

Scheme of Studies for PhD-ME program

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|--------------------------------|-------------------------------------|---------------------|-----------------|---------------------|-----------|
| 1st Semester | Course code | Course Title | Lec Hrs. | Credit Hours | |
| | XXXXX | Course-I | 3 | 3 | |
| | XXXXX | Course-II | 3 | 3 | |
| | XXXXX | Course-III | 3 | 3 | |
| | Total Credit Hours | | | 9 | 9 |
| 2nd Semester | Course Code | Course Title | Lec Hrs. | Credit Hours | |
| | XXXXX | Course-IV | 3 | 3 | |
| | XXXXX | Course-V | 3 | 3 | |
| | XXXXX | Course-VI | 3 | 3 | |
| | Total Credit Hours | | | 9 | 9 |
| | Course Code | Course Title | Lec Hrs. | Credit Hours | |
| | XXXXX | Research Thesis | 36 | 36 | |
| | Total Credit Hours | | | 36 | 36 |
| | Total Credit Hours of Degree | | | 54 | 54 |

Disciplines

- I. Design Engineering
- II. Dynamics and Control
- III. Mechanical Power Engineering
- IV. Manufacturing Engineering
- V. Engineering Management

Course Code Methodology: ME = Mechanical Engineering

First Numeric = Level of knowledge

Second Numeric = 0 for Common Subject

1 for Design Engineering

2 for Dynamics and Control

3 for Mechanical Power Engineering

4 for Manufacturing Engineering

5 for Engineering Management

Third Numeric = Related discipline serial number

List of Courses

| Sr. # | Course Code | Course Title |
|-------|-------------|--|
| 1 | ME501 | Research Methodology |
| 2 | ME502 | Statistical Analysis |
| 3 | ME503 | Advanced Numerical Analysis |
| 4 | ME511 | Advanced Engineering Materials |
| 5 | ME512 | Finite Element Analysis |
| 6 | ME513 | Mechanics Of Composite Materials |
| 7 | ME611 | Theory Of Elasticity |
| 8 | ME612 | Experimental Stress Analysis |
| 9 | ME613 | Engineering Design Optimization |
| 10 | ME711 | Fracture Mechanics |
| 11 | ME712 | Fatigue Analysis |
| 12 | ME713 | Tribology |
| 13 | ME811 | Advanced Stress Analysis |
| 14 | ME812 | Continuum Mechanics |
| 15 | ME813 | Special Topics In Design Engineering |
| 16 | ME521 | Behavior of Materials under Impact Loading |
| 17 | ME621 | Mechanism Design |
| 18 | ME622 | Condition Monitoring of Rotating Machinery |
| 19 | ME721 | Advanced Mechanical Vibrations |
| 20 | ME722 | Robotics |
| 21 | ME723 | Advanced Dynamics |
| 22 | ME821 | Engineering Acoustics |
| 23 | ME822 | Modal Analysis |
| 24 | ME823 | Advanced Automatic Control Systems |
| 25 | ME824 | Special Topics In Dynamics And Control |
| 26 | ME531 | Computational Fluid Dynamics |
| 27 | ME532 | Propulsion Engineering |
| 28 | ME533 | Nuclear Engineering |
| 29 | ME631 | Solar Energy Utilization |
| 30 | ME632 | Combustion Engineering |
| 31 | ME731 | Experimental Methods In Fluid |
| 32 | ME732 | Energy Management |
| 33 | ME831 | Advanced Thermodynamics |
| 34 | ME832 | Advanced Fluid Mechanics |
| 35 | ME833 | Advanced Heat Transfer |
| 36 | ME834 | Special Topics In Mechanical Power Engineering |
| 37 | ME541 | Advanced Metal Forming |
| 38 | ME542 | Lean And Agile Manufacturing |

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| 39 | ME641 | Manufacturing planning and control |
| 40 | ME642 | Work design and measurement |
| 41 | ME741 | Advanced statistics and data mining |
| 42 | ME742 | Product Design And Development |
| 43 | ME743 | Engineering optimization techniques |
| 44 | ME744 | Research methodology and design of experiments |
| 45 | ME745 | Design of advanced manufacturing systems |
| 46 | ME841 | Advanced Cad/Cam |
| 47 | ME842 | Computer Integrated Manufacturing |
| 48 | ME843 | Simulation modeling of manufacturing systems |
| 49 | ME844 | Statistical quality control and assurance |
| 50 | ME845 | Computer aided process planning |
| 51 | ME551 | Human Resources Management and Organizational Behavior |
| 52 | ME651 | Industrial Cost Management |
| 53 | ME652 | Facility Planning and Layout |
| 54 | ME653 | Project Management |
| 55 | ME751 | Total Quality Management |
| 56 | ME752 | Leadership And Entrepreneurship |
| 57 | ME753 | Operations Management |
| 59 | ME851 | Supply Chain Management |
| 60 | ME852 | Cognitive Ergonomics |
| 61 | ME853 | Human Factor Engineering |
| 62 | ME854 | Product Life Cycle Management |
| 62 | ME855 | Operations Research |
| 63 | ME856 | Special Topics In Engineering Management |