

**Bachelor of Science (B.Sc. Computer Science)****Degree Duration : 3 Years (6 Semesters)****Intake Capacity :120**

The fast and innovative development of new applications in science, engineering and business, Computer Science is rapidly changing the way in which we experience our world. Students will gain not only knowledge and practical experience of the latest technologies, but also a grounding in the underlying principles of the subject. It is the combination of skills that enable the graduates to keep pace with this fast-moving technology and secure rewarding careers that can be pursued almost anywhere in the world.

**Eligibility:**

*A candidate for being eligible for admission to the three years integrated course leading to the degree of Bachelor of Science (B.Sc.) must have passed Higher Secondary School Certificate Examination (Std. XII) in Science stream conducted by the Maharashtra State Board of Secondary and Higher Secondary Education with Mathematics and Statistics as one of the subject or its equivalent.*

*Admission will be on merit, based on order of preference as follows:*

1. *Aggregate Marks at H.S.C. or equivalent.*
2. *Aggregate Marks in Science Group (Physics, Chemistry and Mathematics)*
3. *Marks in Mathematics and Statistics and Physics.*
4. *Marks in Mathematics and Statistics.*

**(Ref. Circular of University of Mumbai/284 of 2007, Dated 16<sup>th</sup> June, 2007)**

**Subjects:**

| Semester I |   | Semester II |   |
|------------|---|-------------|---|
| USCS101    | Digital Systems & Architecture                      | USCS201     | Design & Analysis of Algorithms             |
| USCSP101   | Digital Systems & Architecture – Practical          | USCSP201    | Design & Analysis of Algorithms – Practical |
| USCS102    | Introduction to Programming with Python             | USCS202     | Advanced Python Programming                 |
| USCSP102   | Introduction to Programming with Python – Practical | USCSP202    | Advanced Python Programming – Practical     |
| USCS103    | LINUX Operating System                              | USCS203     | Introduction to OOPs using C++              |
| USCSP103   | LINUX Operating System – Practical                  | USCSP203    | Introduction to OOPs using C++ – Practical  |
| USCS104    | Open Source Technologies                            | USCS204     | Database Systems                            |
| USCSP104   | Open Source Technologies – Practical                | USCSP204    | Database Systems – Practical                |
| USCS105    | Discrete Mathematics                                | USCS205     | Calculus                                    |
| USCSP105   | Discrete Mathematics – Practical                    | USCSP205    | Calculus – Practical                        |
| USCS106    | Descriptive Statistics                              | USCS206     | Statistical Methods                         |
| USCSP106   | Descriptive Statistics – Practical                  | USCSP206    | Statistical Methods – Practical             |
| USCS107    | Soft Skills   | USCS207     | E-Commerce & Digital Marketing              |

| Semester III |                                 | Semester IV |                       |
|--------------|---------------------------------|-------------|-----------------------|
| USCS301      | Principles of Operating Systems | USCS401     | Theory of Computation |

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|                         |  |                         |  |
| USCSP301                | Principles of Operating Systems – Practical    | USCSP401                | Theory of Computation – Practical            |
|                         |  |                         |  |
| USCS302                 | Linear Algebra                                 | USCS402                 | Computer Networks                            |
| USCSP302                | Linear Algebra – Practical                     | USCSP402                | Computer Networks – Practical                |
| USCS303                 | Data Structures                                | USCS403                 | Software Engineering                         |
| USCSP303                | Data Structures – Practical                    | USCSP403                | Software Engineering – Practical             |
| USCS304                 | Advanced Database Concepts                     | USCS404                 | IoT Technologies                             |
| USCSP304                | Advanced Database Concepts – Practical         | USCSP404                | IoT Technologies – Practical                 |
| USCS305                 | Java based Application Development             | USCS405                 | Android Application Development              |
| USCSP305                | Java based Application Development – Practical | USCSP405                | Android Application Development – Practical  |
| USCS306                 | Web Technologies                               | USCS406                 | Advanced Application Development             |
| USCSP306                | Web Technologies – Practical                   | USCSP406                | Advanced Application Development – Practical |
| <b>General Elective</b> |  | <b>General Elective</b> |  |
| USCS3071                | Creative Content Writing                       | USCS4071                | Research Methodology                         |
| USCS3072                | Green Technologies                             | USCS4072                | Management & Entrepreneurship                |

| Semester V               |  | Semester VI              |   |
|--------------------------|--|--------------------------|---|
| <b>Elective 1</b>        |  | <b>Elective I</b>        |   |
| USCS502                  | Linux Server Administration            | USCS601                  | Wireless Sensor Networks and Mobile Communication |
| USCS503                  | Software Testing and Quality Assurance | USCS602                  | Cloud Computing                                   |
| <b>Elective II</b>       |  | <b>Elective II</b>       |   |
| USCS504                  | Information and Network Security       | USCS604                  | Information Retrieval                             |
| USCS506                  | Web Services                           | USCS606                  | Data Science                                      |
| <b>Skill Enhancement</b> |  | <b>Skill Enhancement</b> |   |
| USCS507                  | Game Programming                       | USCS607                  | Ethical Hacking                                   |
| <b>Practical</b>         |  | <b>Practical</b>         |   |
| USCSP501                 | Practical of Elective-I                | USCSP601                 | Practical of Elective-I                           |
| USCSP502                 | Practical of Elective-II               | USCSP602                 | Practical of Elective-II                          |
| USCSP503                 | Project Implementation                 | USCSP603                 | Project Implementation                            |
| USCSP504                 | Practical of Skill                     | USCSP604                 | Practical of Skill                                |
|                          | Enhancement: USCS507                   |                          | Enhancement: USCS607                              |

### Career Options After BSc Computer Science

Computer science as a subject and its application in real-life business situations are considered the most sought-after courses both at graduation and post-graduation scenarios. Let us look at some career options after BSc Computer Science.

1. Programmer
2. Data Scientist
3. Application Analyst
4. Software Tester

5. Information System Manager
6. System Analyst
7. Project Head
8. Web Designer
9. Technical Support Representative
10. Database Administrator
11. Software Engineer
12. Online Tutoring and many more

As per technology advances, Career opportunities also increasing in this field. This is evergreen field.