Appendix " U" Item No. 39

**M.Tech (R&M), B.Tech+M.Tech(5/6 and 6/6), Two Year**

**(Four Semesters)**

Scheme to be valid with effect from the admitted batch of 2019 – 2020

**I SEMESTER**

Subject Code Name of the Subject Periods/Week Max. Marks Total Credits

Theory Lab Ext. Int.

MTRM-1.1 Digital Signal processing 3 - 70 30 100 3

MTRM-1.2 Microwave components and networks 3 - 70 30 100 3

MTRM-1.3 Elective – IOptical fibers and applications/   
 Nano Technologies and Applications/   
 Modern RADAR Systems 3 - 70 30 100 3

MTRM-1.4 Elective – II EMI/EMC /Artificial   
 intelligence and neural networks/  
 Microprocessor Systems 3 - 70 30 100 3

MTRM-1.5 Research Methodology & IPR 3 - 70 30 100 2

MTRM-1.6 Audit Course 3 - - 100 100 0

MTRM-1.7 Antenna LAB-I - 3 - 100 100 2

MTRM-1.8 Signal Processing LAB - 3 - 100 100 2

Total 18 06 350 450 800 18

**II SEMESTER**

Subject Code Name of the Subject Periods/Week Max. Marks Total Credits

Theory Lab Ext. Int.

MTRM-2.1 RF and Microwave Engineering 3 - 70 30 100 3

MTRM-2.2 GPS and Applications 3 - 70 30 100 3

MTRM-2.3 Elective – IIICellular and Mobile   
 Communications/ Stealth technologies/  
 Application SpecificIntegrated Circuits(ASIC) 3 - 70 30 100 3

MTRM-2.4 Elective – IV Micro controllers and   
 Embedded Systems/Digital Image   
 Processing/Wireless communications   
 and networks 3 - 70 30 100 3

MTRM-2.5 Audit Course 3 - - 100 100 0

MTRM-2.6 Antenna LAB-II 3 - 100 100 2

MTRM-2.7 Microwave Engineering LAB - 3 - 100 100 2

MTRM-2.8 Mini Project With Seminar - 3 - 100 100 2

Total 15 9 280 520 800 18

**III SEMESTER**

Subject Code Name of the Subject Periods/Week Max. Marks Total Credits

Theory Lab Ext. Int.

MTRM-3.1 Elective – VPhased Array Radar/ DSP   
 processor and Architecture/ Remote   
 Sensing and Sensors 3 - 70 30 100 3

MTRM-3.2 Open Elective Computer and   
 Communications Networks /Business   
 Analytics/Industrial Safety/Operational   
 Research/Cost Management of   
 Engineering Projects 3 - 70 30 100 3

MTRM-3.3 Dissertation- I / Industrial Project - - - 100 100 10

Total 6 - 140 160 300 16

**IV SEMESTER**

Subject Code Name of the Subject Periods/Week Max. Marks Total Credits

Theory Lab Ext. Int.

MTRM-4.1 Dissertation- II - - 70 30 100 16

Total - - 70 30 100 16

*Note:*

1. At the end of 3rd semester project review is conducted by HOD with the committee consisting of the HOD, Chair Person of BOS and the Guide. In the Affiliated Colleges, Project (Preliminary) will be evaluated by concerned HOD and the thesis Guide of their respective colleges.

2. At the end of the 4th semester there will be a final viva voce for the project work conducted by the HOD with the committee consisting of HOD, Chair Person ofBOS, the Guide and an External examiner nominated by the university.

*Audit Course 1 & 2*

1. English for Research Paper Writing

2. Disaster Management

3. Sanskrit for Technical Knowledge

4. Value Education

5. Constitution of India

6. Pedagogy Studies

7. Stress Management by Yoga

8. Personality Development through Life Enlightenment Skills.

**M.Tech (VLSI), B.Tech+M.Tech(5/6 and 6/6), Two Year   
(Four Semesters)**

Scheme to be valid with effect from the admitted batch of 2019 – 2020

**I-Semester**

Subject Code Name of the Subject Periods/Week Max. Marks Total Credits

Theory Lab Ext. Int.

