

# IIIT Nagpur

## Scheme for B.Tech CSE

| Year               | Semester        | Course Code | Course Name                                 | Type | L         | T        | P         | Credits   |
|--------------------|-----------------|-------------|---------------------------------------------|------|-----------|----------|-----------|-----------|
| <b>BS YEAR</b>     |                 |             |                                             |      |           |          |           |           |
| 1 <sup>ST</sup>    | 1 <sup>ST</sup> | MAL 101     | Mathematics-I                               | BS   | 3         | 1        | 0         | 4         |
| 1 <sup>ST</sup>    | 1 <sup>ST</sup> | BEL 102     | Elements of Electrical Engineering          | BS   | 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     | Analog Electronics                          | DC   | 3         | 0        | 2         | 4         |
| 1 <sup>ST</sup>    | 1 <sup>ST</sup> | SAP 101     | Health, Sports & Safety                     |      | 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 102     | Mathematics-II                              | 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                        | BS   | 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     | Mathematics-III(Statistics & Probability)   | BS   | 3         | 1        | 0         | 4         |
| 2 <sup>nd</sup>    | 3 <sup>rd</sup> |             | Advanced Data Structures                    | DC   | 3         | 1        | 2         | 5         |
| 2 <sup>nd</sup>    | 3 <sup>rd</sup> |             | Introduction to Object Oriented Programming | DC   | 3         | 0        | 2         | 4         |
| 2 <sup>nd</sup>    | 3 <sup>rd</sup> |             | Computer System Organisation                | DC   | 3         | 1        | 0         | 4         |
| 2 <sup>nd</sup>    | 3 <sup>rd</sup> |             | Discrete Maths and Graph Theory             | DC   | 3         | 1        | 0         | 4         |
| 2 <sup>nd</sup>    | 3 <sup>rd</sup> |             | IT Workshop-I                               | DC   | 1         | 0        | 4         | 3         |
| 2 <sup>nd</sup>    | 3 <sup>rd</sup> |             |                                             |      |           |          |           |           |
| <b>Subtotal</b>    |                 |             |                                             |      | <b>16</b> | <b>4</b> | <b>8</b>  | <b>24</b> |
| 2 <sup>nd</sup>    | 4 <sup>th</sup> |             | Design and Analysis of Algorithms           | DC   | 3         | 1        | 2         | 5         |
| 2 <sup>nd</sup>    | 4 <sup>th</sup> |             | Software Engineering                        | DC   | 3         | 1        | 0         | 4         |
| 2 <sup>nd</sup>    | 4 <sup>th</sup> |             | Operating Systems                           | DC   | 3         | 0        | 2         | 4         |
| 2 <sup>nd</sup>    | 4 <sup>th</sup> |             | Design Principles of Programming Languages  | DC   | 3         | 0        | 2         | 4         |
| 2 <sup>nd</sup>    | 4 <sup>th</sup> |             | Human Values                                | HU   | 3         | 0        | 0         | 3         |
| 2 <sup>nd</sup>    | 4 <sup>th</sup> |             | IT Workshop-II                              | DC   | 1         | 0        | 4         | 3         |
| <b>Subtotal</b>    |                 |             |                                             |      | <b>16</b> | <b>2</b> | <b>10</b> | <b>23</b> |
| <b>Total</b>       |                 |             |                                             |      |           |          |           | <b>47</b> |

| Year               | Semester        | Course Code | Course Name                       | Type | L         | T        | P         | Credits    |
|--------------------|-----------------|-------------|-----------------------------------|------|-----------|----------|-----------|------------|
| <b>THIRD YEAR</b>  |                 |             |                                   |      |           |          |           |            |
| 3 <sup>rd</sup>    | 5 <sup>th</sup> |             | Database Management Systems       | DC   | 3         | 0        | 2         | 4          |
| 3 <sup>rd</sup>    | 5 <sup>th</sup> |             | Economics and Business Finance    | HU   | 3         | 1        | 0         | 4          |
| 3 <sup>rd</sup>    | 5 <sup>th</sup> |             | Computer Networks                 | DC   | 3         | 0        | 2         | 4          |
| 3 <sup>rd</sup>    | 5 <sup>th</sup> |             | Theory of Computation             | DC   | 3         | 1        | 0         | 4          |
| 3 <sup>rd</sup>    | 5 <sup>th</sup> |             | Elective-I                        | DE   | 3         | 1        | 0         | 4          |
| 3 <sup>rd</sup>    | 5 <sup>th</sup> |             | IT Workshop-III                   | DC   | 1         | 0        | 4         | 3          |
| <b>Subtotal</b>    |                 |             |                                   |      | <b>16</b> | <b>3</b> | <b>8</b>  | <b>23</b>  |
| 3 <sup>rd</sup>    | 6 <sup>th</sup> |             | Compilers                         | DC   | 3         | 0        | 2         | 4          |
| 3 <sup>rd</sup>    | 6 <sup>th</sup> |             | Cryptography and Network Security | DC   | 3         | 1        | 0         | 4          |
| 3 <sup>rd</sup>    | 6 <sup>th</sup> |             | Software Design Documentation     | HU   | 3         | 0        | 0         | 3          |
| 3 <sup>rd</sup>    | 6 <sup>th</sup> |             | Elective-II                       | DE   | 3         | 0        | 2         | 4          |
| 3 <sup>rd</sup>    | 6 <sup>th</sup> |             | Elective -III                     | DE   | 3         | 0        | 2         | 4          |
|                    |                 |             | IT Workshop -IV                   | DC   | 1         | 0        | 4         | 3          |
| <b>Subtotal</b>    |                 |             |                                   |      | <b>16</b> | <b>1</b> | <b>10</b> | <b>22</b>  |
| <b>Total</b>       |                 |             |                                   |      |           |          |           | <b>45</b>  |
| <b>FINAL YEAR</b>  |                 |             |                                   |      |           |          |           |            |
| 4 <sup>th</sup>    | 7 <sup>th</sup> |             | In-house Project                  | DE   | 0         | 0        | 4         | 8          |
| 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        | 2         | 4          |
| 4 <sup>th</sup>    | 7 <sup>th</sup> |             | Elective-VII                      | DE   | 3         | 0        | 2         | 4          |
| 4 <sup>th</sup>    | 7 <sup>th</sup> |             | Elective-VIII                     | DE   | 3         | 0        | 2         | 4          |
| 4 <sup>th</sup>    | 7 <sup>th</sup> |             | Elective-IX                       | DE   | 3         | 0        | 0         | 3          |
| <b>Subtotal</b>    |                 |             |                                   |      | <b>15</b> | <b>0</b> | <b>12</b> | <b>27</b>  |
| 4 <sup>th</sup>    | 8 <sup>th</sup> |             | Industry Internship Project       | DE   | 0         | 0        | 4         | 6          |
| <b>Subtotal</b>    |                 |             |                                   |      |           |          |           | <b>6</b>   |
| <b>Total</b>       |                 |             |                                   |      |           |          |           | <b>33</b>  |
| <b>GRAND TOTAL</b> |                 |             |                                   |      |           |          |           | <b>170</b> |

| Type         | Credits    |
|--------------|------------|
| BS           | 24         |
| HU           | 15         |
| DE           | 45         |
| DC           | 86         |
| <b>TOTAL</b> | <b>170</b> |