**Syllabus to be implemented from the Academic Year 2014-15**

**M.Tech (Microelectronics & VLSI)**

**First Year First Semester**

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| **A. THEORY** |
| **Sl.No.** | **Subject Code** | **Theory** | **Contact Hours/Week** | Credit |
| **L** | **T** | **P** | **Total** |
| 1 | **MVLSI101** | **Advanced Engineering Mathematics** |  3 | 1 | 0 | 4  | 4  |
| 2 | **MVLSI102** | **VLSI Devices and Modeling** |  3 | 1 | 0 | 4 | 4 |
| 3 | **MVLSI103** | **Digital IC Design** |  3 | 1 | 0 | 4 | 4 |
| 4 | **MVLSI104** | **Microelectronics Technology & IC Fabrication** |  3 | 1 | 0 | 4 | 4 |
| 5 | **MVLSI105** | **Advanced Digital Communication** |  3 | 1 | 0 | 4 | 4 |
|  TOTAL OF THEORY |   | 20 |
| **B. PRACTICAL** |
| 7 | **MVLSI191** | **CAD Tools for Design** | 0 | 0  | 3 |  3 | 2 |
| 8 | **MVLSI192** | **Embedded System Lab-I** | 0 | 0  | 3 |  3 | 2 |
| 9 | **MVLSI181** | **Seminar – Based on literature survey** | 0 | 0 | 3 |  3 |  1 |
|  TOTAL OF PRACTICAL |   |   |   |  | 5 |
| **TOTAL OF SEMESTER** |  | 25 |

**First Year Second Semester\_ Microelectronics & VLSI**

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| **A. THEORY** |
| **Sl.No.** | **Subject Code** | **Theory** | **Contact Hours/Week** | Credit |
| **L** | **T** | **P** | **Total** |
| 1 | **MVLSI201** | **Processor Architecture for VLSI** |  3 | 1 | 0 | 4  | 4  |
| 2 | **MVLSI202** | **Digital Signal Processing & Applications** |  3 | 1 | 0 | 4 | 4 |
| 3 | **MVLSI203** | **Analog IC Design** |  3 | 1 | 0 | 4 | 4 |
| 4 | **MVLSI204** | **Quantum and Nano Science** |  3 | 1 | 0 | 4 | 4 |
| 5 | **MVLSI205** | **Mobile Communication** |  3 | 1 | 0 | 4 | 4 |
|  TOTAL OF THEORY |   | 20 |
| **B. PRACTICAL** |
| 7 | **MVLSI291** | **Embedded System Lab-II**  | 0 | 0  | 3 |  3 |  2 |
| 8 | **MVLSI281** | **Comprehensive Viva-Voce** | 0 | 0  | 0 | 0 | 1 |
| 9 | **MVLSI282** | **Seminar – Term Paper Leading To Thesis** | 0 | 0 | 3 |  3 | 1 |
|  TOTAL OF PRACTICAL |   |   |   |  | 4 |
| **TOTAL OF SEMESTER** |  | 24 |

**Second Year 3rd Semester\_Microelectronics & VLSI**

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| **A. THEORY** |
| **Sl.No.** | **Subject Code** | **Theory** | **Contact Hours/Week** | Credit |
| **L** | **T/P** | **Total** |  |
| 1 | **MVLSI 301** | **Teaching Research Methodologies** | 3 | 1 | 4 | 4 |
|  TOTAL OF THEORY |   | 4 |
| **B. PRACTICAL** |
| 2 | **MVLSI 381** | **Advanced Digital Signal Processing Lab** | 0 | 3 | 3 | 2 |
| 3 | **MVLSI 382** | **Dissertation I /Project Viva** | 0 | 0 | 18 |  12 |
|  TOTAL OF PRACTICAL |   |    |  | 14 |
| **TOTAL OF SEMESTER** |  | 18 |

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| --- | --- | --- | --- | --- |
| **Sl.No.** | **Subject Code** | **Theory** | **Contact Hours/Week** |  Credit |
| **L** | **T/P** | **Total** |  |
| 1 | **MVLSI 481** | **Dissertation II /Project Viva** | 0 | 0 | 24 | 20 |
| **TOTAL OF SEMESTER** |  | 20 |

**Second Year 4th Semester**