

# Scheme for 2020 Batch onwards

## Scheme for B. Tech. CSE

| Year               | Semester        | Course Code | Course Name  | Type | L         | T        | P         | Credits   |
|--------------------|-----------------|-------------|--|------|-----------|----------|-----------|-----------|
| <b>FIRST YEAR</b>  |                 |             |  |      |           |          |           |           |
| 1 <sup>ST</sup>    | 1 <sup>ST</sup> | MAL 103     | Calculus for Engineers                                     | BS   | 3         | 1        | 0         | 4         |
| 1 <sup>ST</sup>    | 1 <sup>ST</sup> | BEL 102     | Elements of Electrical Engineering                         | ES   | 3         | 0        | 2         | 4         |
| 1 <sup>ST</sup>    | 1 <sup>ST</sup> | BSL 101     | Applied Sciences   | BS   | 3         | 0        | 2         | 4         |
| 1 <sup>ST</sup>    | 1 <sup>ST</sup> | CSL 101     | Computer Programming                                       | DC   | 3         | 0        | 2         | 4         |
| 1 <sup>ST</sup>    | 1 <sup>ST</sup> | ECL 101     | Electronics Devices and Circuits                           | DC   | 3         | 0        | 2         | 4         |
| 1 <sup>ST</sup>    | 1 <sup>ST</sup> | SAP 101     | Health, Sports & Safety                                    | HU   | 0         | 0        | 2         | 0         |
| 1 <sup>ST</sup>    | 1 <sup>ST</sup> | HUL 102     | Environmental Studies                                      | HU   | 2         | 0        | 0         | 2         |
| <b>Subtotal</b>    |                 |             |  |      | <b>17</b> | <b>1</b> | <b>10</b> | <b>22</b> |
| 1 <sup>ST</sup>    | 2 <sup>nd</sup> | MAL 104     | Matrices, Transform Techniques, and Differential Equations | BS   | 3         | 1        | 0         | 4         |
| 1 <sup>ST</sup>    | 2 <sup>nd</sup> | ECL 102     | Digital Electronics  | DC   | 3         | 0        | 2         | 4         |
| 1 <sup>ST</sup>    | 2 <sup>nd</sup> | CSL 102     | Data Structures  | DC   | 3         | 0        | 2         | 4         |
| 1 <sup>ST</sup>    | 2 <sup>nd</sup> | CSL 103     | Application Programming                                    | DC   | 3         | 0        | 2         | 4         |
| 1 <sup>ST</sup>    | 2 <sup>nd</sup> | HUL 101     | Communication Skills                                       | HU   | 2         | 0        | 2         | 3         |
| 1 <sup>ST</sup>    | 2 <sup>nd</sup> | BEL 101     | Mechanics & Graphics                                       | ES   | 3         | 0        | 2         | 4         |
| <b>Subtotal</b>    |                 |             |  |      | <b>17</b> | <b>1</b> | <b>10</b> | <b>23</b> |
| <b>Total</b>       |                 |             |  |      |           |          |           | <b>45</b> |
| <b>SECOND YEAR</b> |                 |             |  |      |           |          |           |           |
| 2 <sup>nd</sup>    | 3 <sup>rd</sup> | MAL 201     | Numerical Methods and Probability Theory                   | BS   | 3         | 1        | 0         | 4         |
| 2 <sup>nd</sup>    | 3 <sup>rd</sup> | CSL 202     | Introduction to Object Oriented Programming                | DC   | 3         | 0        | 2         | 4         |
| 2 <sup>nd</sup>    | 3 <sup>rd</sup> | CSL 203     | Computer System Organisation                               | DC   | 3         | 0        | 0         | 3         |
| 2 <sup>nd</sup>    | 4 <sup>th</sup> | CSL 210     | Data Structures with Applications                          | DC   | 2         | 0        | 2         | 3         |
| 2 <sup>nd</sup>    | 3 <sup>rd</sup> | CSP 201     | IT Workshop-I  | DC   | 0         | 0        | 4         | 2         |
| 2 <sup>nd</sup>    | 3 <sup>rd</sup> | ECL 202     | Microprocessors & Interfacing                              | DC   | 3         | 0        | 2         | 4         |
| <b>Subtotal</b>    |                 |             |  |      | <b>14</b> | <b>1</b> | <b>10</b> | <b>20</b> |
| 2 <sup>nd</sup>    | 4 <sup>th</sup> | CSL 205     | Design and Analysis of Algorithms                          | DC   | 3         | 0        | 2         | 4         |
| 2 <sup>nd</sup>    | 4 <sup>th</sup> | CSL 206     | Software Engineering                                       | DC   | 3         | 0        | 0         | 3         |
| 2 <sup>nd</sup>    | 4 <sup>th</sup> | CSL 207     | Operating Systems  | DC   | 3         | 0        | 2         | 4         |
| 2 <sup>nd</sup>    | 4 <sup>th</sup> | CSL 208     | Design Principles of Programming Languages                 | DC   | 3         | 0        | 2         | 4         |
| 2 <sup>nd</sup>    | 4 <sup>th</sup> | CSL 204     | Discrete Maths and Graph Theory                            | DC   | 3         | 1        | 0         | 4         |
| 2 <sup>nd</sup>    | 4 <sup>th</sup> | CSP 202     | IT Workshop-II   | DC   | 0         | 0        | 4         | 2         |
| <b>Subtotal</b>    |                 |             |  |      | <b>15</b> | <b>1</b> | <b>10</b> | <b>21</b> |
| <b>Total</b>       |                 |             |  |      |           |          |           | <b>41</b> |

