

**Course Structure of B.Tech. Programme in Computer Science and  
Engineering  
(DATA SCIENCE)  
Regulation: GRBT-20**

**I Year I Semester**

| S.<br>No       | Course<br>Code | Course<br>Type | Course Title                           | Periods per<br>week |          |           | C           | Scheme of<br>Examination<br>Maximum Marks |            |            |
|----------------|----------------|----------------|--|---------------------|----------|-----------|-------------|---|------------|------------|
|                |                |                |  | L                   | T        | P         |             | Int.                                      | Ext.       | Total      |
| 1              |                | BSC            | Mathematics-I                          | 3                   | 0        | 0         | 3           | 30  | 70         | 100        |
| 2              |                | HSMC           | Communicative English                  | 3                   | 0        | 0         | 3           | 30  | 70         | 100        |
| 3              |                | BSC            | Engineering Chemistry                  | 3                   | 0        | 0         | 3           | 30  | 70         | 100        |
| 4              |                | ESC            | Problem Solving & Programming in C     | 3                   | 0        | 0         | 3           | 30  | 70         | 100        |
| 5              |                | ESC            | Engineering Graphics                   | 1                   | 0        | 4         | 3           | 30  | 70         | 100        |
| 6              |                | BSC            | Engineering Chemistry Laboratory       | 0                   | 0        | 3         | 1.5         | 50  | 50         | 100        |
| 7              |                | ESC            | Computer Engineering Workshop          | 0                   | 0        | 3         | 1.5         | 50  | 50         | 100        |
| 8              |                | ESC            | Problem Solving & Programming in C Lab | 0                   | 0        | 3         | 1.5         | 50  | 50         | 100        |
| <b>Total =</b> |                |                |  | <b>13</b>           | <b>0</b> | <b>13</b> | <b>19.5</b> | <b>300</b>                                | <b>500</b> | <b>800</b> |

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**I Year II Semester**

| S.<br>No       | Course<br>Code | Course<br>Type | Course Title                        | Periods per<br>week |          |          | C           | Scheme of<br>Examination<br>Maximum Marks |            |            |
|----------------|----------------|----------------|-------------------------------------|---------------------|----------|----------|-------------|---|------------|------------|
|                |                |                |                                     | L                   | T        | P        |             | Int.                                      | Ext.       | Total      |
| 1              |                | BSC            | Mathematics-II                      | 3                   | 0        | 0        | 3           | 30  | 70         | 100        |
| 2              |                | BSC            | Applied Physics                     | 3                   | 0        | 0        | 3           | 30  | 70         | 100        |
| 3              |                | ESC            | Fundamentals of Digital Electronics | 3                   | 0        | 0        | 3           | 30  | 70         | 100        |
| 4              |                | ESC            | Data Structures                     | 3                   | 0        | 0        | 3           | 30  | 70         | 100        |
| 5              |                | ESC            | Python Programming                  | 3                   | 0        | 0        | 3           | 30  | 70         | 100        |
| 6              |                | BSC            | Applied Physics Laboratory          | 0                   | 0        | 3        | 1.5         | 50  | 50         | 100        |
| 7              |                | ESC            | Data Structures Lab                 | 0                   | 0        | 3        | 1.5         | 50  | 50         | 100        |
| 8              |                | HSMC           | Communicative English Lab           | 0                   | 0        | 3        | 1.5         | 50  | 50         | 100        |
| 9              |                | MC             | Environmental Science               | 2                   | 0        | 0        | 0           | 30*                                       | ---        | ---        |
| <b>Total =</b> |                |                |                                     | <b>17</b>           | <b>0</b> | <b>9</b> | <b>19.5</b> | <b>300</b>                                | <b>500</b> | <b>800</b> |

