

SCHEME OF INSTRUCTION & EXAMINATION
B.E. VI - Semester
(MECHANICAL ENGINEERING)

| S.No | Course Code | Course Title | Scheme of Instruction | | | | Scheme of Examination | | | Credits |
|---------------------------------------|-------------|----------------------------------|-----------------------|---|----------|---------------|-----------------------|------------|-------------------|-----------|
| | | | L | T | P/D | Contact Hr/Wk | CIE | SEE | Duration in Hours | |
| Theory Courses | | | | | | | | | | |
| 1. | PC601ME | Metal Cutting & Machine Tools | 3 | - | - | 3 | 30 | 70 | 3 | 3 |
| 2. | PC602ME | Refrigeration & Air Conditioning | 4 | - | - | 4 | 30 | 70 | 3 | 4 |
| 3. | PC603ME | Hydraulic Machinery & Systems | 4 | - | - | 4 | 30 | 70 | 3 | 4 |
| 4. | PC604ME | Metrology & Instrumentation | 3 | - | - | 3 | 30 | 70 | 3 | 3 |
| 5. | PC605ME | Automobile Engineering | 3 | - | - | 3 | 30 | 70 | 3 | 3 |
| 6. | PE - I | Professional Elective-I | 3 | - | - | 3 | 30 | 70 | 3 | 3 |
| 7. | OE - I | Open Elective - I | 3 | - | - | 3 | 30 | 70 | 3 | 3 |
| Practical / Laboratory Courses | | | | | | | | | | |
| 7. | PC651ME | Metrology & Machine Tools Lab | | | 2 | 2 | 25 | 50 | 3 | 1 |
| 8. | PC652ME | Hydraulic Machinery Lab | | | 2 | 2 | 25 | 50 | 3 | 1 |
| 9. | MC | Mandatory Course | - | - | 3 | 3 | 50 | - | 3 | 0 |
| 10. | SI 671ME | Summer Internship* | | | | | | | | |
| Total | | | 23 | | 7 | 30 | 310 | 590 | | 25 |

PE: Professional Elective MC: Mandatory Course OE: Open Elective SI: Summer Internship
 L: Lecture T: Tutorial P: Practical D: Drawing
 CIE: Continuous Internal Evaluation SEE: Semester End Examination (Univ. Exam)

Note -1:

- Each contact hour is a Clock Hour
- The duration of the practical class is two clock hours, however it can be extended wherever necessary, to enable the student to complete the experiment

Note-2:

- * The students have to undergo a Summer Internship of four weeks duration after VI semester and credits will be awarded in VII semester after evaluation.
- ** Subject is not offered to the students of Mechanical Engineering, Production Engineering and Automobile Engineering Department.




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| Open Elective-I: | | |
|------------------|-------------|---|
| S.No | Course Code | Course Title |
| 1 | OE601CE | Disaster Management |
| 2 | OE602CE | Geo Spatial Techniques |
| 3 | OE601CS | Operating Systems |
| 4 | OE602CS | OOP using Java |
| 5 | OE601IT | Database Systems |
| 6 | OE601EC | Principles of Embedded Systems |
| 7 | OE602EC | Digital System Design using Verilog HDL |
| 8 | OE601EE | Reliability Engineering |
| 9 | OE602EE | Basics of Power Electronics |
| 10 | OE601ME | Industrial Robotics** |
| 11 | OE602ME | Material Handling** |
| 12 | OE632AE | Automotive Safety & Ergonomics** |

| Professional Elective – I | | |
|---------------------------|-------------|--------------------------------------|
| S.No | Course Code | Course Title |
| 1 | PE601ME | Non-Conventional Energy Sources |
| 2 | PE602ME | Modern Machining and Forming Methods |

| Mandatory Course | | |
|------------------|-------------|-------------------------|
| S.No | Course Code | Course Title |
| 1 | MC951SP | Yoga Practice |
| 2 | MC952SP | National Service Scheme |
| 3 | MC953SP | Sports |



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Mechanical Engineering Department
Methodist College of Engg & Tech
 King Kottl, Hyderabad-500 001.