| THIRD YEAR         |                 |         |                                   |    |           |          |           |                |
|--------------------|-----------------|---------|-----------------------------------|----|-----------|----------|-----------|----------------|
| 3 <sup>rd</sup>    | 5 <sup>th</sup> | CSL 301 | Database Management Systems       | DC | 3         | 0        | 2         | 4              |
| 3 <sup>rd</sup>    | 5 <sup>th</sup> |         | Open Course - I                   | OC | 3         | 0        | 0         | 3              |
| 3 <sup>rd</sup>    | 5 <sup>th</sup> | CSL 302 | Computer Networks                 | DC | 3         | 0        | 2         | 4              |
| 3 <sup>rd</sup>    | 5 <sup>th</sup> | CSL 303 | Theory of Computation             | DC | 3         | 1        | 0         | 4              |
| 3 <sup>rd</sup>    | 5 <sup>th</sup> |         | Elective-I                        | DE | 3         | 0        | 0         | 3              |
| <b>Subtotal</b>    |                 |         |                                   |    | <b>15</b> | <b>1</b> | <b>4</b>  | <b>18</b>      |
| 3 <sup>rd</sup>    | 6 <sup>th</sup> | CSL 304 | Compilers                         | DC | 3         | 0        | 2         | 4              |
| 3 <sup>rd</sup>    | 6 <sup>th</sup> | CSL 305 | Cryptography and Network Security | DC | 3         | 0        | 2         | 4              |
| 3 <sup>rd</sup>    | 6 <sup>th</sup> |         | Open course-II                    | OC | 3         | 0        | 0         | 3              |
| 3 <sup>rd</sup>    | 6 <sup>th</sup> |         | Elective-II                       | DE | 3         | 0        | 0         | 3              |
| 3 <sup>rd</sup>    | 6 <sup>th</sup> |         | Elective -III                     | DE | 3         | 0        | 2         | 4              |
| <b>Subtotal</b>    |                 |         |                                   |    | <b>15</b> | <b>0</b> | <b>6</b>  | <b>18</b>      |
| <b>Total</b>       |                 |         |                                   |    |           |          |           | <b>36</b>      |
| FINAL YEAR         |                 |         |                                   |    |           |          |           |                |
| 4 <sup>th</sup>    | 7 <sup>th</sup> | CSD403  | Project Phase - I                 | DE | 0         | 0        | 2         | 2              |
| 4 <sup>th</sup>    | 7 <sup>th</sup> |         | Elective-IV                       | DE | 3         | 0        | 2         | 4              |
| 4 <sup>th</sup>    | 7 <sup>th</sup> |         | Elective-V                        | DE | 3         | 0        | 2         | 4              |
| 4 <sup>th</sup>    | 7 <sup>th</sup> |         | Elective-VI                       | DE | 3         | 0        | 0         | 3              |
| 4 <sup>th</sup>    | 7 <sup>th</sup> |         | Elective-VII                      | DE | 3         | 0        | 0         | 3              |
| 4 <sup>th</sup>    | 7 <sup>th</sup> |         | Open Course III / MooC Course     | OC | 3         | 0        | 0         | 3              |
| <b>OR</b>          |                 |         |                                   |    |           |          |           |                |
| 4 <sup>th</sup>    | 7 <sup>th</sup> | CSD403  | Project Phase - I                 | DE | 0         | 0        | 2         | 2              |
| 4 <sup>th</sup>    | 7 <sup>th</sup> | CSD 402 | Industry Internship Project       | DE | 0         | 0        | 4         | 6              |
| <b>Subtotal</b>    |                 |         |                                   |    | <b>15</b> | <b>0</b> | <b>14</b> | <b>19/8</b>    |
| <b>Total</b>       |                 |         |                                   |    |           |          |           | <b>27</b>      |
| 4 <sup>th</sup>    | 8 <sup>th</sup> | CSD 404 | Project Phase - II                | DE | 0         | 0        | 4         | 6              |
| 4 <sup>th</sup>    | 8 <sup>th</sup> | CSD 402 | Industry Internship Project       | DE | 0         | 0        | 4         | 6              |
| <b>OR</b>          |                 |         |                                   |    |           |          |           |                |
| 4 <sup>th</sup>    | 8 <sup>th</sup> | CSD404  | Project Phase - II                | DE | 0         | 0        | 4         | 6              |
| 4 <sup>th</sup>    | 8 <sup>th</sup> |         | Elective-IV                       | DE | 3         | 0        | 2         | 4              |
| 4 <sup>th</sup>    | 8 <sup>th</sup> |         | Elective-V                        | DE | 3         | 0        | 2         | 4              |
| 4 <sup>th</sup>    | 8 <sup>th</sup> |         | Elective-VI                       | DE | 3         | 0        | 0         | 3              |
| 4 <sup>th</sup>    | 8 <sup>th</sup> |         | Elective-VII                      | DE | 3         | 0        | 0         | 3              |
| 4 <sup>th</sup>    | 8 <sup>th</sup> |         | Open Course III / MooC Course*    | OC | 3         | 0        | 0         | 3              |
| <b>Subtotal</b>    |                 |         |                                   |    | <b>15</b> | <b>0</b> | <b>16</b> | <b>12 / 23</b> |
| <b>Total</b>       |                 |         |                                   |    |           |          |           | <b>31</b>      |
| <b>GRAND TOTAL</b> |                 |         |                                   |    |           |          |           | <b>153</b>     |

| <b>TYPE</b>  | <b>CREDITS</b> |
|--------------|----------------|
| BS           | 16             |
| ES           | 08             |
| HU           | 05             |
| OC           | 06+03*         |
| DE           | 38             |
| DC           | 77             |
| <b>Total</b> | <b>153</b>     |

**\* MooC courses are to be taken by the students after the prior approval from the concerned authority. The MooC courses can be taken either in 3rd year or in final year.**