

| CREDIT INFO          |                         |           |
|----------------------|-------------------------|-----------|
| S.no                 | Category                | Credits   |
| 1                    | Discipline Core         | 24        |
| 2                    | Discipline Elective     | 12        |
| 3                    | Projects and Internship | 26        |
| 4                    | Open Elective           | 3         |
| 5                    | Skill Enhancement       | 5         |
| <b>Total Credits</b> |                         | <b>70</b> |

| Discipline Core |             |                                  |             |         |   |   |   |   |         |
|-----------------|-------------|----------------------------------|-------------|---------|---|---|---|---|---------|
| sl.no           | Course Code | Course Title                     | Course Type | Version | L | T | P | J | Credits |
| 1               | MVLD501L    | Physics of VLSI Devices          | Theory Only | 1.0     | 3 | 0 | 0 | 0 | 3.0     |
| 2               | MVLD502L    | Digital IC Design                | Theory Only | 1.0     | 3 | 0 | 0 | 0 | 3.0     |
| 3               | MVLD503L    | Digital Design with FPGA         | Theory Only | 1.0     | 2 | 0 | 0 | 0 | 2.0     |
| 4               | MVLD503P    | Digital Design with FPGA Lab     | Lab Only    | 1.0     | 0 | 0 | 2 | 0 | 1.0     |
| 5               | MVLD504L    | Analog IC Design                 | Theory Only | 1.0     | 3 | 0 | 0 | 0 | 3.0     |
| 6               | MVLD504P    | Analog IC Design Lab             | Lab Only    | 1.0     | 0 | 0 | 2 | 0 | 1.0     |
| 7               | MVLD505L    | ASIC Design                      | Theory Only | 1.0     | 3 | 0 | 0 | 0 | 3.0     |
| 8               | MVLD505P    | ASIC Design Lab                  | Lab Only    | 1.0     | 0 | 0 | 2 | 0 | 1.0     |
| 9               | MVLD506L    | VLSI Testing and Testability     | Theory Only | 1.0     | 3 | 0 | 0 | 0 | 3.0     |
| 10              | MVLD506P    | VLSI Testing and Testability Lab | Lab Only    | 1.0     | 0 | 0 | 2 | 0 | 1.0     |
| 11              | MVLD507L    | IC Technology                    | Theory Only | 1.0     | 3 | 0 | 0 | 0 | 3.0     |

| Discipline Elective |             |   |             |         |   |   |   |   |         |
|---------------------|-------------|---|-------------|---------|---|---|---|---|---------|
| sl.no               | Course Code | Course Title  | Course Type | Version | L | T | P | J | Credits |
| 1                   | MEDS501L    | Embedded System Design                                | Theory Only | 1.0     | 3 | 0 | 0 | 0 | 3.0     |
| 2                   | MEDS601L    | Electromagnetic Interference and Compatibility in ESD | Theory Only | 1.0     | 3 | 0 | 0 | 0 | 3.0     |
| 3                   | MVLD601L    | Computer Aided Design for VLSI                        | Theory Only | 1.0     | 3 | 0 | 0 | 0 | 3.0     |
| 4                   | MVLD602L    | Low Power IC Design                                   | Theory Only | 1.0     | 3 | 0 | 0 | 0 | 3.0     |
| 5                   | MVLD603L    | VLSI Verification Methodologies                       | Theory Only | 1.0     | 3 | 0 | 0 | 0 | 3.0     |
| 6                   | MVLD606L    | Mixed Signal IC Design                                | Theory Only | 1.0     | 3 | 0 | 0 | 0 | 3.0     |
| 7                   | MVLD607L    | RFIC Design   | Theory Only | 1.0     | 3 | 0 | 0 | 0 | 3.0     |
| 8                   | MVLD608L    | VLSI Digital Signal Processing                        | Theory Only | 1.0     | 3 | 0 | 0 | 0 | 3.0     |
| 9                   | MVLD610L    | Nanoscale Devices and Circuit Design                  | Theory Only | 1.0     | 3 | 0 | 0 | 0 | 3.0     |
| 10                  | MVLD613L    | System Design with FPGA                               | Theory Only | 1.0     | 3 | 0 | 0 | 0 | 3.0     |
| 11                  | MVLD616L    | Scripting Languages for Electronic Design Automation  | Theory Only | 1.0     | 3 | 0 | 0 | 0 | 3.0     |
| 12                  | MVLD617L    | Neuromorphic Engineering and Hardware Accelerators    | Theory Only | 1.0     | 3 | 0 | 0 | 0 | 3.0     |

| Projects and Internship |             |                                |             |         |   |   |   |   |         |
|-------------------------|-------------|--------------------------------|-------------|---------|---|---|---|---|---------|
| sl.no                   | Course Code | Course Title                   | Course Type | Version | L | T | P | J | Credits |
| 1                       | MVLD696J    | Study Oriented Project         | Project     | 1.0     | 0 | 0 | 0 | 0 | 2.0     |
| 2                       | MVLD697J    | Design Project                 | Project     | 1.0     | 0 | 0 | 0 | 0 | 2.0     |
| 3                       | MVLD698J    | Internship I/ Dissertation I   | Project     | 1.0     | 0 | 0 | 0 | 0 | 10.0    |
| 4                       | MVLD699J    | Internship II/ Dissertation II | Project     | 1.0     | 0 | 0 | 0 | 0 | 12.0    |

| Open Elective |             |                                    |             |         |   |   |   |   |         |
|---------------|-------------|------------------------------------|-------------|---------|---|---|---|---|---------|
| sl.no         | Course Code | Course Title                       | Course Type | Version | L | T | P | J | Credits |
| 1             | MEDS616L    | Machine Learning and Deep Learning | Theory Only | 1.0     | 3 | 0 | 0 | 0 | 3.0     |
| 2             | MSTS601L    | Advanced Competitive Coding        | Soft Skill  | 1.0     | 3 | 0 | 0 | 0 | 3.0     |
| 3             | MVLD611L    | Advanced Computer Architecture     | Theory Only | 1.0     | 3 | 0 | 0 | 0 | 3.0     |

| Skill Enhancement |             |                              |             |         |   |   |   |   |         |
|-------------------|-------------|------------------------------|-------------|---------|---|---|---|---|---------|
| sl.no             | Course Code | Course Title                 | Course Type | Version | L | T | P | J | Credits |
| 1                 | MENG501P    | Technical Report Writing     | Lab Only    | 1.0     | 0 | 0 | 4 | 0 | 2.0     |
| 2                 | MSTS501P    | Qualitative Skills Practice  | Soft Skill  | 1.0     | 3 | 0 | 0 | 0 | 1.5     |
| 3                 | MSTS502P    | Quantitative Skills Practice | Soft Skill  | 1.1     | 0 | 0 | 3 | 0 | 1.5     |