

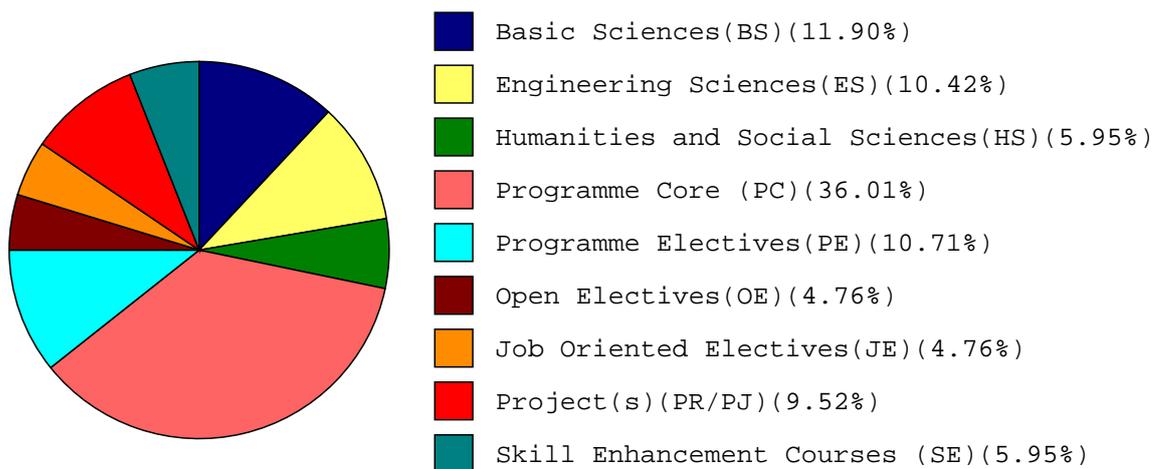
**R.V.R & J.C.COLLEGE OF ENGINEERING (Autonomous)**  
**DEPARTMENT OF INFORMATION TCHNOLOGY**

**B.TECH. INFORMATION TCHNOLOGY**

(w.e.f. the batch of students admitted from the academic year 2024-2025)

**Programme curriculum (R24) grouping based on course components**

| Course Component                         | Curriculum Content<br>(% of total number of<br>credits in programme) | Total number of<br>contact hours | Total number<br>of credits |
|--|--|----------------------------------|----------------------------|
| Basic Sciences (BS)                      | 12.5   | 23                               | 20                         |
| Engineering Sciences (ES)                | 10.94  | 22                               | 17.5                       |
| Humanities and /<br>Social Sciences (HS) | 6.25   | 12                               | 10                         |
| Professional Core (PC)                   | 37.81  | 76                               | 60.5                       |
| Professional Elective(s) (PE)            | 11.25  | 17                               | 18                         |
| Open Elective(s) (OE)                    | 5  | 6                                | 8                          |
| Job Oriented Elective(s) (JE)            | 0  |                                  | 0                          |
| Project(s) (PR/PJ)                       | 10   | 22                               | 16                         |
| Skill Enhancement<br>Course(s) (SEC)     | 6.25   | 17                               | 10                         |
| Mandatory Course(s) (MC)                 | --   | 6                                | --                         |
| <b>Total number of Credits</b>           |  |                                  | <b>160</b>                 |



# R.V.R & J.C.COLLEGE OF ENGINEERING (Autonomous)

## B.TECH. INFORMATION TECHNOLOGY

Course Structure, Scheme of Instruction (R24) and Examination

(w.e.f. the batch of students admitted from the academic year 2024-2025)

