



**SANDIP FOUNDATION'S**  
**SANDIP INSTITUTE OF TECHNOLOGY AND RESEARCH CENTRE**

(An Autonomous Institute Permanently Affiliated to Savitribai Phule Pune University, Pune)  
 MAHIRAVANI, TRIMBAK ROAD, TAL & DIST: NASHIK-422213, MAHARASHTRA, INDIA

**Master of Computer Application**

**Semester-I**

Sr. No.	Core	Course Code	Course Name	Teaching Scheme (Hrs./Week)				Examination Scheme				Total Marks
				L	T	P	C	Formative Assessment CIA		Summative Assessment ESE		
								Course	Lab	Course	Lab	
1	IC	2400501	Mathematical Logic Combination and Graph Theory	4	--	--	4	50	--	50	--	100
2	PC	2423502	Advance Database Management System	3	--	--	3	50	--	50	--	100
3	PC	2423503	Web Technology	3	--	--	3	50	--	50	--	100
4	PC	2423504	Advanced Software Engineering	3	--	--	3	50	--	50	--	100
5	PE	2423505#	Program Elective-I	4	--	--	4	50	--	50	--	100
6	PC	2423506	Lab Practice 1 – ADBMS & Web	--	--	4	3	--	50	--	50 <sup>a</sup>	100
7	IKS	SWAYAM	SWAYAM Certification Course	--	--	--	2	--	--	--	--	--
<b>Program Elective-I</b>												
5	PE	2423505A	Multi-Core Computer Architecture	4	--	--	4	50	--	50	--	100
5	PE	2423505B	Distributed Operating System	4	--	--	4	50	--	50	--	100
<b>TOTAL</b>				<b>18</b>	<b>00</b>	<b>04</b>	<b>22</b>	<b>250</b>	<b>50</b>	<b>250</b>	<b>50</b>	<b>600</b>
<b>Indian Knowledge System (IKS) Courses</b>												
1. An Introduction to Indian Literary Theory						2. Folk & Minor Art in India						



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**Semester-II**

Sr. No.	Core	Course Code	Course Name	Teaching Scheme (Hrs./Week)				Examination Scheme				Total Marks
				L	T	P	C	Formative Assessment CIA		Summative Assessment ESE		
								Course	Lab	Course	Lab	
1	PC	2423507	Advanced java	3	--	--	4	50	--	50	--	100
2	PC	2423508	Cloud Computing	3	--	--	3	50	--	50	--	100
3	PC	2423509	Cryptography & Cyber Security	3	--	--	3	50	--	50	--	100
4	PE	2423510	Program Elective-II	4	--	--	4	50	--	50	--	100
5	PC	2423511	Lab Practice – II (Java & PE-II)	--	--	4	2	--	50	--	50 <sup>a</sup>	100
6	IC (TP)	SWAYAM	Teaching Pedagogy SWAYAM Courses	--	--	--	2	--	--	--	--	--
7	IC	2400502	On-Job Training/Internship	--	--	--	4	--	50	--	50	100
<b>Program Elective-II</b>												
4	PE	2423510A	Mobile Application Development	4	--	--	4	50	--	50	--	100
4	PE	2423510B	Parallel Computing	4	--	--	4	50	--	50	--	100
<b>TOTAL</b>				<b>14</b>	<b>00</b>	<b>04</b>	<b>22</b>	<b>200</b>	<b>100</b>	<b>200</b>	<b>100</b>	<b>600</b>
<b>Teaching Pedagogy SWAYAM Courses</b>												
1) Advance Instructional Methods                      2) Basic Instructional Methods 3) ICT in Teaching & Learning                      4) Educational Media												
<b>Course Work (for Exit Criterion to PG Diploma)</b>												
<b>NPTEL Courses</b> (Any Two courses in total of six credits)				--	--	--	<b>6</b>	--	--	--	--	--
<b>OR</b>												
<b>Higher Semester Courses</b> (Any Two courses in total of six credits)				--	--	--	<b>6</b>	--	--	--	--	--



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**Semester-III**

Sr. No.	Core	Course Code	Course Name	Teaching Scheme (Hrs./Week)				Examination Scheme				Total Marks
				L	T	P	C	Formative Assessment CIA		Summative Assessment ESE		
								Course	Lab	Course	Lab	
1	PC	2423601	Operations Research	3			3	50	--	50	--	100
2	PC	2423602	Artificial Intelligence and Machine Learning	3	--	--	3	50	--	50	--	100
3	PE	SWAYAM	Program Elective-III	--	--	--	3	--	--	--	--	--
4	IC	2400601	Python Programming	3	--	--	3	--	--	50	-	50
5	PC	2423603	Object Oriented Analysis and Design	3			3	50	--	50	--	100
6	IC	2400602	Linux Administration	3	--	--	3	--		50		50
7	IC	2400603	Lab Practice III (Linux admin & Python)			4	2	----	50	----	50 <sup>a</sup>	100
8	PC	2423604	Dissertation Stage 1	--	--	2	1	--	25	--	25 <sup>a</sup>	50
9	IC	2400604	Research Methodology with Writing Research Paper	--	2	--	1	---	---	50	----	50
<b>Audit Course</b>												
10	IC	2400605	Mini project	--	---	---	----	----	----	----	----	----
<b>Program Elective-III</b>												
3	PE	SWAYAM	AI in Health Care	--	--	--	3	--	--	--	--	--
3	PE		Advanced GPU Process	--	--	--	3	--	--	--	--	--
<b>TOTAL</b>				<b>15</b>	<b>02</b>	<b>6</b>	<b>22</b>	<b>150</b>	<b>75</b>	<b>300</b>	<b>75</b>	<b>600</b>



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**Semester-IV**

Sr. No.	Core	Course Code	Course Name	Teaching Scheme (Hrs./Week)				Examination Scheme				Total Marks
				L	T	P	C	Formative Assessment CIA		Summative Assessment ESE		
								Course	Lab	Course	Lab	
2	PC	2423605	Industry Internship	--	--	--	14	--	150	--	200 <sup>a</sup>	350
5	IC	2400603	Dissertation Stage-II	--	--	16	8	--	100	--	150 <sup>a</sup>	250
<b>TOTAL</b>				<b>4</b>	<b>00</b>	<b>16</b>	<b>22</b>	<b>--</b>	<b>250</b>	<b>--</b>	<b>350</b>	<b>600</b>