -                   | 50         |                     |
| 10.          | ELC             | 24ME305P        | Micro Project-I*                             | -              | -        | 2         | 1         | -                   | 50                   | -                   | 50         |                     |
| <b>Total</b> |                 |                 |  | <b>14</b>      | <b>2</b> | <b>12</b> | <b>22</b> | <b>90</b>           | <b>265</b>           | <b>345</b>          | <b>700</b> |                     |

\* Field Project or Community engagement project in the major discipline

|                |                  |                 |         |                           |
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### MECHANICAL ENGINEERING

#### SEMESTER IV

| SrNo         | Course Category | Course Code | Course Title                               | Hours per Week |          |           | Credits   | Mid-Sem Examination | Maximum Marks        |                     |            | No of Hours for ESE |
|--------------|-----------------|-------------|--|----------------|----------|-----------|-----------|---------------------|----------------------|---------------------|------------|---------------------|
|              |                 |             |  | L              | T        | P         |           |                     | Continual Assessment | End Sem Examination | Total      |                     |
| 1.           | PCC             | 24ME401T    | Fluid Mechanics and Hydraulic Machines     | 3              | -        | -         | 3         | 20                  | 20                   | 60                  | 100        | 3                   |
| 2.           | PCC             | 24ME401P    | Fluid Mechanics and Hydraulic Machines Lab | -              | -        | 2         | 1         | -                   | 25                   | 25                  | 50         | -                   |
| 3.           | PCC             | 24ME402T    | Strength of Materials                      | 3              | -        | -         | 3         | 20                  | 20                   | 60                  | 100        | 3                   |
| 4.           | PCC             | 24ME402P    | Strength of Materials Lab                  | -              | -        | 2         | 1         | -                   | 25                   | 25                  | 50         | -                   |
| 5.           | PCC             | 24ME403P    | Mechatronics Lab                           | -              | -        | 2         | 1         | -                   | 25                   | 25                  | 50         | -                   |
| 6.           | PCC             | 24ME404P    | Mechanical Measurements Lab                | -              | -        | 2         | 1         | -                   | 25                   | 25                  | 50         | -                   |
| 7.           | MDM             | 24ME431M    | MDM-II Project Management                  | 3              | -        | -         | 3         | 20                  | 20                   | 60                  | 100        | 3                   |
| 8.           | VSC             | 24ME405T    | Technical Skill Development-I              | 2              | -        | -         | 2         | -                   | 50                   | -                   | 50         | -                   |
| 9.           | AEC             | 24ES301T    | Value Education Course                     | 3              | -        | -         | 3         | 20                  | 20                   | 60                  | 100        | 3                   |
| 10.          | SEC             | 24ME441P    | Career Development-IV                      | -              | -        | 2         | 1         | -                   | 50                   | -                   | 50         | -                   |
| 11.          | ELC             | 24ME406P    | Micro Project-II*                          | -              | -        | 2         | 1         | -                   | 50                   | -                   | 50         | -                   |
| <b>Total</b> |                 |             |  | <b>14</b>      | <b>0</b> | <b>12</b> | <b>20</b> | <b>80</b>           | <b>330</b>           | <b>340</b>          | <b>750</b> |                     |

\* Field Project or Community engagement project in the major discipline

|                |                  |                 |         |                           |
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### MECHANICAL ENGINEERING

#### SEMESTER V

| SrNo         | Course Category | Course Code | Course Title                       | Hours per Week |          |          | Credits   | Maximum Marks       |                      |                     |            | No of Hours for ESE |
|--------------|-----------------|-------------|------------------------------------|----------------|----------|----------|-----------|---------------------|----------------------|---------------------|------------|---------------------|
|              |                 |             |                                    | L              | T        | P        |           | Mid-Sem Examination | Continual Assessment | End Sem Examination | Total      |                     |
| 1.           | PCC             | 24ME501T    | Heat Transfer                      | 3              | 1        | -        | 4         | 20                  | 20                   | 60                  | 100        | 3                   |
| 2.           | PCC             | 24ME501P    | Heat Transfer Lab                  | -              | -        | 2        | 1         | -                   | 25                   | 25                  | 50         | -                   |
| 3.           | PCC             | 24ME502T    | Design of Machine Elements         | 3              | 1        | -        | 4         | 20                  | 20                   | 60                  | 100        | 3                   |
| 4.           | PCC             | 24ME502P    | Design of Machine Elements Lab     | -              | -        | 2        | 1         | -                   | 25                   | 25                  | 50         | -                   |
| 5.           | PEC             | 24ME503T    | Professional Elective course-I     | 3              | -        | -        | 3         | 20                  | 20                   | 60                  | 100        | 3                   |
| 6.           | PEC             | 24ME503P    | Professional Elective course-I Lab | -              | -        | 2        | 1         | -                   | 25                   | 25                  | 50         | -                   |
| 7.           | MDM             | 24ME531M    | MDM-III Industrial Safety          | 3              | -        | -        | 3         | 20                  | 20                   | 60                  | 100        | 3                   |
| 8.           | VSC             | 24ME504P    | Technical Skill Development-II     | 2              | -        | -        | 2         | -                   | 50                   | -                   | 50         | -                   |
| 9.           | SEC             | 24ME541P    | Career Development-V               | -              | -        | 2        | 1         | -                   | 50                   | -                   | 50         | -                   |
| <b>Total</b> |                 |             |                                    | <b>14</b>      | <b>2</b> | <b>8</b> | <b>20</b> | <b>90</b>           | <b>265</b>           | <b>345</b>          | <b>700</b> |                     |