**Three Weeks Orientation Programme is Mandatory before starting Semester I [First Year]**

### Semester I [First Year]

### COURSE STRUCTURE

| SNo.         | Course Details       |   | Scheme of Instruction |          |           | Scheme of Examination |     |           | Category Code |
|--------------|----------------------|---|-----------------------|----------|-----------|-----------------------|-----|-----------|---------------|
|              | Code No.             | Subject Name  | Periods per week      |          |           | Maximum Marks         |     | Credits   |               |
|              |                      |   | L                     | T        | P         | SES                   | EXT |           |               |
| 1            | IT/CD/CM/CO/CS111    | Linear Algebra, Calculus and Differential Equations | 3                     | -        | -         | 30                    | 70  | 3.0       | BS            |
| 2            | IT/CD/CO/CS112       | Engineering Physics                                 | 3                     | -        | -         | 30                    | 70  | 3.0       | BS            |
| 3            | IT/CD/CM/CO/CS113    | Basic Electrical and Electronics Engineering        | 3                     | -        | -         | 30                    | 70  | 3.0       | ES            |
| 4            | IT/CD/CM/CO/CS/EC114 | Programming for Problem Solving                     | 4                     | -        | -         | 30                    | 70  | 4.0       | ES            |
| 5            | IT151                | Engineering Physics Lab                             | -                     | -        | 2         | 30                    | 70  | 1.0       | BS            |
| 6            | IT152                | Basic Electrical and Electronics Engineering Lab    | -                     | -        | 2         | 30                    | 70  | 1.0       | ES            |
| 7            | IT153                | Programming for Problem Solving Lab                 | -                     | -        | 3         | 30                    | 70  | 1.5       | ES            |
| 8            | IT/CD/CM/CO/CS154    | Engineering Graphics                                | 1                     | -        | 2         | 30                    | 70  | 2.0       | ES            |
| 9            | IT/CB/CO/CM/CD/CS155 | NSS / NCC / Community Service                       | -                     | -        | 1         | 30                    | 70  | 0.5       | BS            |
| <b>TOTAL</b> |                      |   | <b>14</b>             | <b>0</b> | <b>10</b> | 270                   | 630 | <b>19</b> | TPW-24        |

### Semester II [First Year]

### COURSE STRUCTURE

| SNo.         | Course Details    |                                      | Scheme of Instruction |          |           | Scheme of Examination |     |           | Category Code |
|--------------|-------------------|--------------------------------------|-----------------------|----------|-----------|-----------------------|-----|-----------|---------------|
|              | Code No.          | Subject Name                         | Periods per week      |          |           | Maximum Marks         |     | Credits   |               |
|              |                   |                                      | L                     | T        | P         | SES                   | EXT |           |               |
| 1            | IT/CD/CM/CO/CS121 | Integral calculus and Transforms     | 3                     | -        | -         | 30                    | 70  | 3.0       | BS            |
| 2            | IT/CD/CO/CS122    | Engineering Chemistry                | 2                     | -        | -         | 30                    | 70  | 2.0       | BS            |
| 3            | IT/CD/CM/CO/CS123 | Communicative English                | 2                     | -        | -         | 30                    | 70  | 2.0       | HS            |
| 4            | IT/CD/CO/CM/CS124 | Digital Logic Design                 | 3                     | -        | -         | 30                    | 70  | 3.0       | ES            |
| 5            | IT/CB/CM/CO/CS125 | Python Programming                   | 2                     | -        | -         | 30                    | 70  | 2.0       | ES            |
| 6            | IT/CD/CO/CS126    | Data Structures                      | 4                     | -        | -         | 30                    | 70  | 4.0       | PC            |
| 7            | IT161             | Engineering Chemistry Lab            | -                     | -        | 2         | 30                    | 70  | 1.0       | BS            |
| 8            | IT162             | Communicative English Lab            | -                     | -        | 2         | 30                    | 70  | 1.0       | HS            |
| 9            | IT163             | Python Programming Lab               | -                     | -        | 2         | 30                    | 70  | 1.0       | ES            |
| 10           | IT164             | Data Structures Lab                  | -                     | -        | 3         | 30                    | 70  | 1.5       | PC            |
| 11           | IT/CB/CD/CO/CS165 | Health and Wellness, Yoga and Sports | -                     | -        | 1         | 30                    | 70  | 0.5       | BS            |
| <b>TOTAL</b> |                   |                                      | <b>16</b>             | <b>0</b> | <b>10</b> | 330                   | 770 | <b>21</b> | TPW-26        |

