M.Tech in VLSI DESIGN AND EMBEDDED SYSTEMS

I SEMESTER

| | Teaching Hours / Week Examination | | | | | | | | |
|-----------|-----------------------------------|---|--------|---|--------------|---------------|-------------------------------|----------------|--------|
| SI. No | Subject Code | Title | Theory | Practical/Fi eld Work/ Assignment | Dura tion | I.A. Marks | Theory/ Practical Marks | Total Marks | Credit |
| 1 | 16ELD11 | Advanced Engineering Mathematics | 4 | - | 3 | 20 | 80 | 100 | 4 |
| 2 | 16EVE12 | Digital VLSI Design | 4 | - | 3 | 20 | 80 | 100 | 4 |
| 3 | 16EVE13 | Advanced Embedded System | 4 | - | 3 | 20 | 80 | 100 | 4 |
| 4 | 16EVE14 | Low Power VLSI Design | 4 | - | 3 | 20 | 80 | 100 | 4 |
| 5 | 16EXX15X | Elective-1 | 3 | - | 3 | 20 | 80 | 100 | 3 |
| 6 | 16EVEL16 | VLSI and ES Lab -1 | | 3 | 3 | 20 | 80 | 100 | 2 |
| 7 | 16EVE17 | Seminar on advanced topics from refereed journals | - | 3 | - | 100 | - | 100 | 1 |
| | TOTAL 19 6 18 220 480 700 22 | | | | | | | | |

| | | 40000 |
|-------------|-------------------------------------|----------|
| Elective -1 | | |
| 16 EVE151 | Digital System Design Using Verilog | |
| 16 EVE152 | Nanoelectronics | 4 |
| 16 EVE153 | ASIC Design | |
| 16 ELD154 | Advanced Computer Architecture | - |

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II SEMESTER

| | | | Teaching | Hours /Week | | Exan | nination | | Credit |
|-----------|-----------------|---|----------|---|--------------|---------------|-------------------------------|----------------|--------|
| Sl. No | Subject Code | Title | Theory | Practical/Fi eld Work/ Assignment | Dura tion | I.A. Marks | Theory/ Practical Marks | Total Marks | |
| 1 | 16EVE21 | Design of Analog and Mixed mode VLSI Circuits | 4 | | 3 | 20 | 80 | 100 | 4 |
| 2 | 16EVE22 | VLSI Testing | 4 | | 3 | 20 | 80 | 100 | 4 |
| 3 | 16EVE23 | Advances in VLSI Design | 4 | - | 3 | 20 | 80 | 100 | 4 |
| 4 | 16EVE24 | Real Time Operating System | 4 | | 3 | 20 | 80 | 100 | 4 |
| 5 | 16EXX25X | Elective –2 | 3 | | 3 | 20 | 80 | 100 | 3 |
| 6 | 16EVEL26 | VLSI and ES Lab -2 | | 3 | 3 | 20 | 80 | 100 | 2 |
| 7 | 16EVE27 | Seminar on Advanced topics from refereed journals | | 3 | - | 100 | - | 100 | 1 |
| | | TOTAL | 19 | 6 | 18 | 220 | 480 | 700 | 22 |

| Elective -2 | |
|-------------|-----------------------------------|
| 16EVE251 | System Verilog |
| 16EVE252 | VLSI Design for Signal processing |
| 16ELD253 | MEMS |
| 16EVE254 | SoC Design |

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III SEMESTER: Internship

| | | | Teaching | g Hours /Week | | | nination | Credit | |
|-----------|-----------------|--|----------|---|--------------|---------------|-------------------------------|----------------|----|
| Sl. No | Subject Code | Title | Theory | Practical/Fi eld Work/ Assignment | Dura tion | I.A. Marks | Theory/ Practical Marks | Total Marks | |
| 1 | 16EVE31 | Seminar / Presentation on Internship (After 8 weeks from the date of commencement) | - | - | - | 25 | - | 25 | |
| 2 | 16EVE32 | Report on Internship | - | | - | 25 | - | 25 | 20 |
| 3 | 16EVE33 | Evaluation and Viva-Voce of Internship | - | - | | - | 50 | 50 | |
| 4 | 16EVE34 | Evaluation of Project phase -1 | - | - | - | 50 | - | 50 | 1 |
| | TOTAL | | - | | - 4 | 100 | 50 | 150 | 21 |

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IV SEMESTER

| | | | | Teaching Hours /Week | | Examination | | | Credit |
|-----------|-----------------|--|--------|---|--------------|---------------|-------------------------------|----------------|--------|
| Sl. No | Subject Code | Title | Theory | Practical/Fi eld Work/ Assignment | Dura tion | I.A. Marks | Theory/ Practical Marks | Total Marks | |
| 1 | 16ELD41 | Synthesis and Optimization of Digital Circuits | 4 | - | 3 | 20 | 80 | 100 | 4 |
| 2 | 16EXX42X | Elective-3 | 3 | - | 3 | 20 | 80 | 100 | 3 |
| 3 | 16EVE43 | Evaluation of Project phase -2 | - | - | - | 50 | - | 50 | 3 |
| 4 | 16EVE44 | Evaluation of Project and Viva-Voce | - | <u>-</u> | - | - * | 100+100 | 200 | 10 |
| | TOTAL | | - | - | 6 | 90 | 360 | 450 | 20 |

| Elective -3 | | | |
|-------------|------------------------------|---|---|
| 16EVE421 | CMOS RF Circuit Design | | |
| 16ECS422 | Advances in Image Processing | | |
| 16EVE423 | High Speed VLSI Design | | 4 |
| 16ELD424 | Reconfigurable Computing | A | |

Note:

- **1. Project Phase-1:** 6-week duration shall be carried out between 2nd and 3rd Semester vacation. Candidates in consultation with the guide shall carry out literature survey/ visit industries to finalize the topic of Project.
- 2. Project Phase-2: 16-week duration during 4th semester. Evaluation shall be done by the committee constituted comprising of HoD as Chairman, Guide and Senior faculty of the department.
- 3. Project Evaluation: Evaluation shall be taken up at the end of 4th semester. Project work evaluation and Viva-Voce examination shall be conducted.
 - a. Internal Examiner shall carry out the evaluation for 100 marks.
 - b. External Examiner shall carry out the evaluation for 100 marks.
 - c .The average of marks allotted by the internal and external examiner shall be the final marks of the project evaluation.
 - d. Viva-Voce examination of Project work shall be conducted jointly by Internal and External examiner for 100 marks.