**DEPARTMENT OF INFORMATION AND COMMUNICATION TECHNOLOGY**

# MTECH (COMPUTER NETWORKING & ENGINEERING)

### Program Structure (Applicable to 2023 admission onwards)

| YEAR | FIRST SEMESTER | | | | | | SECOND SEMESTER | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SUB CODE | SUBJECT NAME | L | T | P | C | SUB CODE | SUBJECT NAME | L | T | P | C |
| I | MAT 5134 | Mathematical Foundations of Computer Networking | 3 | 1 | 0 | 4 | ICT 5213 | Advanced Communication Network Technologies | 4 | 0 | 0 | 4 |
| | ICT 5114 | Advanced Data Structures and Algorithms | 4 | 0 | 0 | 4 | ICT 5214 | Systems and Network Security | 4 | 0 | 0 | 4 |
| | ICT 5115 | Advanced Operating Systems | 4 | 0 | 0 | 4 | ICT **** | Program Elective-I | 3 | 0 | 0 | 3 |
| | ICT 5116 | Communication Network Protocols | 4 | 0 | 0 | 4 | ICT **** | Program Elective-II | 3 | 0 | 0 | 3 |
| | ICT 5117 | Mobile Computing and Communication | 3 | 0 | 0 | 3 | ICT **** | Program Elective-III | 4 | 0 | 0 | 4 |
| | HUM 5051 | Research Methodology and Technical Communication* | 1 | 0 | 3 | - | *** **** | Open Elective | 3 | 0 | 0 | 3 |
| | ICT 5141 | Algorithms and Operating Systems Lab** | 0 | 0 | 3 | 2 | HUM 5051 | Research Methodology and Technical Communication* | 1 | 0 | 3 | 2 |
| | ICT 5142 | Network Modeling and Performance Lab ** | 0 | 0 | 3 | 2 | ICT 5242 | Network Security Lab** | 0 | 1 | 3 | 2 |
| | | | | | | | ICT 5244 | Network Engineering Capstone Project** | 0 | 0 | 3 | 2 |
| | | **Total** | **19** | **1** | **6** | **23** | | | **20** | **1** | **9** | **27** |
| **THIRD AND FOURTH SEMESTER** | | | | | | | | | | | | |
| II | ICT 6091 | Project Work and Industrial Training | | | | | | | **0** | **0** | **0** | **25** |

*TAUGHT IN BOTH SEMESTERS AND EVALUATED AND CREDITED IN THE SECOND SEMESTER

**3 Hrs/WEEK WITH A PROVISION FOR MINI PROJECT/ASSIGMENTS

| PROGRAM ELECTIVES | | OPEN ELECTIVES | |
| --- | --- | --- | --- |
| **COURSE CODE** | **COURSE TITLE** | **COURSE CODE** | **COURSE TITLE** |
| ICT 5401 | Applied Deep Learning | ICT 5301 | Applied Game Theory |
| ICT 5402 | Applied Natural Language Processing | ICT 5302 | Block Chain Technologies |
| ICT 5403 | Big Data Technologies | ICT 5303 | Cyber Security And Cyber Laws |
| ICT 5404 | Edge Computing | ICT 5304 | Real Time Systems |
| ICT 5405 | Federated Learning | | |
| ICT 5406 | Information Retrieval Systems | | |
| ICT 5408 | Machine Learning | | |
| ICT 5409 | Semantic Web Technologies | | |
| ICT 5410 | Time Series Analysis And Forecasting | | |