MTVL1.1 VLSI Design Techniques 3 - 70 30 100 3

MTVL1.2 Analog IC design 3 - 70 30 100 3

MTVL1.3 Elective – I (Digital Signal Processing/   
 Application Specific Integrated Circuit  
 (ASIC)/ Hardware Software Co Design/  
 Advanced Microprocessors &  
 Microcontrollers) 3 - 70 30 100 3

MTVL1.4 Elective – II (CPLD and FPGA   
 Architecture & Applications / VHDL   
 Modelling of Digital Systems/EDA Tools) 3 - 70 30 100 3

MTVL1.5 Research Methodology & IPR 3 - 70 30 100 2

MTVL1.6 Audit Course 3 - - 100 100 0

MTVL1.7 HDL Programming LAB-I - 3 - 100 100 2

MTVL1.8 Analog IC Design LAB - 3 - 100 100 2

Total 18 6 350 450 800 18

**II-Semester**

Subject Code Name of the Subject Periods/Week Max. Marks Total Credits

Theory Lab Ext. Int.

MTVL2.1 Digital System Design 3 - 70 30 100 3

MTVL2.2 Algorithms for VLSI design automation 3 - 70 30 100 3

MTVL2.3 Elective – III(Low Power VLSI Design/   
 Wireless Communication and networks/   
 RF& Microwave Integrate Circuits) 3 - 70 30 100 3

MTVL2.4 Elective – IV (Microcontroller and   
 Embedded Systems/ Digital Systems   
 Testing & Testable Design/ DSP Processors   
 and Architectures) 3 - 70 30 100 3

MTVL2.5 Audit Course 3 - - 100 100 0

MTVL2.6 HDL Programming LAB-II - 3 - 100 100 2

MTVL2.7 Mixed Signal Simulation LAB - 3 - 100 100 2

MTVL2.8 Mini Project with Seminar - 3 - 100 100 2

Total 15 9 280 520 800 18

**III-Semester**

Subject Code Name of the Subject Periods/Week Max. Marks Total Credits

Theory Lab Ext. Int.

MTVL3.1 Elective – VSystem Modeling and   
 Simulation// Cellular & Mobile   
 Communications/ EMI/EMC 3 - 70 30 100 3

MTVL3.2 Open Elective Business AnalyticsIndustrial   
 Safety Operational Research Cost   
 Management of Engineering Projects 3 - 70 30 100 3

MTVL3.3 Dissertation- I / Industrial Project - - 100 — 100 10

Total 6 - 240 60 300 16

**IV-Semester**

Subject Code Name of the Subject Periods/Week Max. Marks Total Credits

Theory Lab Ext. Int.

MTVL4.1 Dissertation-II - - 100 - 100 16

Total - - 100 - 100 16

*Audit Course 1 & 2*

1. English for Research Paper Writing

2. Disaster Management

3. Sanskrit for Technical Knowledge

4. Value Education

5. Constitution of India

6. Pedagogy Studies

7. Stress Management by Yoga

8. Personality Development through Life Enlightenment Skills.

**M.Tech (EI), Two Year (Four Semesters)**

Scheme to be valid with effect from the admitted batch of 2019 – 2020

**SEMESTER-I**

Subject Code Name of the Subject Periods/Week Max. Marks Total Credits

Theory Lab Ext. Int.

MTEI-1.1 Digital Signal Processing 3 - 70 30 100 3

MTEI-1.2 Electronic Instrumentation Techniques 3 - 70 30 100 3

MTEI-1.3 Elective IDSP Processors and Architecture/  
 Wireless communication and Networks/  
 Microprocessor systems 3 - 70 30 100 3

MTEI-1.4 Elective IIEMI/EMC/ Bio Medical   
 Instrumentation/Artificial Intelligence and   
 Neural Networks 3 - 70 30 100 3

MTEI-1.5 Research Methodology & IPR 3 - 70 30 100 2

MTEI-1.6 Audit Course 3 - - 100 100 0

MTEI-1.7 Instrumentation LAB-I - 3 - 100 100 2

MTEI-1.8 Signal Processing LAB - 3 - 100 100 2

Total 18 06 350 450 800 18

**SEMESTER-II**

Subject Code Name of the Subject Periods/Week Max. Marks Total Credits

Theory Lab Ext. Int.

MTEI-2.1 Transducers and signal conditioners 3 - 70 30 100 3

MTEI-2.2 Data Acquisition Systems 3 - 70 30 100 3

MTEI-2.3 Elective – III Processor Control   
 Instrumentation/Remote Sensing and Image   
 Sensors/GPS and Applications - 70 30 100 3

MTEI-2.4 Elective – IVNano Technology and   
 Applications/Microcontrollers and   
 Embedded Systems/Digital Image   
 Processing 3 - 70 30 100 3

MTEI-2.5 Audit Course 3 - - 100 100 0

MTEI-2.6 Instrumentation LAB-II - 3 - 100 100 2

MTEI-2.7 Microprocessor LAB - 3 - 100 100 2

MTEI-2.8 Mini Project With Seminar - 3 - 100 100 2

Total 15 9 280 520 800 18

**SEMESTER-III**

Subject Code Name of the Subject Periods/Week Max. Marks Total Credits

Theory Lab Ext. Int.

