

SR UNIVERSITY
M.TECH (EMBEDDED SYSTEMS)
COURSE STRUCTURE:

(Applicable from the batch admitted during 2020-21 academic year and onwards)

L: Theory, T: Tutorial, P/D: Practical/Drawing, C: Credits
CIE: Continuous Internal Evaluation, SEE: Semester End Examination

I Semester

| S. No. | Course Code | Course Title | Hours/Week | | | |
|--------------|-------------|---|------------|----------|----------|-----------|
| | | | L | T | P | C |
| 1 | PC | Embedded Systems Design and Programming | 3 | 0 | 0 | 3 |
| 2 | PC | Embedded Linux | 3 | 0 | 0 | 3 |
| 3 | PE | Professional Elective - I | 3 | 0 | 0 | 3 |
| 4 | PE | Professional Elective - II | 3 | 0 | 0 | 3 |
| 5 | Lab | Embedded Systems Design and Programming Lab | 0 | 0 | 3 | 2 |
| 6 | Lab | Embedded Linux Lab | 0 | 0 | 3 | 2 |
| 7 | | Research Methodology & IPR | 2 | 0 | 0 | 2 |
| 8 | | Audit Course – I | 2 | 0 | 0 | 0 |
| Total | | | 16 | 0 | 6 | 18 |

II Semester

| S. No. | Course Code | Course Title | Hours/Week | | | |
|--------------|-------------|--|------------|----------|-----------|-----------|
| | | | L | T | P | C |
| 1 | PC | VLSI Fundamentals: A Practical Approach | 3 | 0 | 0 | 3 |
| 2 | PC | Advanced System- On- Chip Design | 3 | 0 | 0 | 3 |
| 3 | PE | Professional Elective – III | 3 | 0 | 0 | 3 |
| 4 | PE | Professional Elective - IV | 3 | 0 | 0 | 3 |
| 5 | Lab | VLSI Fundamentals-A Practical Approach Lab | 0 | 0 | 3 | 2 |
| 6 | Lab | Advanced System- On- Chip Design Lab | 0 | 0 | 3 | 2 |
| 7 | | Mini project with Seminar | 0 | 0 | 4 | 2 |
| 8 | | Audit Course – II | 2 | 0 | 0 | 0 |
| Total | | | 14 | 0 | 10 | 18 |

III Semester

| S. No. | Course Code | Course Title | Hours/Week | | | |
|-----------|----------------|------------------------------|------------|---|----|----|
| | | | L | T | P | C |
| 1 | PE | Professional Elective - V | 3 | 0 | 0 | 3 |
| 2 | OE | Open Elective | 3 | 0 | 0 | 3 |
| 3 | | Dissertation Work Phase - II | - | - | - | 10 |
| Total | | | 6 | 0 | 12 | 16 |

IV Semester

| S. No. | Course Code | Course Title | Hours/Week | | | |
|-----------|----------------|------------------------|------------|---|---|----|
| | | | L | T | P | C |
| 1 | | Dissertation Phase -II | - | - | - | 16 |
| Total | | | - | - | - | 16 |

LIST OF PROFESSIONAL ELECTIVES

| S.No. | Title of the Elective |
|-------|---|
| 1. | Programming Languages for Embedded Software |
| 2. | AI & Machine Learning |
| 3. | Internet of Things |
| 4. | Communications Buses & Interfaces |
| 5. | Parallel Processing |
| 6. | Computer architecture |
| 7. | Advanced Digital Signal Processing |
| 8. | VLSI Signal Processing |
| 9. | RTL Simulation and Synthesis with PLDs |
| 10. | Hardware and Software Co-Design |
| 11. | Wireless Sensor Networks |
| 12. | Physical Design Automation |
| 13. | Scripting Languages |
| 14. | Memory Technologies |
| 15. | Network Security and Cryptography |