SCHEME OF INSTRUCTION & EXAMINATION
B.E. VII - Semester
(MECHANICAL ENGINEERING)

| S. No. | Course Code | Course Title | Scheme of Instruction | | | | Scheme of Examination | | | Credits |
|--------------------------------------|-------------|--------------------------------------|-----------------------|----|-----|----------------|-----------------------|-----|-----------------|---------|
| | | | L | T | P/D | Contact Hrs/Wk | CIE | SEE | Duration in Hrs | |
| Theory Courses | | | | | | | | | | |
| 1 | PC 701 ME | Thermal Turbo Machines | 3 | 1 | - | 4 | 30 | 70 | 3 | 3 |
| 2 | PC 702 ME | Finite Element Analysis | 3 | 1 | - | 4 | 30 | 70 | 3 | 3 |
| 3 | PC 703 ME | Industrial Engineering | 3 | - | - | 3 | 30 | 70 | 3 | 3 |
| 4 | PC 704 ME | Production And Operations Management | 3 | - | - | 3 | 30 | 70 | 3 | 3 |
| 5 | HS 901 MB | Managerial Economics and Accountancy | 3 | - | - | 3 | 30 | 70 | 3 | 3 |
| 6 | | Open Elective-II | | | | | | | | |
| 7 | | Open Elective-III | 3 | - | - | 3 | 30 | 70 | 3 | 3 |
| Practical/ Laboratory Courses | | | | | | | | | | |
| 8 | PC 751 ME | Thermal Engineering Lab | - | - | 2 | 2 | 25 | 50 | 3 | 1 |
| 9 | PC 752 ME | CAE Lab | - | - | 2 | 2 | 25 | 50 | 3 | 1 |
| 10 | PW 761 ME | Project Work - I | - | - | 4 | 4 | 50 | - | - | 2 |
| 11 | SI 762 ME | Summer Internship | - | - | - | - | 50 | - | - | 2 |
| | | | 21 | 02 | 08 | 31 | 360 | 590 | | 27 |

| Open Elective - II | | | Open Elective - III | | |
|--------------------|-------------|----------------------------------|---------------------|-------------|--|
| S. No. | Course Code | Course Title | S. No. | Course Code | Course Title |
| 1 | OE 771 CE | Green Building Technologies | 1 | OE 781 CE | Road Safety Engineering |
| 2 | OE 772 CS | Data Science Using R Programming | 2 | OE 782 IT | Software Engineering |
| 3 | OE 773 EC | Fundamentals of IoT | 3 | OE 783 EC | Principles of Electronic Communications |
| 4 | OE 774 EE | Non-Conventional Energy Sources | 4 | OE 784 EE | Illumination and Electric Traction systems |
| 5 | OE 775 ME** | Entrepreneurship | 5 | OE 785 ME** | Mechatronics |

PC: Professional Course

PE: Professional Elective

L: Lectures

T: Tutorials

P: Practical

D: Drawing

CIE: Continuous Internal Evaluation

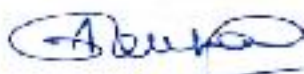
SEE: Semester End Examination (Univ. Exam)

Note: 1) Each contact hour is a Clock Hour

2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

Note-2: * The students have to undergo a Summer Internship of four weeks' duration after VI semester and credits will be awarded in VII semester after evaluation.

** Subject is not offered to the students of Mechanical Engineering Department.



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Mechanical Engineering Department
Methodist College of Engg & Tech
 King Kod, Hyderabad-500 001.

**SCHEME OF INSTRUCTION & EXAMINATION
B.E. VIII - SEMESTER
(MECHANICAL ENGINEERING)**

| S. No. | Course Code | Course Title | Scheme of Instruction | | | | Scheme of Examination | | | Credits |
|--------------------------------------|-------------|-----------------------------|-----------------------|---|-----|----------------|-----------------------|-----|-----------------|---------|
| | | | L | T | P/D | Contact Hrs/Wk | CIE | SEE | Duration in Hrs | |
| Theory Courses | | | | | | | | | | |
| 1 | | Professional Elective – II | 3 | - | - | 3 | 30 | 70 | 3 | 3 |
| 2 | | Professional Elective – III | 3 | - | - | 3 | 30 | 70 | 3 | 3 |
| 3 | | Professional Elective – IV | 3 | - | - | 3 | 30 | 70 | 3 | 3 |
| 4 | | Professional Elective – V | 3 | - | - | 3 | 30 | 70 | 3 | 3 |
| Practical/ Laboratory Courses | | | | | | | | | | |
| 5 | PW 961 ME | Project Work – II | - | - | 16 | 16 | 50 | 100 | - | 8 |
| | | | 12 | - | 16 | 28 | 170 | 380 | | 20 |

