Mechanical Engineering Department, University College of Engineering, Osmania University, Hyderabad.

Scheme of Instruction of Theory Subjects & Practical for Mechanical Engineering Dept., University College of Engineering (autonomous) O.U. for the award of BE degree

B.E I/4 (Effective 2011-12)	B.E 2/4 (Effective 2012-13)	B.E.3/4 (Effective 2013-14)	B.E.4/4 (Effective 2010-11)
I Semester	**I Semester**	**I Semester**	**I Semester**
Theory Subjects 1. MT 101 UE Engineering Mathematics-I 2. PH 101 UE Engineering Physics-I 3. CH 101 UE Engineering Chemistry-I 4. CS 101 UE Computer Programming and Problem Solving 5. CE 101 UE Engineering Mechanics-I 6. CE 102 UE Engineering Graphics-I 7. EG 101 UE Engineering English **Practical** 1. EG 131 UE Engg. English Language Lab- I 2. PH 131 UE Engineering Physics lab-I 3. CH 131 UE Engineering Chemistry Lab- I 4. CS 131 UE 'C' Programming Lab 5. ME 131 UE Workshop Practice – I	**Theory Subjects** 1. ME 201 UE Metallurgy & Material Science 2. ME 202 UE Machine Drawing 3. ME 203 UE Thermodynamics 4. CE 222 UE Mechanics of Materials 5. EE 222 UE Electrical Circuits and Machines 6. MT 202 UE Mathematics - III **Practical** 1. ME 231 UE Metallurgy Lab 2. CE 241 UE Mechanics of Materials Lab	**Theory Subjects** 1. ME 301 UE Dynamics of Machines 2. ME 302 UE Design of Machine Elements 3. ME 303 UE Metal Cutting & Machine Tools 4. ME 304 UE Heat Transfer 5. ME 305 UE Metrology & Instrumentation 6. CE 151 UE Environmental Studies **Practical** 1. ME 331 UE Thermodynamics Lab 2. ME 332 UE Manufacturing Processes Lab	**Theory Subjects** 1. ME 401 UE Production and Operations Management 2. ME 402 UE Thermal Turbo Machines 3. ME 403 UE CAD/CAM 4. ME 404 UE Control Systems Theory 5. CM 221 UE Managerial Economics & Accountancy 6. Elective - II **Practical** 1. ME 431 UE Thermal Engineering Lab 2. ME 432 UE CAD/CAM Lab 3. ME 433 UE Project Seminar 4. SI 400 UE Summer Internship Viva-Voce
S.No Service Course Branch	**S.No Service Course Branch**	**S.No Service Course Branch**	**S.No Service Course Branch**
1. Workshop Practice-I All Branches	1. ME 221 UE Mechanical Technology CE (Section-B)	NIL	1. ME 409 UE Entrepreneurship CE/CSE/ECE/EEE/BME 2. ME 412 UE Finite Element Analysis CE/CSE/EEE/ECE/BME
II Semester	**II Semester**	**II Semester**	**II Semester**
Theory Subjects 1.MT 151 UE Engineering Mathematics-II 2. PH 151 UE Engineering Physics- II 3. CH 151 UE Engineering Chemistry - II 4. CS 151 UE Object Oriented Programming 5. CE 155 UE Engineering Mechanics – II 6. CE 156 UE Engineering Graphics - II **Practical** 1. EG 181 UE Engg. English Language Lab - II 2. PH 181 UE Engineering Physics Lab - II 3. CH 181 UE Engineering Chemistry Lab-II 4. CS 182 UE C++ Programming Lab 5. * 181 UE Computer Drafting Lab 6. ME 183 UE Workshop Practice – II * CE for Civil Engg, ME for Mech Engg	**Theory Subjects** 1. ME 251 UE Applied Thermodynamics 2. ME 252 UE Kinematics of Machines 3. ME 253 UE Manufacturing Processes 4. CE 271 UE Fluid Dynamics 5. EC 273 UE Applied Electronics 6. MT 251 UE Mathematics - IV **Practical** 1. EE 241 UE Electrical Engg Lab 2. EC 292 UE Applied Electronics Lab	**Theory Subjects** 1. ME 351 UE Machine Design 2. ME 352 UE Operations Research 3 ME 353 UE Automobile Engineering 4. ME 354 UE Hydraulic Machinery and Systems 5. ME 355 UE Refrigeration and Air Conditioning 6. Elective - I **Practical** 1. ME 381 UE Metrology & Machine Tools Lab 2. ME 382 UE Hydraulic Machinery Lab 3. ME 383 UE Production Drawing 4. SI 400 UE Summer Internship (6-Weeks)	**Theory Subjects** 1. ME 451 UE Management and information systems 2. Elective - III 3. Elective - IV (Free Elective) **Practical** 1. ME 481 UE Seminar 2. ME 482 UE Project
S.No. Service Course Branch	**S.No. Service Course Branch**	**S.No. Service Course Branch**	**S.No. Service Course Branch**
1. Workshop Practice-II CE 2. ME 151 UE Elements of Mechanical Engg ECE/EEE	1. ME 271 UE Prime Movers & Pumps EEE 2. ME 291 UE Prime Movers & Pumps Lab EEE	NIL	1. ME 460 UE Robotics CE/BME/ECE/EEE/CSE 2. ME 471 UE Industrial &Financial Management EEE/ ECE

3/4 (Mech.) II-semester

ELECTIVE-I

1. ME 356 UE Energy Systems
2. ME 357 UE Gas Dynamics
3. ME 358 UE Mechanical Vibrations & Industrial Noise Control
4. ME 359 UE Theory of Elasticity
5. ME 360 UE Non Conventional Energy Sources
6. ME 361 UE Powder Metallurgy
7. ME 362 UE Computational Fluids Flows
8. ME 363 UE Nanomaterials and Technology
9. PH 321 UE Solid State Physics

4/4 (Mech.) I-semester

ELECTIVE-II

1. ME 406 UE Design of Solar Energy Systems
2. ME 407 UE Non-conventional Methods of Machining & Forming
3. ME 408 UE Additive Manufacturing Technologies
4. ME 409 UE Entrepreneurship
5. ME 410 UE Aerodynamics Design of Thermal Turbines
6. ME 411 UE Materials Handling
7. ME 412 UE Finite Element Analysis
8. ME 413 UE Numerical Methods in Engineering
9. CS 408 UE Database Management Systems

4/4 (Mech.) II-semester

ELECTIVE-III

1. ME 454 UE Waste Heat Recovery & Co-Generation
2. ME 455 UE Composite Materials
3. ME 456 UE Machine Tool Engineering & Design
4. ME 466 UE Advanced Propulsion & Space Science
5. EC 465 UE Embedded System Design
6. EC 466 UE Microprocessor Applications
7. CS 459 UE Information Security
8. EE 451 UE Reliability Engineering

4/4 (Mech.) II-semester

ELECTIVE-IV

1. ME 460 UE Robotics
2. ME 461 UE Energy Conservation & Management
3. ME 462 UE Tool Design
4. ME 465 UE Non-Destructive Testing
5. CS 458 UE Data Mining
6. LA 454 UE Intellectual Property Rights
7. BM 454 UE Bio-Electricity
8. CE 461 UE Disaster Management