**Semester III [Second Year]**
**COURSE STRUCTURE**

| SNo.         | Course Details       |   | Scheme of Instruction |          |           | Scheme of Examination |     | Credits   | Category Code |
|--------------|----------------------|---|-----------------------|----------|-----------|-----------------------|-----|-----------|---------------|
|              | Code No.             | Subject Name                                    | Periods per week      |          |           | SES                   | EXT |           |               |
|              |                      |   | L                     | T        | P         |                       |     |           |               |
| 1            | IT/CD/CM/CO/CS211    | Probability, Statistics & Complex Analysis      | 3                     | -        | -         | 30                    | 70  | 3.0       | BS            |
| 2            | IT/CB/CD/CM/CO/CS212 | Universal Human Values-II Understanding Harmony | 2                     | -        | -         | 30                    | 70  | 2.0       | HS            |
| 3            | IT/CD/CM/CO/CS213    | Discrete Mathematical Structures                | 3                     | -        | -         | 30                    | 70  | 3.0       | PC            |
| 4            | IT/CD/CM/CO/CS214    | Computer Organization                           | 3                     | -        | -         | 30                    | 70  | 3.0       | PC            |
| 5            | IT/CB/CM/CO/CS215    | Design and Analysis of Algorithms               | 3                     | -        | -         | 30                    | 70  | 3.0       | PC            |
| 6            | IT/CB/CD/CM/CO/CS216 | Object Oriented Programming                     | 3                     | -        | -         | 30                    | 70  | 3.0       | PC            |
| 7            | IT251                | Skill Enhancement Course-1                      | -                     | -        | 4         | 30                    | 70  | 2.0       | SEC           |
| 8            | IT252                | Design and Analysis of Algorithms Lab           | -                     | -        | 3         | 30                    | 70  | 1.0       | PC            |
| 9            | IT253                | Object Oriented Programming Lab                 | -                     | -        | 3         | 30                    | 70  | 1.0       | PC            |
| 10           | MC1                  | Constitution of India                           | 2                     | -        | -         | 100                   | -   | 0.0       | MC            |
| <b>TOTAL</b> |                      |   | <b>19</b>             | <b>0</b> | <b>10</b> | 370                   | 630 | <b>21</b> | TPW-29        |

**Semester IV [Second Year]**
**COURSE STRUCTURE**

| SNo.  | Course Details       |                                 | Scheme of Instruction |          |           | Scheme of Examination |           | Credits   | Category Code |
|---|----------------------|---------------------------------|-----------------------|----------|-----------|-----------------------|-----------|-----------|---------------|
|   | Code No.             | Subject Name                    | Periods per week      |          |           | SES                   | EXT       |           |               |
|   |                      |                                 | L                     | T        | P         |                       |           |           |               |
| 1   | IT/CM/CO/CS221       | Computational Statistics        | 3                     | -        | -         | 30                    | 70        | 3.0       | BS            |
| 2   | IT/CB/CD/CM/CS222    | Artificial Intelligence         | 3                     | -        | -         | 30                    | 70        | 3.0       | PC            |
| 3   | IT/CB/CD/CM/CO/CS223 | Database Management Systems     | 3                     | -        | -         | 30                    | 70        | 3.0       | PC            |
| 4   | IT/CB/CD/CM/CO/CS224 | Operating Systems               | 3                     | -        | -         | 30                    | 70        | 3.0       | PC            |
| 5   | IT/CB/CD/CS225       | Software Engineering            | 3                     | -        | -         | 30                    | 70        | 3.0       | PC            |
| 6   | IT261                | Skill Enhancement Course-2      | -                     | -        | 4         | 30                    | 70        | 2.0       | SEC           |
| 7   | IT/CB/CD/CM/CO/CS262 | Design Thinking and Innovation  | 1                     | -        | 2         | 30                    | 70        | 2.0       | HS            |
| 8   | IT263                | Artificial Intelligence Lab     | -                     | -        | 3         | 30                    | 70        | 1.0       | PC            |
| 9   | IT264                | Database Management Systems Lab | -                     | -        | 3         | 30                    | 70        | 1.0       | PC            |
| 10  | MC2                  | Environmental Science           | 2                     | -        | -         | 100                   | -         | 0.0       | MC            |
| <b>TOTAL</b>  |                      |                                 | <b>18</b>             | <b>0</b> | <b>12</b> | 370                   | 630       | <b>21</b> | TPW-30        |
| <b>Internship 2 weeks (Mandatory) during summer vacation (to be evaluated during next semester)</b> |                      |                                 |                       |          |           |                       |           |           |               |
| <b>Honors/Minor course (Maximum Two courses can be registered)</b>                                  |                      |                                 | <b>3</b>              | <b>-</b> | <b>-</b>  | <b>30</b>             | <b>70</b> | <b>3</b>  | HR/MR         |