| Professional Elective course-I |                          |
|--------------------------------|--------------------------|
| 24ME503T(i)                    | Industrial Robotics      |
| 24ME503T(ii)                   | Machine Fault Diagnosis  |
| 24ME503T(iii)                  | Renewable Energy Systems |
| 24ME503T(iv)                   | Advanced I/C Engine      |

| Professional Elective course-I Lab |                              |
|------------------------------------|------------------------------|
| 24ME503P(i)                        | Industrial Robotics Lab      |
| 24ME503P(ii)                       | Machine Fault Diagnosis Lab  |
| 24ME503P(iii)                      | Renewable Energy Systems Lab |
| 24ME503P(iv)                       | Advanced I/C Engine Lab      |

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### MECHANICAL ENGINEERING

#### SEMESTER VI

| No           | Course Category | Course Code | Course Title                            | Hours per Week |          |          | Credits   | Maximum Marks       |                      |                     |            | No of Hours for ESE |
|--------------|-----------------|-------------|---|----------------|----------|----------|-----------|---------------------|----------------------|---------------------|------------|---------------------|
|              |                 |             |   | L              | T        | P        |           | Mid-Sem Examination | Continual Assessment | End Sem Examination | Total      |                     |
| 1            | PCC             | 24ME601T    | Kinematics and Dynamic of Machines      | 3              | -        | -        | 3         | 20                  | 20                   | 60                  | 100        | 3                   |
| 2            | PCC             | 24ME601P    | Kinematics and Dynamics of Machines Lab | -              | -        | 2        | 1         | -                   | 25                   | 25                  | 50         | -                   |
| 3            | PCC             | 24ME602T    | Industrial Engineering                  | 2              | -        | -        | 2         | 10                  | 10                   | 30                  | 50         | 1.5                 |
| 4            | PEC             | 24ME603T    | Professional Elective course-II         | 3              | -        | -        | 3         | 20                  | 20                   | 60                  | 100        | 3                   |
| 5            | PEC             | 24ME604T    | Professional Elective course-III        | 3              | -        | -        | 3         | 20                  | 20                   | 60                  | 100        | 3                   |
| 6            | MDM             | 24ME631M    | MDM-IV Vehicle Engineering              | 3              | -        | -        | 3         | 20                  | 20                   | 60                  | 100        | 3                   |
| 7            | OE              | 24ME661O    | Open Elective-I                         | 2              | -        | -        | 2         | 10                  | 10                   | 30                  | 50         | 1.5                 |
| 8            | ELC             | 24ME605T    | Project-I                               | -              | -        | 4        | 2         | -                   | 50                   | 50                  | 100        | -                   |
| 9            | SEC             | 24ME641P    | Career Development-VI                   | -              | -        | 2        | 1         | -                   | 50                   | -                   | 50         | -                   |
| <b>Total</b> |                 |             |   | <b>16</b>      | <b>0</b> | <b>8</b> | <b>20</b> | <b>100</b>          | <b>225</b>           | <b>375</b>          | <b>700</b> |                     |

| Open Elective-I |                              |
|-----------------|------------------------------|
| 24ME661O        | Entrepreneurship Development |

| Professional Elective course-II |  |
|---------------------------------|--|
| 24ME603T(i)                     | Logistics and Supply Chain Management      |
| 24ME603T(ii)                    | Mechanical Vibrations                      |
| 24ME603T(iii)                   | Vehicle Engineering                        |
| 24ME603T(iv)                    | Advances in Project and Quality Management |
| 24ME603T(v)                     | Production and Operation Management        |

| Professional Elective course-III |  |
|----------------------------------|--|
| 24ME604T(i)                      | Fundamentals of HVAC System                    |
| 24ME604T(ii)                     | Design of Mechanical Power Transmission system |
| 24ME604T(iii)                    | Sustainable Production System                  |
| 24ME604T(iv)                     | Computer Aided Design                          |
| 24ME604T(v)                      | Advanced Manufacturing Techniques              |