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**II Year I Semester**

| S.<br>No       | Course<br>Code | Course<br>Type | Course Title   | Periods per<br>week |          |           | C           | Scheme of<br>Examination<br>Maximum Marks |            |            |
|----------------|----------------|----------------|--|---------------------|----------|-----------|-------------|---|------------|------------|
|                |                |                |  | L                   | T        | P         |             | Int                                       | Ext        | Total      |
| 1              |                | BSC            | Mathematical Foundations of Cyber Security             | 2                   | 1        | 0         | 3           | 30  | 70         | 100        |
| 2              |                | PCC            | Design and Analysis of Algorithms                      | 3                   | 0        | 0         | 3           | 30  | 70         | 100        |
| 3              |                | PCC            | Computer Organization                                  | 3                   | 0        | 0         | 3           | 30  | 70         | 100        |
| 4              |                | PCC            | Object Oriented Programming through JAVA               | 3                   | 0        | 0         | 3           | 30  | 70         | 100        |
| 5              |                | HSBC           | Managerial Economics and Financial Analysis            | 3                   | 0        | 0         | 3           | 30  | 70         | 100        |
| 6              |                | PCC            | Data Analysis Lab                                      | 0                   | 0        | 3         | 1.5         | 50  | 50         | 100        |
| 7              |                | PCC            | Object Oriented Programming through JAVA Lab           | 0                   | 0        | 3         | 1.5         | 50  | 50         | 100        |
| 9              |                | PCC            | Linux and Shell Programming Lab                        | 0                   | 0        | 3         | 1.5         | 50  | 50         | 100        |
| 10             |                | SC             | Web Application Development Using Full Stack Module -1 | 0                   | 1        | 2         | 2           | ---                                       | 50         | 50         |
| 11             |                | MC             | Constitution of India                                  | 2                   | 0        | 0         | 0           | 30  | 70*        | 100        |
| <b>Total =</b> |                |                |  | <b>16</b>           | <b>2</b> | <b>11</b> | <b>21.5</b> | <b>330</b>                                | <b>620</b> | <b>950</b> |

**GODAVARI INSTITUTE OF ENGINEERING & TECHNOLOGY (A)**  
**CHAITANYA NAGAR, RAJAHMUNDRY**

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**II Year II Semester**

| S.<br>No | Course<br>Code | Course<br>Type | Course Title                         | Periods<br>per week |   |   | C   | Scheme of<br>Examination<br>Maximum<br>Marks |      |       |
|----------|----------------|----------------|--------------------------------------|---------------------|---|---|-----|--|------|-------|
|          |                |                |                                      | L                   | T | P |     | Int.   | Ext. | Total |
| 1        |                | BSC            | Statistics with R Programming        | 2                   | 1 | 0 | 3   | 30   | 70   | 100   |
| 2        |                | PCC            | Formal Languages and Automata Theory | 3                   | 0 | 0 | 3   | 30   | 70   | 100   |
| 3        |                | PCC            | Operating Systems                    | 3                   | 0 | 0 | 3   | 30   | 70   | 100   |
| 4        |                | PCC            | Database Management Systems          | 3                   | 0 | 0 | 3   | 30   | 70   | 100   |
| 5        |                | PCC            | Software Engineering                 | 3                   | 0 | 0 | 3   | 30   | 70   | 100   |
| 6        |                | PCC            | R Programming Lab                    | 0                   | 0 | 3 | 1.5 | 50   | 50   | 100   |

|                      |  |     |  |           |          |           |             |            |            |            |
|----------------------|--|-----|--|-----------|----------|-----------|-------------|------------|------------|------------|
| 7                    |  | PCC | Database Management Systems Lab                        | 0         | 0        | 3         | 1.5         | 50         | 50         | 100        |
| 8                    |  | PCC | Operating Systems & Software Engineering Lab           | 0         | 0        | 3         | 1.5         | 50         | 50         | 100        |
| 9                    |  | SC  | Web Application Development Using Full Stack Module -2 | 0         | 1        | 2         | 2           | ---        | 50         | 50         |
| <b>Total =</b>       |  |     |  | <b>16</b> | <b>2</b> | <b>11</b> | <b>21.5</b> | <b>300</b> | <b>550</b> | <b>850</b> |
| <b>Minor courses</b> |  |     |  | <b>4</b>  | <b>0</b> | <b>0</b>  | <b>4</b>    |            |            |            |

# After II B.Tech II Semester Summer Internship/ Mini Project-1 is mandatory.  
Evaluation should be III year I semester.