**Semester V [Third Year]**
**COURSE STRUCTURE**

| SNo.   | Course Details     |   | Scheme of Instruction |          |          | Scheme of Examination |            |           | Category |
|--|--------------------|---|-----------------------|----------|----------|-----------------------|------------|-----------|----------|
|  | Code No.           | Subject Name                              | Periods per week      |          |          | Maximum Marks         |            | Credits   | Code     |
|  |                    |   | L                     | T        | P        | SES                   | EXT        |           |          |
| 1  | IT/CS311           | Automata Theory and Formal Languages      | 3                     | -        | -        | 30                    | 70         | 3.0       | PC       |
| 2  | IT/CB/CD/<br>CS312 | Computer Networks                         | 3                     | -        | -        | 30                    | 70         | 3.0       | PC       |
| 3  | IT313              | Professional Elective-I                   | 3                     | -        | -        | 30                    | 70         | 3.0       | PE       |
| 4  | IT314              | Professional Elective-II                  | 3                     | -        | -        | 30                    | 70         | 3.0       | PE       |
| 5  | IT315              | Open Elective-I                           | 3                     | -        | -        | 30                    | 70         | 3.0       | OE       |
| 6  | IT/CS316           | Web Technologies                          | 3                     | -        | -        | 30                    | 70         | 3.0       | PC       |
| 7  | IT351              | Skill Enhancement Course-3 (Isp Coding-I) | -                     | 1        | 2        | 30                    | 70         | 2.0       | SEC      |
| 8  | IT352              | Summer Internship                         | -                     | -        | -        | 30                    | 70         | 1.0       | PJ       |
| 9  | IT353              | Tinkering Lab                             | -                     | -        | 2        | 30                    | 70         | 1.0       | PC       |
| 10   | IT354              | Web Technologies Lab                      | -                     | -        | 2        | 30                    | 70         | 1.0       | PC       |
| 11   | IT355              | Data Analysis Lab                         | -                     | -        | 2        | 30                    | 70         | 1.0       | PC       |
| <b>TOTAL</b>   |                    |   | <b>18</b>             | <b>1</b> | <b>8</b> | <b>330</b>            | <b>770</b> | <b>24</b> | TPW-27   |
| <b>Honors/Minor course (Maximum Two courses can be registered)</b> |                    |   | <b>3</b>              | <b>-</b> | <b>-</b> | <b>30</b>             | <b>70</b>  | <b>3</b>  | HR/MR    |

