Course Name : Bsc CS

Course Duration : 3 Year

Course Category : Non Aided

Programme Structure for B.Sc. Computer Science

Programme Duration	06 Semesters *spread across 3 years*
Total Credits required for successful completion of the Course	120
Credits required from the Core Courses	76
Credits required for the Ability Enhancement Courses	04
Credits required for Skills Enhancement Courses	32
Credits for General Elective Courses	08
Minimum Attendance per Semester	75%

SEMESTER I

Course Code	Course Type	Course Title	Credits
USCS101	Core Subject	Digital Systems & Architecture	2
USCSP101	Core Subject Practical	Digital Systems & Architecture – Practical	1
USCS102	Core Subject	Introduction to Programming with Python	2
USCSP102	Core Subject Practical	Introduction to Programming with Python – Practical	1
USCS103	Core Subject	LINUX Operating System	2
USCSP103	Core Subject Practical	LINUX Operating System – Practical	1
USCS104	Core Subject	Open Source Technologies	2
USCSP104	Core Subject Practical	Open Source Technologies – Practical	1
USCS105	Core Subject	Discrete Mathematics	2
USCSP105	Core Subject Practical	Discrete Mathematics – Practical	1
USCS106	Core Subject	Descriptive Statistics	2
USCSP106	Core Subject Practical	Descriptive Statistics – Practical	1
USCS107	Ability Enhancement Course	Soft Skills	2

SEMESTER II

Course Code	Course Type	Course Title	Credits
USCS201	Core Subject	Design & Analysis of Algorithms	2
USCSP201	Core Subject Practical	Design & Analysis of Algorithms – Practical	1
USCS202	Core Subject	Advanced Python Programming	2
USCSP202	Core Subject Practical	Advanced Python Programming – Practical	1
USCS203	Core Subject	Introduction to OOPs using C++	2
USCSP203	Core Subject Practical	Introduction to OOPs using C++ – Practical	1
USCS204	Core Subject	Database Systems	2
USCSP204	Core Subject Practical	Database Systems – Practical	1
USCS205	Core Subject	Calculus	2
USCSP205	Core Subject Practical	Calculus – Practical	1
USCS206	Core Subject	Statistical Methods	2
USCSP206	Core Subject Practical	Statistical Methods – Practical	1
USCS207	Ability Enhancement Course	E-Commerce & Digital Marketing	2

SEMESTER III

Course	Subject Name	Credits
USCS301	Theory of Computation	2
USCS302	Core JAVA	2
USCS303	Operating System	2
USCS304	Database Management Systems	2
USCS305	Combinatorics and Graph Theory	2
USCS306	Physical Computing and IoT Programming	2
USCS307	Skill Enhancement: Web Programming	2
USCSP301	Practical of USCS302+USCS303+USCS304	3
USCSP302	Practical of USCS305+USCS306+USCS307	3

SEMESTER IV

Course	Subject Name	Credits
USCS401	Fundamentals of Algorithms	2

Course	Subject Name	Credits
USCS402	Advanced JAVA	2
USCS403	Computer Networks	2
USCS404	Software Engineering	2
USCS405	Linear Algebra using Python	2
USCS406	.NET Technologies	2
USCS407	Skill Enhancement: Android Developer Fundamentals	2
USCSP401	Practical of USCS401+ USCS402+ USCS403	3
USCSP402	Practical of USCS405+ USCS406+ USCS407	3

SEMESTER V

Course	TOPICS	Credits
	Elective-I (Select Any Two)	
USCS501	Artificial Intelligence	3
USCS502	Linux Server Administration	3
USCS503	Software Testing and Quality Assurance	3
	Elective-II (Select Any Two)	
USCS504	Information and Network Security	3
USCS505	Architecting of IoT	3
USCS506	Web Services	3
	Skill Enhancement	
USCS507	Game Programming	2
	Practical	
USCSP501	Practical of Elective-I	2
USCSP502	Practical of Elective-II	2
USCSP503	Project Implementation	1
USCSP504	Practical of Skill Enhancement : USCS507	1

SEMESTER VI

Course	Subject Name	Credits
	Elective-I (Select Any Two)	
USCS601	Wireless Sensor Networks and Mobile Communication	3
USCS602	Cloud Computing	3
USCS603	Cyber Forensics	3
	Elective-II (Select Any Two)	
USCS604	Information Retrieval	3
USCS605	Digital Image Processing	3

Course	Subject Name	Credits
USCS606	Data Science	3
	Skill Enhancement	
USCS607	Ethical Hacking 2 3	2
	Practical	
USCSP601	Practical of Elective-I	2
USCSP602	Practical of Elective-II	2
USCSP603	Project Implementation	1
USCSP604	Practical of Skill Enhancement : USCS607	1

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. Marks in Mathematics and Statistics.

Total no of students enrollment: 60(FY/SY/TY EACH)

Course Scope   :

BSc CS degree can get profiles such as **programmer, system engineer, software engineer, network administrator**.

Objective:

The objectives of the 3 year B.Sc. Computer Science programme are as follows:

To develop an understanding and knowledge of the basic theory of Computer Science with good foundation on theory, systems and applications.

To foster necessary skills and analytical abilities for developing computer based solutions of real-life problems. To provide training in emergent computing technologies which lead to innovative solutions for industry and academia.

To develop the necessary study skills and knowledge to pursue further post-graduate study in computer science or other related fields. To develop the professional skillset required for a career in an information technology oriented business or industry.

To enable students to work independently and collaboratively, communicate effectively, and become responsible, competent, confident, insightful, and creative users of computing technology