

## Bachelor of Computer Applications

| Semester I |                                 |           |          |          |          |           |           |         |
|------------|---------------------------------|-----------|----------|----------|----------|-----------|-----------|---------|
| S No.      | Name of the Course              | L         | T        | P        | S        | C         | H         | Remarks |
| 1          | Open Elective-I                 | 3         | 0        | 0        | 0        | 3         | 3         |         |
| 2          | Discrete Mathematics            | 3         | 0        | 0        | 0        | 3         | 3         |         |
| 3          | Computer System Organisation    | 3         | 0        | 0        | 0        | 3         | 3         |         |
| 4          | Programming for Problem Solving | 3         | 0        | 1        | 1        | 5         | 8         |         |
| 5          | Co-curricular Elective-I        | 2         | 0        | 0        | 0        | 2         | 2         |         |
| 6          | Vocational Elective-I           | 3         | 0        | 1        | 0        | 4         | 5         |         |
|            | <b>Total Credits (BCA)</b>      | <b>17</b> | <b>0</b> | <b>2</b> | <b>1</b> | <b>20</b> | <b>24</b> |         |

| Semester II |                                       |           |          |          |          |           |           |         |
|-------------|---------------------------------------|-----------|----------|----------|----------|-----------|-----------|---------|
| SN          | Name of the Course                    | L         | T        | P        | S        | C         | H         | Remarks |
| 1           | Open Elective-II                      | 3         | 0        | 0        | 0        | 3         | 3         |         |
| 2           | Probability and Statistics            | 3         | 0        | 0        | 0        | 3         | 3         |         |
| 3           | Data Structures                       | 3         | 0        | 1        | 0        | 4         | 5         |         |
| 4           | Object Oriented Programming using C++ | 3         | 0        | 1        | 1        | 5         | 8         |         |
| 5           | Database Management Systems           | 3         | 0        | 1        | 1        | 5         | 8         |         |
|             | <b>Total Credits (BCA)</b>            | <b>15</b> | <b>0</b> | <b>3</b> | <b>2</b> | <b>20</b> | <b>27</b> |         |

| Open Elective-II for II sem |  |   |   |   |   |   |   |        |
|-----------------------------|--|---|---|---|---|---|---|--------|
| SN                          | Name of the Course                               | L | T | P | S | C | H | School |
| 1                           | Environmental Literature                         | 3 | 0 | 0 | 0 | 3 | 3 | SOLE   |
| 2                           | Linear Algebra                                   | 3 | 0 | 0 | 0 | 3 | 3 | SBS    |
| 3                           | Understanding India                              | 3 | 0 | 0 | 0 | 3 | 3 | SOLE   |
| 4                           | Report Writing                                   | 3 | 0 | 0 | 0 | 3 | 3 | SOLE   |
| 5                           | Environmental Studies                            | 3 | 0 | 0 | 0 | 3 | 3 | SBS    |
| 6                           | Introduction to Japanese language and culture-II | 3 | 0 | 0 | 0 | 3 | 3 | SOLE   |

| Semester III |                                   |           |          |          |          |           |           |         |
|--------------|-----------------------------------|-----------|----------|----------|----------|-----------|-----------|---------|
| SN           | Name of the Course                | L         | T        | P        | S        | C         | H         | Remarks |
| 1            | Open Elective-III                 | 3         | 0        | 0        | 0        | 3         | 3         |         |
| 2            | Operating Systems                 | 3         | 0        | 1        | 0        | 4         | 5         |         |
| 3            | Design and Analysis of Algorithms | 3         | 0        | 1        | 0        | 4         | 5         |         |
| 4            | Java Programming                  | 3         | 0        | 1        | 1        | 5         | 8         |         |
| 5            | Elective-I                        | 3         | 0        | 0        | 0        | 3         | 3         |         |
|              | <b>Total Credits (BCA)</b>        | <b>15</b> | <b>0</b> | <b>3</b> | <b>1</b> | <b>19</b> | <b>24</b> |         |

| Semester IV |                            |           |          |          |          |           |           |         |
|-------------|----------------------------|-----------|----------|----------|----------|-----------|-----------|---------|
| SI No       | Name of the Course         | L         | T        | P        | S        | C         | H         | Remarks |
| 1           | Machine Learning           | 3         | 0        | 1        | 1        | 5         | 8         |         |
| 2           | Open Elective-IV           | 3         | 0        | 0        | 0        | 3         | 3         |         |
| 3           | Computer Networks          | 3         | 0        | 0        | 0        | 3         | 3         |         |
| 4           | Advanced Web Technology    | 3         | 0        | 1        | 1        | 5         | 8         |         |
| 5           | Elective-II                | 3         | 0        | 1        | 0        | 4         | 5         |         |
|             | <b>Total Credits (BCA)</b> | <b>15</b> | <b>0</b> | <b>3</b> | <b>2</b> | <b>20</b> | <b>27</b> |         |