**Semester VI [Third Year]**
**COURSE STRUCTURE**

| SNo.  | Course Details     |   | Scheme of Instruction |          |          | Scheme of Examination |            |           | Category |
|---|--------------------|---|-----------------------|----------|----------|-----------------------|------------|-----------|----------|
|   | Code No.           | Subject Name                              | Periods per week      |          |          | Maximum Marks         |            | Credits   | Code     |
|   |                    |   | L                     | T        | P        | SES                   | EXT        |           |          |
| 1   | IT/CB/CM/<br>CS321 | Cryptography and Network Security         | 3                     | -        | -        | 30                    | 70         | 3.0       | PC       |
| 2   | IT/CS322           | Full Stack                                | 3                     | -        | -        | 30                    | 70         | 3.0       | PC       |
| 3   | IT323              | Machine Learning                          | 3                     | -        | -        | 30                    | 70         | 3.0       | PC       |
| 4   | IT324              | Professional Elective-III                 | 3                     | -        | -        | 30                    | 70         | 3.0       | PE       |
| 5   | IT325              | Professional Elective-IV                  | 3                     | -        | -        | 30                    | 70         | 3.0       | PE       |
| 6   | IT326              | Open Elective-II                          | 3                     | -        | -        | 30                    | 70         | 3.0       | OE       |
| 7   | IT361              | Skill Enhancement Course-4 (Isp Coding-2) | -                     | 1        | 2        | 30                    | 70         | 2.0       | SEC      |
| 8   | IT362              | Full Stack Lab                            | -                     | -        | 2        | 30                    | 70         | 1.0       | PC       |
| 9   | IT363              | Machine Learning Lab                      | -                     | -        | 2        | 30                    | 70         | 1.0       | PC       |
| 10  | MC3                | Technical Paper Writing and IPR           | -                     | -        | 2        | 100                   | -          | 0.0       | MC       |
| <b>TOTAL</b>  |                    |   | <b>18</b>             | <b>1</b> | <b>8</b> | <b>370</b>            | <b>630</b> | <b>22</b> | TPW-27   |
| <b>Internship 4 weeks (Mandatory) during summer vacation (to be evaluated during next semester)</b> |                    |   |                       |          |          |                       |            |           |          |
| <b>Honors/Minor course (Maximum Two courses can be registered)</b>                                  |                    |   | <b>3</b>              | <b>-</b> | <b>-</b> | <b>30</b>             | <b>70</b>  | <b>3</b>  | HR/MR    |

**Semester VII [Fourth Year]**
**COURSE STRUCTURE**

| SNo.   | Course Details |                                  | Scheme of Instruction |          |          | Scheme of Examination |            | Category Code |         |
|--|----------------|----------------------------------|-----------------------|----------|----------|-----------------------|------------|---------------|---------|
|  | Code No.       | Subject Name                     | Periods per week      |          |          | Maximum Marks         |            |               | Credits |
|  |                |                                  | L                     | T        | P        | SES                   | EXT        |               |         |
| 1  | IT411          | Humanities Elective              | 3                     | -        | -        | 30                    | 70         | 3.0           | HS      |
| 2  | IT/CS412       | Compiler Design                  | 3                     | -        | -        | 30                    | 70         | 3.0           | PC      |
| 3  | IT413          | Professional Elective-V          | 3                     | -        | -        | 30                    | 70         | 3.0           | PE      |
| 4  | IT414          | Professional Elective-VI (MOOCs) | -                     | -        | -        | -                     | 100        | 2.0           | PE      |
| 5  | IT415          | Open Elective-III (MOOCs)        | -                     | -        | -        | -                     | 100        | 2.0           | OE      |
| 6  | IT451          | Skill Enhancement Course-5       | -                     | 1        | 2        | 30                    | 70         | 2.0           | SEC     |
| 7  | IT452          | Summer Internship-2              | -                     | -        | -        | 30                    | 70         | 2.0           | PJ      |
| 8  | IT453          | IoT Lab                          | -                     | -        | 2        | 30                    | 70         | 1.0           | PC      |
| 9  | IT454          | Professional Elective-IV Lab     | -                     | -        | 2        | 30                    | 70         | 1.0           | PE      |
| 10   | IT455          | Term Paper                       | -                     | -        | 2        | 100                   | -          | 1.0           | PJ      |
| <b>TOTAL</b>   |                |                                  | <b>9</b>              | <b>1</b> | <b>8</b> | <b>310</b>            | <b>690</b> | <b>20</b>     | TPW-18  |
| <b>Honors/Minor course (Maximum Two courses can be registered)</b> |                |                                  | <b>3</b>              | <b>-</b> | <b>-</b> | <b>30</b>             | <b>70</b>  | <b>3</b>      | HR/MR   |

