

**GODAVARI INSTITUTE OF ENGINEERING & TECHNOLOGY**

NH-16, CHAITANYA KNOWLEDGE CITY, RAJAHMUNDY-533296

**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING****SPECIALIZATION: VLSI & ES****COURSE STRUCTURE-R14****I SEMESTER**

| S.No | SUBJECT CODE                              | SUBJECT                                                                                                                 | Periods per week |          |          | C         | Scheme of Examination<br>Max.Marks |            |            |
|------|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|------------------|----------|----------|-----------|------------------------------------|------------|------------|
|      |                                           |                                                                                                                         | T                | P        | D        |           | Int.                               | Ext.       | Total      |
| 1    | 14242101                                  | Microcontroller for Embedded System Design                                                                              | 4                | -        | -        | 3         | 40                                 | 60         | 100        |
| 2    | 14242102                                  | CMOS Analog IC Design                                                                                                   | 4                | -        | -        | 3         | 40                                 | 60         | 100        |
| 3    | 14242103                                  | CPLD and FPGA Architecture and Application                                                                              | 4                | -        | -        | 3         | 40                                 | 60         | 100        |
| 4    | 14242104                                  | VLSI Technology and Design                                                                                              | 4                | -        | -        | 3         | 40                                 | 60         | 100        |
| 5    | 14242161(A)<br>14242161(B)<br>14242161(C) | <b>Elective I</b><br>1.Digital System Design<br>2.Soft Computing Techniques<br>3. Hardware Software Co-Design           | 4                | -        | -        | 3         | 40                                 | 60         | 100        |
| 6    | 14242162(A)<br>14242162(B)<br>14242162(C) | <b>Elective II</b><br>1. CMOS Digital IC Design<br>2. Advanced Operating Systems<br>3.Network Security and Cryptography | 4                | -        | -        | 3         | 40                                 | 60         | 100        |
| 7    | 14242111                                  | <b>Laboratory</b><br>VLSI Laboratory                                                                                    | -                | 3        | -        | 2         | 40                                 | 60         | 100        |
|      |                                           | <b>TOTAL</b>                                                                                                            | <b>24</b>        | <b>3</b> | <b>-</b> | <b>20</b> | <b>280</b>                         | <b>420</b> | <b>700</b> |

**T-THEORY P-PRACTICAL D-DRAWING C-CREDITS Int.-INTERNAL Ext.-EXTERNAL**

## II-SEMESTER

| S.No | SUBJECT CODE                              | SUBJECT                                                                                                                                          | Periods per week |   |   | C  | Scheme of Examination Max.Marks |      |       |
|------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---|---|----|---------------------------------|------|-------|
|      |                                           |                                                                                                                                                  | T                | P | D |    | Int.                            | Ext. | Total |
| 1    | 14242201                                  | Embedded –C                                                                                                                                      | 4                | - | - | 3  | 40                              | 60   | 100   |
| 2    | 14242202                                  | Embedded Real Time Operating Systems                                                                                                             | 4                | - | - | 3  | 40                              | 60   | 100   |
| 3    | 14242203                                  | CMOS Mixed Signal Circuit Design                                                                                                                 | 4                | - | - | 3  | 40                              | 60   | 100   |
| 4    | 14242204                                  | Design for Testability                                                                                                                           | 4                | - | - | 3  | 40                              | 60   | 100   |
| 5    | 14242263(A)<br>14242263(B)<br>14242263(C) | <b>Elective III</b><br>1.DSP Processor and Architecture<br>2.System on Chip Design<br>3.VLSI Signal Processing                                   | 4                | - | - | 3  | 40                              | 60   | 100   |
| 6    | 14242264(A)<br>14242264(B)<br>14242264(C) | <b>Elective IV</b><br>1. Low Power VLSI Design<br>2. Micro Electro Mechanical Systems (MEMS) Design<br>3.Semiconductor Memory Design and Testing | 4                | - | - | 3  | 40                              | 60   | 100   |
| 7    | 14242211                                  | <b>Laboratory</b><br>Advanced Communication Laboratory                                                                                           | 4                | 3 | - | 2  | 40                              | 60   | 100   |
|      |                                           | <b>TOTAL</b>                                                                                                                                     | 24               | 3 | - | 20 | 280                             | 420  | 700   |

T-THEORY P-PRACTICAL D-DRAWING C-CREDITS Int.-INTERNAL Ext.-EXTERNAL

## III SEMESTER

| Sl. No | SUBJECT CODE | SUBJECT         | Periods per week |   |   | C  | Scheme of Examination Max.Marks |      |       |
|--------|--------------|-----------------|------------------|---|---|----|---------------------------------|------|-------|
|        |              |                 | T                | P | D |    | Int.                            | Ext. | Total |
| 1      | 14242381     | Seminar -I      | 1                | - | - | 2  | 50                              | -    | 50    |
| 2      | 14242341     | Project work -I | -                | - | - | 18 | -                               | -    | -     |
|        |              | <b>TOTAL</b>    | 1                | - | - | 20 | 50                              | -    | 50    |

T-THEORY P-PRACTICAL D-DRAWING C-CREDITS Int.-INTERNAL Ext.-EXTERNAL

## IV SEMESTER

| Sl. No | SUBJECT CODE | SUBJECT          | Periods per week |   |   | C  | Scheme of Examination Max. Marks |      |       |
|--------|--------------|------------------|------------------|---|---|----|----------------------------------|------|-------|
|        |              |                  | T                | P | D |    | Int.                             | Ext. | Total |
| 1      | 14242481     | Seminar -II      | 1                | - | - | 2  | 50                               | -    | 50    |
| 2      | 14242441     | Project work -II | -                | - | - | 18 | -                                | -    | -     |
|        |              | TOTAL            | 1                | - | - | 20 | 50                               | -    | 50    |

**T-THEORY P-PRACTICAL D-DRAWING C-CREDITS Int.-INTERNAL Ext.-EXTERNAL**

**Elective I**

14242161(A) - Digital System Design

14242161(B) - Soft Computing Techniques

14242161(C) - Hardware Software Co-Design

**Elective II**

14242162(A) - CMOS Digital IC Design

14242162(B) - Advanced Operating Systems

14242162(C) - Network Security and Cryptography

**Elective III**

14242263(A) - DSP Processor and Architecture

14242263(B) - System on Chip Design

14242263(C) - VLSI Signal Processing

**Elective IV**

14242264(A) - Low Power VLSI Design

14242264(B) - Micro Electro Mechanical Systems (MEMS) Design

14242264(C) - Semiconductor Memory Design and Testing