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### MECHANICAL ENGINEERING

#### VII SEMESTER

| SrNo         | Course Category | Course Code | Course Title  | Hours per Week |          |           | Credits   | Maximum Marks       |                      |                     |            | No of Hours for ESE |
|--------------|-----------------|-------------|---|----------------|----------|-----------|-----------|---------------------|----------------------|---------------------|------------|---------------------|
|              |                 |             |   | L              | T        | P         |           | Mid-Sem Examination | Continual Assessment | End Sem Examination | Total      |                     |
| 1.           | PCC             | 24ME701T    | Automation & Robotics   | 3              | -        | -         | 3         | 20                  | 20                   | 60                  | 100        | 3                   |
| 2.           | PCC             | 24ME701P    | Automation & Robotics Lab   | -              | -        | 2         | 1         |                     | 25                   | 25                  | 50         | -                   |
| 3.           | PCC             | 24ME702T    | Energy Conversion   | 3              | -        | -         | 3         | 20                  | 20                   | 60                  | 100        | 3                   |
| 4.           | PCC             | 24ME702P    | Energy Conversion Lab   | -              | -        | 2         | 1         |                     | 25                   | 25                  | 50         | -                   |
| 5.           | PEC             | 24ME703T    | Professional Elective course-IV                                     | 3              | -        | -         | 3         | 20                  | 20                   | 60                  | 100        | 3                   |
| 6.           | PEC             | 24ME703P    | Professional Elective course-IV Lab                                 | -              | -        | 2         | 1         |                     | 25                   | 25                  | 50         | -                   |
| 7.           | OE              | 24ME761O    | Open Elective-II  | 3              | -        | -         | 3         | 20                  | 20                   | 60                  | 100        | 3                   |
| 8.           | MDM             | 24ME731M    | MDM-V Project Planning and auxiliary systems in vehicle development | 3              | -        | -         | 3         | 20                  | 20                   | 60                  | 100        | 3                   |
| 9.           | ELC             | 24ME704P    | Project-II  | -              | -        | 4         | 2         |                     | 50                   | 50                  | 100        |                     |
| <b>Total</b> |                 |             |   | <b>15</b>      | <b>0</b> | <b>10</b> | <b>20</b> | <b>100</b>          | <b>225</b>           | <b>425</b>          | <b>750</b> |                     |

| Open Elective – II |                        |
|--------------------|------------------------|
| 24ME761O           | Automobile Engineering |

| Professional Elective course-IV |                                    |
|---------------------------------|------------------------------------|
| 24ME703T(i)                     | Refrigeration and Air Conditioning |
| 24ME703T(ii)                    | Finite Element Method              |
| 24ME703T(iii)                   | Computer Integrated Manufacturing  |
| 24ME703T(iv)                    | Additive Manufacturing             |

| Professional Elective course-IV Lab |  |
|-------------------------------------|--|
| 24ME703P(i)                         | Refrigeration and Air Conditioning Lab |
| 24ME703P(ii)                        | Finite Element Method Lab              |
| 24ME703P(iii)                       | Computer Integrated Manufacturing Lab  |
| 24ME703P(iv)                        | Additive Manufacturing Lab             |

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### MECHANICAL ENGINEERING

#### SEMESTER VIII

##### Option A

| Sr No        | Course Category | Course Code | Course Title                                | Hours per Week |          |          | Credits   | Maximum Marks        |                     |            | No of Hours for ESE |
|--------------|-----------------|-------------|---|----------------|----------|----------|-----------|----------------------|---------------------|------------|---------------------|
|              |                 |             |   | L              | T        | P        |           | Continual Assessment | End Sem Examination | Total      |                     |
| 1            | ELC             | 24ES801T    | Research Methodology <sup>#</sup>           | 2              | -        | -        | 2         | 20                   | 30                  | 50         | 1.5                 |
| 2            | PEC             | 24ME802T    | Professional Elective Course-V <sup>#</sup> | 3              | -        | -        | 3         | 40                   | 60                  | 100        | 3                   |
| 3            | OE              | 24ME861O    | Open Elective-III <sup>#</sup>              | 3              | -        | -        | 3         | 40                   | 60                  | 100        | 3                   |
| 4            | ELC             | 24ME804P(i) | Industry/Research Internship <sup>*</sup>   | -              | -        | -        | 12        | 300                  | 100                 | 400        | -                   |
| <b>Total</b> |                 |             |   | <b>0</b>       | <b>0</b> | <b>0</b> | <b>20</b> | <b>300</b>           | <b>100</b>          | <b>400</b> |                     |