**Semester VIII [Fourth Year]**
**COURSE STRUCTURE**

| SNo.         | Course Details |                        | Scheme of Instruction |          |           | Scheme of Examination |           | Category Code |         |
|--------------|----------------|------------------------|-----------------------|----------|-----------|-----------------------|-----------|---------------|---------|
|              | Code No.       | Subject Name           | Periods per week      |          |           | Maximum Marks         |           |               | Credits |
|              |                |                        | L                     | T        | P         | SES                   | EXT       |               |         |
| 1            | IT461          | Internship and Project | -                     | -        | 20        | 30                    | 70        | 12.0          | PJ      |
| <b>TOTAL</b> |                |                        | <b>0</b>              | <b>0</b> | <b>20</b> | <b>30</b>             | <b>70</b> | <b>12</b>     | TPW-20  |

**Professional Elective Courses**

| Code No. | Subject Name | Code No. | Subject Name |
|----------|--------------|----------|--------------|
|          |              |          |              |

**Skill Courses**

| Code No. | Subject Name                        | Code No. | Subject Name                         |
|----------|-------------------------------------|----------|--------------------------------------|
| ITSL1    | Employability Skills-I              | ITSL2    | Employability Skills-II              |
| ITSL3    | Industry Standard Coding Practice-I | ITSL4    | Industry Standard Coding Practice-II |
| ITSL7    | Skill Orientation Course            |          |                                      |

**Science & Humanities Elective Courses**

| Code No. | Subject Name                             | Code No. | Subject Name                          |
|----------|--|----------|---------------------------------------|
| HSEL1    | Industrial Management & Entrepreneurship | HSEL2    | Economics for Engineers               |
| HSEL3    | Introduction to Industrial Management    | HSEL4    | Project Management & Entrepreneurship |

## Honors Courses

- Note :**
1. The subjects opted for Honors should be Advanced type which are not covered in regular curriculum
  2. Students has to acquire 12 credits with minimum one subject from each pool.
  3. Compulsory MOOC/NPTEL Courses for 06 credits (02 courses @ 3 credits each)

### Pool 1

| Code No. | Subject Name | Code No. | Subject Name |
|----------|--------------|----------|--------------|
|          |              |          |              |

### Pool 2

| Code No. | Subject Name | Code No. | Subject Name |
|----------|--------------|----------|--------------|
|          |              |          |              |

### Pool 3

| Code No. | Subject Name | Code No. | Subject Name |
|----------|--------------|----------|--------------|
|          |              |          |              |

### Pool 4

| Code No. | Subject Name | Code No. | Subject Name |
|----------|--------------|----------|--------------|
|          |              |          |              |

### Open Elective Courses (Offered by other Departments)

| Code No. | Subject Name                      | Code No. | Subject Name             |
|----------|-----------------------------------|----------|--------------------------|
| CEOE1    | Fundamentals of Building Planning | CEOE2    | Remote Sensing and Gis   |
| CEOE3    | Disaster Management               | CHOE1    | Energy Engineering       |
| CHOE2    | Biofuels                          | ECOE1    | Applied Electronics      |
| ECOE2    | Microprocessors & Interfacing     | EEOE1    | Renewable Energy Sources |
| EEOE2    | Utilization of Electrical Energy  | MEOE1    | Operations Research      |
| MEOE2    | Elements of Robotics              |          |                          |

## General Minor Courses (Offered by other Department)

- Note :** 1. A student can opt any 4 subjects from each pool @ 3 credits per subject.  
2. Compulsory MOOC/NPTEL Courses for 06 credits (02 courses@ 3 credits each)

### Offered by Civil Engineering

| Code No. | Subject Name                           | Code No. | Subject Name                          |
|----------|--|----------|---------------------------------------|
| CEMR1    | Geomatics (Survey, GIS & GPS)          | CEMR2    | Construction Engineering & Management |
| CEMR3    | Fundamentals of Structural Engineering | CEMR4    | Water Resource Engineering            |
| CEMR5    | Environmental Engineering              | CEMR6    | Geotechnical Engineering              |
| CEMR7    | Transportation Engineering             |          |                                       |

