**Department of Computer Science**

**D.D.U. Gorakhpur University, Gorakhpur**

**Year wise Structure of B.Sc. Computer Science Subject**

|  |  |  |  |
| --- | --- | --- | --- |
| Year | Sem. | Course Code | Paper Title |
| 1 | I | CSC100 | Basics of Computer Science |
| 1 | I | CSC101 | Problem Solving using Computer |
| 1 | I | CSC102 | Software Lab |
| 1 | II | CSC103 | Database Management Systems |
| 1 | II | CSC104 | Database Management Systems Lab |
| 2 | III | CSC201 | Operating Systems |
| 2 | III | CSC202 | Operating Systems Lab |
| 2 | IV | CSC203 | Computer System Architecture |
| 2 | IV | CSC204 | Computer System Architecture Lab |
| 3 | V | CSC301 | Analysis of Algorithms and Data Structures |
| 3 | V | CSC302 | Soft Computing |
| 3 | V | CSC303 | Lab on Algorithms and Data Structures |
| 3 | V | CSCR01 | Research Project-I |
| 3 | VI | CSC304 | Data Communication and Computer Networks |
| 3 | VI | CSC305 | Cyber Security & Cyber Laws |
| 3 | VI | CSC306 | Lab on Computer Networks |
| 3 | VI | CSCR02 | Research Project-II |

**BCA COURSE STRUCTURE**

|  |  |
| --- | --- |
| **1st Semester** | |
| **BCA 101** | **IT Tools and Applications** |
| **BCA 102** | **Principles of Mathematics** |
| **BCA 103** | **Functional English** |
| **BCA 104** | **Introduction to Computer Programming in ‘C’** |
| **BCA 105** | **Practical 1** |

|  |  |
| --- | --- |
| **2nd Semester** | |
| **BCA 201** | **Discrete Mathematics** |
| **BCA 202** | **Accounting and Financial Management** |
| **BCA 203** | **Digital Circuit and Logic Design** |
| **BCA 204** | **Introductions to Object Oriented Programming & C++** |
| **BCA 205** | **Practical 2** |

|  |  |
| --- | --- |
| **3rd Semester** | |
| **BCA 301** | **Operating System** |
| **BCA 302** | **Computer Oriented Mathematics** |
| **BCA 303** | **Data Structure** |
| **BCA 304** | **Computer Organization and Architecture** |
| **BCA 305** | **Practical 3** |

|  |  |
| --- | --- |
| **4th Semester** | |
| **BCA 401** | **Introduction to Database Management System** |
| **BCA 402** | **Operation Research** |
| **BCA 403** | **Computer Graphics** |
| **BCA 404** | **Software Engineering** |
| **BCA 405** | **Practical 4** |

|  |  |
| --- | --- |
| **5th Semester** | |
| **BCA 501** | **Internet and JAVA Programming** |
| **BCA 502** | **ORACLE and PL/SQL** |
| **BCA 503** | **Computer Networks** |
| **BCA 504** | **Software Project Management** |
| **BCA 505** | **Practical 5** |

|  |  |
| --- | --- |
| **6th Semester** | |
| **BCA 601** | **Advance Networks and Network Security** |
| **BCA 602** | **Web Development Tools and Techniques** |
| **BCA 603** | **Project Work** |

***Course Work for Ph. D. Computer Science Students***

|  |  |  |
| --- | --- | --- |
| **Course Nature** | **Course Code** | **Core Courses** |
| **Compulsory Course** | CSC 601 | Research Methodology |
| CSC 602 | Research and Publication Ethics |
| CSC 603 | Computer Fundamentals and IT |
| CSC 604 | Credit Seminar |
|  | | |
|  |
| **Discipline-Specific Courses** | CSC 605 | Design and Analysis of Algorithms |
| CSC 606 | Theory of Computation and Compiler Designing |
| CSC 607 | Software Engineering |
| CSC 608 | Database Systems |
|  | | |
|  |
| **Research Theme- Specific Courses** | CSC 612 | Data Science |
| CSC 613 | Cloud Computing |
| CSC 614 | Machine Learning Techniques |
| CSC 615 | Internet Of Things |
| CSC 616 | Network and Information Security |
|  | | |
|  |  | Thesis |
|  |  | **Total** |