

Progressive Education Society's
Modern College of Arts, Science and Commerce,
Shivajinagar, Pune 5
(An Autonomous College Affiliated to Savitribai Phule Pune University)

Framework of Syllabus

For

For B.Sc. (Computer Science)

(2019-20 Course)

(with effect from 2019-20)

CIA: Continuous Internal Evaluation**Semester 1 (First Year)**

Course Type	Course Code	Course / Paper Title	Hours / Week	Credit	CIA	End Sem Exam	Total
CCT-1	19CsCmpU101	Problem Solving and Introduction to C Programming	3	2	40	60	100
CCT-2	19CsCmpU102	Introduction to Scripting Languages (HTML, CSS)	3	2	40	60	100
CCP-1	19CsCmpU103	Lab Course on C Programming and Scripting Languages	4	2	40	60	100
Total				6	120	180	300
SECT-1	19CpPedU101	Physical Education – I	1	0.5	20	30	50
	Extra Credentials	Activity Based Learning –I (MOOC or IIT Spoken Tutorial like courses) Introduction to Computers, HTML					

Semester 2 (First Year)

Course Type	Course Code	Course / Paper Title	Hours / Week	Credit	CIA	End Sem Exam	Total
CCT-3	19CsCmpU201	Advanced C Programming	3	2	40	60	100
CCT-4	19CsCmpU202	Relational Database Systems	3	2	40	60	100
CCP-2	19CsCmpU203	Lab Course on Advanced C Programming and Relational Database Systems	4	2	40	60	100
Total				6	120	180	300
SECT-2	19CpPedU102	Physical Education – II	1	0.5	20	30	50
	Extra credentials	Activity Based Learning –II (online courses like MOOC or IIT Spoken Tutorial courses) Programming in C					

Semester 3 (Second Year)

Course Type	Course Code	Course / Paper Title	Hours / Week	Credit	CIA	End Sem Exam	Total
CCT-5	19CsCmpU301	Data Structures	4	2.5	40	60	100
CCT-6	19CsCmpU302	Advanced Relational Database Systems	4	2.5	40	60	100
CCP-3	19CsCmpU303	Lab Course on Data Structures and Relational Database Systems and Mini Project on Database Systems	4	2	40	60	100
Total				7	120	180	300
AECCT-1	19CpEnvU305	Environmental Awareness –I	1	0.5	20	30	50
AECCT-2	19CpEngU306	English Communication –I	4	2.5	40	60	100
	Extra credentials	Activity Based Learning –I (Online Courses like MOOC or IIT Spoken Tutorial courses)					

		RDBMS					
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Semester 4 (Second Year)

Course Type	Course Code	Course / Paper Title	Hours / Week	Credit	CIA	End Sem Exam	Total
CCT-7	19CsCmpU401	Advanced Data Structures	4	2.5	40	60	100
CCT-8	19CsCmpU402	Object Oriented Programming using C++	4	2.5	40	60	100
CCP-4	19CsCmpU403	Lab Course on Advanced Data Structures and Object-Oriented Programming using C++	4	2	40	60	100
Total				7	120	180	300
AECCT-1	19CpEnvU405	Environmental Awareness –I	1	0.5	20	30	50
AECCT-2	19CpEngU406	English Communication –I	4	2.5	40	60	100
	Extra credentials	Activity Based Learning –I (MOOC or IIT Spoken Tutorial like courses) C++					

Semester 5 (Third Year)

Course Type	Course Code	Course / Paper Title	Hours / Week	Credit	CIA	End Sem Exam	Total
DSET-1	19CsCmpU501	System Programming	4	2.5	40	60	100
DSET-2	19CsCmpU502	Networking	4	2.5	40	60	100
DSET-3	19CsCmpU503	Web Programming - I (PHP, Java Script)	4	2.5	40	60	100
DSET-4			4	2.5	40	60	100
DSET-5	19CsCmpU504	Core Java	4	2.5	40	60	100
DSET-6	19CsCmpU505	SE Practices					
	19CsCmpU506	Theory of Computer Science					
	19CsCmpU507	Business Application –I					
	19CsCmpU508	Software Project Management					
DSEP-1	19CsCmpU509	Lab I on System Programming	4	2	40	60	100
DSEP-2	19CsCmpU511	Lab III on Core Java	4	2	40	60	100
SECP-1	19CsCmpU510	Lab II on Web Programming – I and Project*	4	2	40	60	100
	19CsCmpU512	Lab IV on Business Application –I and Project*					
Total				21	360	540	900
	Extra credentials	Activity Based Learning –I (MOOC or IIT Spoken Tutorial like courses) Java Business Application					

*Project will be based on core java and /or web technology-I and /or business application-I

From the 8 Discipline Specific theory courses 4 courses having Practical courses should be selected and two pure theory-oriented courses should be elected by the student as mentioned in following groups

Group 1	Group 2
1. System Programming 2. Web Programming - I (PHP, OJava Script) 3. Core Java 4. Business Application –I	1. Theory of Computer Science 2. Software Project Management

Semester 6 (Third Year)

Course Type	Course Code	Course / Paper Title	Hours / Week	Credit	CIA	End Sem Exam	Total	
DSET-7	19CsCmpU601	Operating System Concepts	4	2.5	40	60	100	
DSET-8	19CsCmpU602	Advanced Networking (Cyber Security, Data Security, Cryptography)	4	2.5	40	60	100	
DSET-9			4	2.5	40	60	100	
DSET-10			4	2.5	40	60	100	
DSET-11	19CsCmpU603	Web Programming –II (Ajax, Mean Stack)	4	2.5	40	60	100	
DSET-12	19CsCmpU604	Advanced Java	4	2.5	40	60	100	
		19CsCmpU605	Object Oriented Software Engineering					
		19CsCmpU606	Compiler Construction					
		19CsCmpU607	Business Application –II					
		19CsCmpU608	Computer Commercial Applications (m-commerce / e-commerce) / Digital Marketing					
DSEP-3	19CsCmpU609	Lab I on Operating System	4	2	40	60	100	
DSEP-4	19CsCmpU611	Lab III on Advanced Java	4	2	40	60	100	
SECP-2	19CsCmpU610	Lab II on Web Programming – II and Project	4	2	40	60	100	
	19CsCmpU612	Lab IV on Business Application –II and Project						
Total				360	540	900	360	
	Extra credentials	Activity Based Learning –I (MOOC or IIT Spoken Tutorial like courses) PHP						

*Project will be based on advanced java and/or web technology –II and/or business application-II (project done in Semester 5 can be continued with sufficient updations in it or separate project can be done by the student)

From the 8 Discipline Specific theory courses 4 courses having Practical courses should be selected and two pure theory-oriented courses should be elected by the student as mentioned in following groups.

Group 1	Group 2
1. Operating System Concepts 2. Web Programming –II (Ajax, Full Stack, Mean Stack (Angular)) 3. Advanced Java 4. Business Application –II	1. Compiler Construction 2. Computer Commercial Applications (m-commerce / e-commerce)