##### Option B

| Sr No        | Course Category | Course Code | Course Title  | Hours per Week |          |           | Credits   | Maximum Marks        |                     |            | No of Hours for ESE |
|--------------|-----------------|-------------|---|----------------|----------|-----------|-----------|----------------------|---------------------|------------|---------------------|
|              |                 |             |   | L              | T        | P         |           | Continual Assessment | End Sem Examination | Total      |                     |
| 1            | ELC             | 24ES801T    | Research Methodology <sup>#</sup>                   | 2              | -        | -         | 2         | 20                   | 30                  | 50         | 1.5                 |
| 2            | PEC             | 24ME802T    | Professional Elective-V <sup>#</sup>                | 3              | -        | -         | 3         | 40                   | 60                  | 100        | 3                   |
| 3            | OE              | 24ME861O    | Open Elective-III <sup>#</sup>                      | 3              | -        | -         | 3         | 40                   | 60                  | 100        | 3                   |
| 4            | ELC             | 24ME804P(i) | Institutional Internship <sup>§</sup> & Project-III | -              | -        | 24        | 12        | 300                  | 100                 | 400        | -                   |
| <b>Total</b> |                 |             |   | <b>0</b>       | <b>0</b> | <b>24</b> | <b>20</b> | <b>300</b>           | <b>100</b>          | <b>400</b> |                     |

Option B is available to students only after recommendation of the concerned Head of the department. The project and internship should contribute towards career development plan of the students.

<sup>#</sup> Courses to be mapped with NPTEL/SWAYAM/MOOC offered course in that semester

<sup>\*</sup> Minimum 90 days internship in any industry and project is to be carried out during internship.

<sup>§</sup> Two NPTEL courses (as per choice of student) or Institutional Internship by IEDC, SVP CET.

|                |                  |                 |         |                           |
|----------------|------------------|-----------------|---------|---------------------------|
|                |                  | July 2024       | 2.0     | Applicable for<br>2024-25 |
| Chairman - BoS | Dean – Academics | Date of Release | Version |                           |



# ST. VINCENT PALLOTTI COLLEGE OF ENGINEERING & TECHNOLOGY, NAGPUR

(An autonomous institution affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

## B. Tech. Scheme of Examination & Syllabus 2024-25

### MECHANICAL ENGINEERING

#### EXIT OPTIONS

##### Award of UG Certificate in Major with 44 credits and an additional 8 credits (After First Year)

| EXIT COURSES |  |                    |         |
|--------------|--|--------------------|---------|
| S.N.         | Course name  | Mode of conduction | Credits |
| 1.           | Vocational Course on drafting software for 8 Weeks / Industry Internship for 8 week duration | Online/ Offline    | 8       |
| 2.           |  |                    |         |

##### Award of UG Diploma in Major with 88 credits and an additional 8 credits (After Second Year)

| EXIT COURSES |   |                    |         |
|--------------|---|--------------------|---------|
| S.N.         | Course name   | Mode of conduction | Credits |
| 1.           | Vocational Course on Modeling software for 8 weeks/ Industry Internship for 8 week duration | Online/ Offline    | 8       |
| 2.           |   |                    |         |

##### Award of UG Degree in Major with 132 credits and an additional 8 credits (After Third Year)

| EXIT COURSES |  |                    |         |
|--------------|--|--------------------|---------|
| S.N.         | Course name  | Mode of conduction | Credits |
| 1.           | Vocational Course on CAE software for 8 weeks/ Industry Internship for 8 week duration | Online/ Offline    | 8       |
| 2.           |  |                    |         |

|                |                  |                 |         |                           |
|----------------|------------------|-----------------|---------|---------------------------|
|                |                  | July 2024       | 2.0     | Applicable for<br>2024-25 |
| Chairman - BoS | Dean – Academics | Date of Release | Version |                           |