MTEI-3.1 Elective VLinear and Digital Systems   
 Design / Optical Fibers and Applications/   
 Application specific Integrated circuits(ASIC) 3 - 70 30 100 3

MTEI-3.2 Open ElectiveVLSI/ Business Analytics  
 Industrial SafetyOperational ResearchCost   
 Management of Engineering Projects 3 - 70 30 100 3

MTEI-3.3 Dissertation- I / Industrial Project - - - 100 100 10

Total 6 140 160 300 16

**SEMESTER-IV**

Subject Code Name of the Subject Periods/Week Max. Marks Total Credits

Theory Lab Ext. Int.

MTEI-4.1 Dissertation- II - - 70 30 100 16

Total 70 30 100 16

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2. At the end of the 4th semester there will be a final viva voce for the project work conducted by the HOD with the committee consisting of HOD, Chair Person of BOS, the Guide and an External examiner nominated by the university.

Audit Course 1 & 2

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2. Disaster Management

3. Sanskrit for Technical Knowledge

4. Value Education

5. Constitution of India

6. Pedagogy Studies

7. Stress Management by Yoga

8. Personality Development through Life Enlightenment Skills.

**M.Tech (BME), Two Year (Four Semesters)**

Scheme to be valid with effect from the admitted batch of 2019 – 2020

**I SEMESTER**

Subject Code Name of the Subject Periods/Week Max. Marks Total Credits

Theory Lab Ext. Int.

MTBM-1.1 Bio Medical Signal Processing 3 - 70 30 100 3

MTBM-1.2 Bio-Medical Instrumentation -I 3 - 70 30 100 3

MTBM-1.3 Elective – I Anatomy & Physiology/  
 EMI/EMC / Bio-Mechanics 3 - 70 30 100 3

MTBM-1.4 Elective – II Principles of Electrotherapy/   
 Electronic Devices and Circuits /   
 Mathematical methods for Engineers 3 - 70 30 100 3

MTBM-1.5 Research Methodology & IPR 3 - 70 30 100 2

MTBM-1.6 Audit Course 3 - - 100 100 0

MTBM-1.7 Bio-Medical Signal processing LAB - 3 - 100 100 2

MTBM-1.8 Bio Instrumentation LAB-I - 3 - 100 100 2

Total 18 6 350 450 800 18

**II SEMESTER**

Subject Code Name of the Subject Periods/Week Max. Marks Total Credits

Theory Lab Ext. Int.

MTBM-2.1 Bio-Medical Instrumentation -II 3 - 70 30 100 3

MTBM-2.2 Principles of Radiology 3 - 70 30 100 3

MTBM-2.3 Elective – IIIOrthopedics & Rehabilitation /   
 Biological Effects of Radiation/ Bio-MEMS   
 and Bio-Sensors 3 - 70 30 100 3

MTBM-2.4 Elective – IV Medical Image Processing/   
 Nano Technologies and Applications/   
 Robotics and Artificial intelligence 3 - 70 30 100 3

MTBM-2.5 Audit Course 3 - - 100 100 0

MTBM-2.6 Bio-Medical Image Processing LAB 3 - 100 100 2

MTBM-2.7 Bio Instrumentation LAB-II - 3 - 100 100 2

MTBM-2.8 Mini Project With Seminar - 3 - 100 100 2

Total 15 9 280 520 800 18

**III SEMESTER**

Subject Code Name of the Subject Periods/Week Max. Marks Total Credits

Theory Lab Ext. Int.

MTBM-3.1 Elective – VClinical Medicine /  
 Electrocardiography Signal Analysis/   
 Bio-Materials and Artificial Organs 3 - 70 30 100 3

MTBM-3.2 Open Elective Hospital Management and   
 Supporting System/ Business Analytics/  
 Industrial Safety/Operational Research/  
 Cost Management of Engineering Projects 3 - 70 30 100 3

MTBM-3.3 Dissertation- I / Industrial Project - - - 100 100 10

Total 6 - 140 160 300 16

**IV SEMESTER**

Subject Code Name of the Subject Periods/Week Max. Marks Total Credits

Theory Lab Ext. Int.

MTBM-4.1 Dissertation- II - - 70 30 100 16

Total - - 70 30 100 16

*Note:*

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2. Disaster Management

3. Sanskrit for Technical Knowledge

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8. Personality Development through Life Enlightenment Skills.