### Offered by Electronics & Communication Engineering

| Code No. | Subject Name                   | Code No. | Subject Name                  |
|----------|--------------------------------|----------|-------------------------------|
| ECMR1    | Electronics Devices & Circuits | ECMR2    | Digital Logic Design          |
| ECMR3    | Network Analysis               | ECMR4    | Electronic Circuit Analysis   |
| ECMR5    | Signals and Systems            | ECMR6    | Microprocessors & Interfacing |

### Offered by Mechanical Engineering

| Code No. | Subject Name                  | Code No. | Subject Name                              |
|----------|-------------------------------|----------|---|
| MEMR1    | Engineering Mechanics         | MEMR2    | Strength of Materials and Fluid Mechanics |
| MEMR3    | Manufacturing Processes       | MEMR4    | Concepts of Thermal Engineering           |
| MEMR5    | Concepts of Mechanical Design | MEMR6    | Computer Aided Design & Manufacturing     |
| MEMR7    | Additive Manufacturing        |          |   |

## Industry Track - Minor Courses

- Note :** 1. A student can opt any 4 subjects from each Track @ 3 credits per subject.  
2. Compulsory MOOC/NPTEL Courses for 06 credits (02 courses@ 3 credits each)

### Minor in Industrial Automation & Robotics (Offered by Mechanical Engineering)

| Code No. | Subject Name                      | Code No. | Subject Name                      |
|----------|-----------------------------------|----------|-----------------------------------|
| ARMR1    | Robotic Engineering               | ARMR2    | Mechatronics and Microcontrollers |
| ARMR3    | Mechanics of Robots               | ARMR4    | Industrial Automation             |
| ARMR5    | Computer Integrated Manufacturing | ARMR7    | 3D Printing                       |

### Minor in Full Stack Development (Offered by Computer Science & Business Systems)

| Code No. | Subject Name                          | Code No. | Subject Name  |
|----------|---------------------------------------|----------|---|
| FSMR1    | Client Side Scripting                 | FSMR2    | React Js  |
| FSMR3    | C# (.Net Framework)                   | FSMR4    | MEAN stack (MongoDB, Express JS, Angular JS, Node JS) |
| FSMR5    | Web Application Development using Asp |          |   |

### Minor in VLSI (Offered by Electronics & Communication Engineering)

| Code No. | Subject Name                      | Code No. | Subject Name             |
|----------|-----------------------------------|----------|--------------------------|
| VLMR1    | HDL Programming                   | VLMR2    | System Verilog and UVM   |
| VLMR3    | Physical Design Fundamentals      | VLMR4    | Low Power VLSI Design    |
| VLMR5    | Synthesis and Formal Verification | VLMR6    | Advanced Physical Design |

### Minor in Electric Vehicles (Offered by Electrical & Electronics Engineering)

| Code No. | Subject Name                           | Code No. | Subject Name                 |
|----------|--|----------|------------------------------|
| EVMR1    | Energy Systems and Electrical Machines | EVMR2    | Hybrid Electric Vehicles     |
| EVMR3    | Plug-in Electric vehicles              | EVMR4    | Electric Vehicle Power Train |
| EVMR5    | Autotronics                            | EVMR6    | BMS & Charging stations      |

**Minor in Quantum Technologies** (Offered by Computer Science & Business Systems)

| Code No. | Subject Name                                   | Code No. | Subject Name                                     |
|----------|--|----------|--|
| QTMR1    | Fundamentals of Quantum Computing              | QTMR2    | Foundations of Quantum Technologies              |
| QTMR3    | Basic Programming Lab                          | QTMR4    | Basic Laboratory Course for Quantum Technologies |
| QTMR5    | Introduction to Quantum Computation            | QTMR6A   | Introduction to Quantum Communication            |
| QTMR6B   | Engineering Foundation of Quantum Technologies | QTMR7    | Introduction to Quantum Sensing                  |
| QTMR8    | Introduction to Quantum Materials              |          |  |

## Department of INFORMATION TCHNOLOGY

### Open Electives (Offered to other Departments)

| Code No. | Subject Name                   | Code No. | Subject Name     |
|----------|--------------------------------|----------|------------------|
| ITOE1    | Data Structures and Algorithms | ITOE2    | Web Technologies |