### Name of the Programme: B. Tech. Mechatronics Engineering

#### Year of the Programme: Third Year

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<tr>
<th>Sr. No.</th>
<th>Module / Subject Code</th>
<th>Name of the Module</th>
<th>Theory Hours per week</th>
<th>Practicals Hours per week</th>
<th>Tutorials Hours per week</th>
<th>Total no. of hours for the subject (In term)</th>
<th>Credits</th>
<th>Duration of Examination (Hrs)</th>
<th>Mode of Exam</th>
<th>Distribution of ICA Marks</th>
<th>ETE</th>
<th>Scaled Marks (ICA+TEE)</th>
<th>Total Marks</th>
<th>Examination Scheme (Weightage)</th>
<th>Template Codes</th>
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#### Semester - V

1. **BTMA05007** Elements of Biology
   - Theory: 3, Practicals: 0, Tutorials: 0, Total: 60
   - ICA: 3
   - Mode of Exam: Written
   - ICA Marks: 50
   - Total Marks: 100
   - Examination Scheme: Written

2. **BTMA05008** Theory of Machines
   - Theory: 3, Practicals: 2, Tutorials: 0, Total: 75
   - ICA: 3
   - Mode of Exam: Written
   - ICA Marks: 50
   - Total Marks: 100
   - Examination Scheme: Written

3. **BTMA05009** Industrial Electronics and Drives
   - Theory: 3, Practicals: 2, Tutorials: 0, Total: 75
   - ICA: 3
   - Mode of Exam: Written
   - ICA Marks: 50
   - Total Marks: 100
   - Examination Scheme: Written

4. **BTMA05010** Essence of Indian Traditional Knowledge
   - Theory: 2, Practicals: 0, Tutorials: 0, Total: 30
   - ICA: 0
   - Mode of Exam: Written
   - Examination Scheme: Written

5. **BTMA05011** Management Accounting for Engineers
   - Theory: 2, Practicals: 0, Tutorials: 0, Total: 30
   - ICA: 2
   - Mode of Exam: Written
   - Examination Scheme: Written

6. **BTMA05012** Electro-Mechanical Workshop
   - Theory: 0, Practicals: 2, Tutorials: 0, Total: 30
   - ICA: 1
   - Mode of Exam: Written
   - Examination Scheme: Written

#### Professional Elective Course-1 (Choose any one)

- **BTMA05013** Thermodynamics and Heat Transfer
  - Theory: 3, Practicals: 2, Tutorials: 0, Total: 75
  - ICA: 3
  - Mode of Exam: Written
  - Examination Scheme: Written
  - ICA Marks: 50
  - Total Marks: 100
  - Examination Scheme: Written

- **BTMA05014** Materials Engineering
  - Theory: 3, Practicals: 2, Tutorials: 0, Total: 75
  - ICA: 3
  - Mode of Exam: Written
  - Examination Scheme: Written
  - ICA Marks: 50
  - Total Marks: 100
  - Examination Scheme: Written

- **BTMA05015** Fluid Mechanics & Machinery
  - Theory: 3, Practicals: 2, Tutorials: 0, Total: 75
  - ICA: 3
  - Mode of Exam: Written
  - Examination Scheme: Written
  - ICA Marks: 50
  - Total Marks: 100
  - Examination Scheme: Written

#### Professional Elective Course-2 (Choose any one)

- **BTMA05016** Industrial Data Communication
  - Theory: 3, Practicals: 2, Tutorials: 0, Total: 75
  - ICA: 3
  - Mode of Exam: Written
  - Examination Scheme: Written
  - ICA Marks: 50
  - Total Marks: 100
  - Examination Scheme: Written

- **BTMA05017** Python Programming
  - Theory: 3, Practicals: 2, Tutorials: 0, Total: 75
  - ICA: 3
  - Mode of Exam: Written
  - Examination Scheme: Written
  - ICA Marks: 50
  - Total Marks: 100
  - Examination Scheme: Written

- **BTMA05018** Signals and Systems
  - Theory: 3, Practicals: 2, Tutorials: 0, Total: 75
  - ICA: 3
  - Mode of Exam: Written
  - Examination Scheme: Written
  - ICA Marks: 50
  - Total Marks: 100
  - Examination Scheme: Written

#### Total
   - Theory: 19
   - Practicals: 10
   - Tutorials: 1
   - Total: 450
   - Duration of ICA: 23
   - ICA Marks: 17
   - Total Marks: 60
   - Scaled Marks (ICA+TEE): 100
   - Weightage %: 70.31

#### Semester - VI

1. **BTMA06007** PLC and Data Acquisition
   - Theory: 3, Practicals: 2, Tutorials: 0, Total: 75
   - ICA: 3
   - Mode of Exam: Written
   - Examination Scheme: Written
   - ICA Marks: 50
   - Total Marks: 100
   - Examination Scheme: Written

2. **BTMA06008** Mechanical Measurements and Instrumentation
   - Theory: 3, Practicals: 2, Tutorials: 0, Total: 75
   - ICA: 3
   - Mode of Exam: Written
   - Examination Scheme: Written
   - ICA Marks: 50
   - Total Marks: 100
   - Examination Scheme: Written

3. **BTMA06009** Professional Ethics and Legal Aspects
   - Theory: 2, Practicals: 0, Tutorials: 0, Total: 30
   - ICA: 2
   - Mode of Exam: Written
   - Examination Scheme: Written
   - ICA Marks: 50
   - Total Marks: 100
   - Examination Scheme: Written

4. **BTMA06010** Research Methodology
   - Theory: 1, Practicals: 2, Tutorials: 0, Total: 45
   - ICA: 2
   - Mode of Exam: Written
   - Examination Scheme: Written
   - ICA Marks: 50
   - Total Marks: 100
   - Examination Scheme: Written

#### Professional Elective Course-3 (Choose any one)

- **BTMA06011** CAD/CAM/CIM
  - Theory: 3, Practicals: 2, Tutorials: 0, Total: 75
  - ICA: 3
  - Mode of Exam: Written
  - Examination Scheme: Written
  - ICA Marks: 50
  - Total Marks: 100
  - Examination Scheme: Written

- **BTMA06012** Modeling and Simulation
  - Theory: 3, Practicals: 2, Tutorials: 0, Total: 75
  - ICA: 3
  - Mode of Exam: Written
  - Examination Scheme: Written
  - ICA Marks: 50
  - Total Marks: 100
  - Examination Scheme: Written

- **BTMA06013** Dynamic System Modeling and Analysis
  - Theory: 3, Practicals: 2, Tutorials: 0, Total: 75
  - ICA: 3
  - Mode of Exam: Written
  - Examination Scheme: Written
  - ICA Marks: 50
  - Total Marks: 100
  - Examination Scheme: Written

#### Total
   - Theory: 15
   - Practicals: 10
   - Tutorials: 0
   - Total: 450
   - Duration of ICA: 20
   - ICA Marks: 14
   - Total Marks: 50
   - Scaled Marks (ICA+TEE): 100
   - Weightage %: 70.31

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**Notes:**
- *Term Work = Viva/ Presentations/ Journals/ Assignments/ Quizzes/ MCQs/ Business plans/Roles plans etc.*

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**Date:** 22.06.2020

**Prof. Vinod Jain**  
**HOD, Mechatronics Department**

**Dean:** _____________________

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**School Name:** Mukesh Patel School of Technology Management & Engineering  
**Teaching Scheme for Academic Year:** 2020-21  
**(As approved in the Academic Council)**