

*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**

**M.Sc. (Computer Application)**

**(2019-20 Course)**

**(with effect from 2019-20)**

**CIA:**Continuous Internal Evaluation

### Semester 1 (Part I)

Course Type	Course Code	Course / Paper Title	Hours / Week	Credit	CIA	End Sem Exam	Total
CCT-1	19ScCmaP101	Design and Analysis of Algorithms	4	4	50	50	100
CCT-2	19ScCmaP102	.NET	4	4	50	50	100
CCT-3	19ScCmaP103	Web Programming - I	4	4	50	50	100
CCP-1	19ScCmaP104	Lab on .NET and Web Programming-I	4	4	50	50	100
DSET-1	19ScCmaP105	Software Development Engineering in Testing	4	4	50	50	100
	19ScCmaP106	Advanced Database Concepts					
<b>Total</b>			<b>20</b>	<b>20</b>			
AECCT-1	19CpCysP101	Cyber Security-I	1	1			25
AECCT-2	19CpHrtP102	Human Rights-I	1	1			25
<b>Total</b>			<b>22</b>	<b>22</b>			
Extra Credentials		Activity based Learning –I (MOOC or IIT Spoken Tutorial like courses), Introduction to Computers, HTML					

### Semester 2 (Part I)

Course Type	Course Code	Course / Paper Title	Hours / Week	Credit	CIA	End Sem Exam	Total
CCT-4	19ScCmaP201	Advanced Operating Systems	4	4	50	50	100
CCT-5	19ScCmaP202	Information System and Security	4	4	50	50	100
CCT-6	19ScCmaP203	Web Programming -II	4	4	50	50	100
CCP-2	19ScCmaP204	Lab on Advanced Operating System and Web Programming-II	4	4	50	50	100
CCP-3	19ScCmaP205	Project	4	4	50	50	100
DSET-2	19ScCmaP206	Soft Computing	4	4	50	50	100
	19ScCmaP207	Cloud and Grid Computing					

<b>Total</b>			24	24			
AECCT-3	19CpCysP201	Cyber Security-I	1	1			25
AECCT-4	19CpHrtP202	Human Rights-I	1	1			25
<b>Total</b>			<b>26</b>	<b>26</b>			
Extra Credentials		Activity based Learning –II (MOOC or IIT Spoken Tutorial like courses) PHP					

### Semester 3 (Part II)

Course Type	Course Code	Course / Paper Title	Hours / Week	Credit	CIA	End Sem Exam	Total
CCT-7	19CsCmaP301	Mobile Technologies (Android Development)	4	4	50	50	100
CCT-8	19CsCmaP302	Programming Language (Python)	4	4	50	50	100
CCP-4	19CsCmaP303	Lab on Mobile Technologies (Android Development) and Programming Language (Python)	4	4	50	50	100
CCP-5	19CsCmaP304	Project	4	4	50	50	100
DSET-3	19CsCmaP305	Research Methodology	4	4	50	50	100
	19CsCmaP306	User Experience and Design					
<b>Total</b>			<b>20</b>	<b>20</b>			
AECCT-5	19CpCysP301	Cyber Security-III	1	1			25
AECCT-6	19CpSkdP302	Skill Development-I	2	2			50
<b>Total</b>			<b>23</b>	<b>23</b>			
Extra Credentials		Activity based Learning –III (MOOC or IIT Spoken Tutorial like courses) Python					

### Semester 4 (Part II)

Course Type	Course Code	Course / Paper Title	Hours / Week	Credit	CIA	End Sem Exam	Total
CCP-1	19CsCmpP401	Industrial Training		16	50	50	100
AECCT-5	19CpCysP401	Cyber Security-III	1	1			25
AECCT-6	19CpSkdP402	Skill Development-I	2	2			50
<b>Total</b>			<b>3</b>	<b>19</b>			