| Professional Elective – II | | | Professional Elective – III | | |
|----------------------------|-------------|-------------------------------------|-----------------------------|-------------|--|
| S. No. | Course Code | Course Title | S. No. | Course Code | Course Title |
| 1 | PE 821 ME | Design of Solar Energy System | 1 | PE 826 ME | Power Plant Engineering |
| 2 | PE 822 ME | Mechanical Vibrations | 2 | PE 827 ME | Robotic Engineering |
| 3 | PE 823 ME | Composite Materials | 3 | PE 828 ME | Tool Design |
| 4 | PE 824 ME | Non-Destructive Testing | 4 | PE 829 ME | Product Design And Process Planning |
| Professional Elective – IV | | | Professional Elective – V | | |
| 1 | PE 831 ME | Intellectual Property Rights | 1 | PE 841 ME | Energy Conservation and Management |
| 2 | PE 832 ME | Additive Manufacturing Technology | 2 | PE 842 ME | Advanced Propulsion and Space Science |
| 3 | PE 833 ME | Machine Tool Engineering and Design | 3 | PE 843 ME | Waste Heat Recovery and Co-Generation |
| 4 | PE 834 ME | Entrepreneurship Development | 4 | PE 844 ME | Aerodynamic Design of Thermal Turbines |

PC: Professional Course

L: Lectures

T: Tutorials

PE: Professional Elective

P: Practical

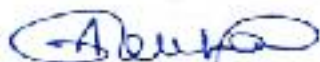
D: Drawing

CIE: Continuous Internal Evaluation

SEE: Semester End Examination (Univ. Exam)

Note: 1) Each contact hour is a Clock Hour

2) The duration of the practical class is two clock hours, however it can be extended wherever necessary, to enable the student to complete the experiment



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**Mechanical Engineering Department
Methodist College of Engg & Tech
King Kott, Hyderabad-500 001.**

M. E. Mechanical Engineering (CAD/CAM)

| Syllabus Ref. No. (Code) | Subject Title | Contact hrs Per week | Scheme of Examination | | Credits |
|-----------------------------------|--|----------------------|-----------------------|-----|---------|
| | | | CIE | SEE | |
| Core Subjects: | | | | | |
| ME2301 | Automation | 3 | 30 | 70 | 3 |
| ME2401 | Finite Element Techniques | 3 | 30 | 70 | 3 |
| ME2402 | Computer Aided Modeling and Design | 3 | 30 | 70 | 3 |
| ME2403 | Computer Integrated Manufacturing | 3 | 30 | 70 | 3 |
| ME2404 | Failure Analysis and Design | 3 | 30 | 70 | 3 |
| ME2306 | Computer Aided Mechanical Design and Analysis | 3 | 30 | 70 | 3 |
| Elective Subjects: | | | | | |
| ME2302 | Control of Dynamic Systems | 3 | 30 | 70 | 3 |
| ME2303 | Robotic Engineering | 3 | 30 | 70 | 3 |
| ME2308 | Optimization Techniques | 3 | 30 | 70 | 3 |
| ME2309 | Vibrations Analysis and Condition Monitoring | 3 | 30 | 70 | 3 |
| ME2001 | Engineering Research Methodology | 3 | 30 | 70 | 3 |
| ME2311 | Neural Networks and Fuzzy Logic | 3 | 30 | 70 | 3 |
| ME2312 | Artificial Intelligence and Expert Systems | 3 | 30 | 70 | 3 |
| ME2107 | Mechanics of Composite Materials | 3 | 30 | 70 | 3 |
| ME2109 | Theory of Elasticity and Plasticity | 3 | 30 | 70 | 3 |
| ME2110 | Experimental Techniques and Data Analysis | 3 | 30 | 70 | 3 |
| ME2601 | Design for Manufacture | 3 | 30 | 70 | 3 |
| ME2405 | Data Base Management Systems | 3 | 30 | 70 | 3 |
| ME2406 | Fracture Mechanics | 3 | 30 | 70 | 3 |
| ME2505 | Design of Press Tools | 3 | 30 | 70 | 3 |
| ME2506 | Design of Dies | 3 | 30 | 70 | 3 |
| ME2206 | Computational Fluid Dynamics | 3 | 30 | 70 | 3 |
| ME2112 | Additive Manufacturing Technologies and Applications | 3 | 30 | 70 | 3 |
| ME2113 | Flexible Manufacturing Systems | 3 | 30 | 70 | 3 |
| ME2111 | Product Design and Process Planning | 3 | 30 | 70 | 3 |
| Departmental Requirements: | | | | | |
| ME2431 | CAD/CAM Lab (Lab –I) | 2 | 50 | - | 2 |
| ME2032 | Computation Lab (Lab –II) | 2 | 50 | - | 2 |
| ME2033 | Seminar I | 2 | 50 | - | 2 |
| ME2034 | Seminar II | 2 | 50 | - | 2 |
| ME2035 | Project Seminar | 6 | 150 | - | 12 |
| ME2036 | Dissertation | 4 | 100 | - | 8 |