| Semester V     |                                  |           |           |            |           |           |           |                                 |
|----------------|----------------------------------|-----------|-----------|------------|-----------|-----------|-----------|---------------------------------|
| SN             | Name of the Course               | L         | T         | P          | S         | C         | H         | Remarks                         |
| 1              | Software Engineering and Testing | 3         | 0         | 1          | 0         | 4         | 5         | Mobile App development project. |
| 2              | Open Elective-V                  | 3         | 0         | 0          | 0         | 3         | 3         |                                 |
| 3              | Campus to Corporate              | 1         | 0         | 1          | 0         | 2         | 3         |                                 |
| 4              | Mobile Application Development   | 3         | 0         | 1          | 1         | 5         | 8         |                                 |
| 5              | Project                          | 0         | 0         | 0          | 0         | 4         | 0         |                                 |
| 6              | Internship                       | 0         | 0         | 0          | 0         | 4         | 0         |                                 |
| 7              | Elective -III                    | 3         | 0         | 1          | 0         | 4         | 5         |                                 |
|                | <b>Total Credits (BCA)</b>       | <b>13</b> | <b>0</b>  | <b>4</b>   | <b>1</b>  | <b>26</b> | <b>24</b> |                                 |
|                |                                  |           |           |            |           |           |           |                                 |
| Semester VI    |                                  |           |           |            |           |           |           |                                 |
| SI No          | Name of the Course               | L         | T         | P          | S         | C         | H         | Remarks                         |
| 1              | Capstone Project                 | 0         | 0         | 0          | 0         | 15        |           |                                 |
|                | <b>Total Credits (BCA)</b>       | <b>0</b>  | <b>0</b>  | <b>0</b>   | <b>0</b>  | <b>15</b> | <b>0</b>  |                                 |
|                |                                  |           |           |            |           |           |           |                                 |
| <b>Credits</b> |                                  | <b>I</b>  | <b>II</b> | <b>III</b> | <b>IV</b> | <b>V</b>  | <b>VI</b> | <b>ToTal</b>                    |
| BCA            |                                  | 20        | 20        | 19         | 20        | 26        | 15        | 120                             |

| List of Electives-I for Semester- III                        |                                       |   |   |   |   |   |   |                     |
|--|---------------------------------------|---|---|---|---|---|---|---------------------|
| SN   | Name of the Course                    | L | T | P | S | C | H | Remarks             |
| 1  | Introduction to Data Science          | 3 | 0 | 0 | 0 | 3 | 3 |                     |
| 2  | Introduction to Cognitive Computing   | 3 | 0 | 0 | 0 | 3 | 3 |                     |
|  |                                       |   |   |   |   |   |   |                     |
|  |                                       |   |   |   |   |   |   |                     |
| List of Electives-II for Semester- IV                        |                                       |   |   |   |   |   |   |                     |
| SN   | Name of the Course                    | L | T | P | S | C | H | Remarks             |
| 1  | Cryptography                          | 3 | 0 | 1 | 0 | 4 | 5 |                     |
| 2  | Computer Graphics                     | 3 | 0 | 1 | 0 | 4 | 5 |                     |
|  |                                       |   |   |   |   |   |   |                     |
| List of Electives-III for Semester- V                        |                                       |   |   |   |   |   |   |                     |
| SN   | Name of the Course                    | L | T | P | S | C | H | Remarks             |
| 1  | Data Mining and Web Algorithms        | 3 | 0 | 1 | 0 | 4 | 5 |                     |
| 2  | BigData                               | 3 | 0 | 1 | 0 | 4 | 5 |                     |
|  |                                       |   |   |   |   |   |   |                     |
|  |                                       |   |   |   |   |   |   |                     |
| Vocational category for the programmes which follow NEP 2020 |                                       |   |   |   |   |   |   |                     |
| SN   | Course Name                           | L | T | P | S | C | H | Remarks             |
| 1  | Introduction to Web Technology        | 3 | 0 | 1 | 0 | 4 | 5 | Semester 1<br>and 2 |
| 2  | Introductory Computer Application     | 3 | 0 | 1 | 0 | 4 | 5 |                     |
| 3  | Office Automation Tools               | 3 | 0 | 1 | 0 | 4 | 5 | Semester 3<br>and 4 |
| 4  | Introduction to System Administration | 3 | 0 | 1 | 0 | 4 | 5 |                     |
|  |                                       |   |   |   |   |   |   |                     |
| Open Elective Basket   |                                       |   |   |   |   |   |   |                     |
| SN   | Course Name                           | L | T | P | S | C | H | Remarks             |

|    |  |   |   |   |   |   |   |                     |
|----|--|---|---|---|---|---|---|---------------------|
| 1  | Introduction to Japanese language and culture    | 3 | 0 | 0 | 0 | 3 | 3 | Semester 1<br>and 2 |
| 2  | Introduction to Japanese language and culture-II | 3 | 0 | 0 | 0 | 3 | 3 |                     |
| 3  | Maths and Puzzles                                | 3 | 0 | 0 | 0 | 3 | 3 |                     |
| 4  | Environmental Literature                         | 3 | 0 | 0 | 0 | 3 | 3 |                     |
| 5  | Environmental Studies                            | 3 | 0 | 0 | 0 | 3 | 3 |                     |
| 6  | Heartfulness (SOLE)-SDG                          | 3 | 0 | 0 | 0 | 3 | 3 |                     |
| 7  | Introduction to Cognitive Computing              | 3 | 0 | 0 | 0 | 3 | 3 | Semester 3<br>and 4 |
| 8  | Understanding India                              | 2 | 0 | 1 | 0 | 3 | 4 |                     |
| 9  | Linear Algebra                                   | 2 | 0 | 1 | 0 | 3 | 4 |                     |
| 10 | Report Writing                                   | 3 | 0 | 0 | 0 | 3 | 3 |                     |
| 11 | Principles of Management                         | 3 | 0 | 0 | 0 | 3 | 3 |                     |