CIE : Continuous Internal Evaluation SEE : Semester End Examination

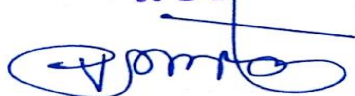

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 Mechanical Engineering Department
 Methodist College of Engg & Tech
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**DEPARTMENT OF
MECHANICAL ENGINEERING**

Scheme of Instruction and Syllabus


H.O.D.

King Kod' Hyderabad-500 001.
Method: Code of Engg & Tech
Mechanical Engineering Department
H.O.D.



**ing Department
of Engg & Tech
abad-500 001.**



**UNIVERSITY COLLEGE OF ENGINEERING
(Autonomous)**

Osmania University

Hyderabad — 500 007, Telangana, INDIA


Scheme of Instruction & Examination
M.E. (Mechanical Engineering) 4 Semesters (Full Time)

| Sl. No | Subject | Hours per week | | Duration (Hrs) | Max. Marks | | Credits |
|-----------------------|-------------------|----------------|----------|----------------|------------|------------|-----------|
| | | L/T | D/P | | SEE | CIE | |
| Semester - I | | | | | | | |
| 1. | Core | 3 | -- | 3 | 70 | 30 | 3 |
| 2. | Core | 3 | -- | 3 | 70 | 30 | 3 |
| 3. | Core / Elective | 3 | -- | 3 | 70 | 30 | 3 |
| 4. | Core / Elective | 3 | -- | 3 | 70 | 30 | 3 |
| 5. | Elective | 3 | -- | 3 | 70 | 30 | 3 |
| 6. | Elective | 3 | -- | 3 | 70 | 30 | 3 |
| 7. | Laboratory - I | -- | 3 | 3 | -- | 50 | 2 |
| 8. | Seminar – I | -- | 3 | 3 | -- | 50 | 2 |
| | Total | 18 | 6 | 24 | 420 | 280 | 22 |
| Semester - II | | | | | | | |
| 1. | Core | 3 | -- | 3 | 70 | 30 | 3 |
| 2. | Core | 3 | -- | 3 | 70 | 30 | 3 |
| 3. | Core / Elective | 3 | -- | 3 | 70 | 30 | 3 |
| 4. | Core / Elective | 3 | -- | 3 | 70 | 30 | 3 |
| 5. | Elective | 3 | -- | 3 | 70 | 30 | 3 |
| 6. | Elective | 3 | -- | 3 | 70 | 30 | 3 |
| 7. | Laboratory - II | -- | 3 | 3 | -- | 50 | 2 |
| 8. | Seminar - II | -- | 3 | 3 | -- | 50 | 2 |
| | Total | 18 | 6 | 24 | 420 | 280 | 22 |
| Semester - III | | | | | | | |
| 1. | Project+ Seminar* | -- | 4 | 4 | -- | 100** | 8 |
| Semester – IV | | | | | | | |
| 1. | Dissertation | -- | 6 | 6 | 200 | - | 16 |

Note: Six core subjects, six elective subjects, two laboratory courses and two seminars should normally be completed by the end of semester II.

* One project seminar presentation.

** 50 marks to be awarded by guide and 50 marks to be awarded by viva-voice committee comprising Guide and two internal senior faculty members (subject experts)


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