



**SANDIP FOUNDATION'S**  
**SANDIP INSTITUTE OF TECHNOLOGY AND RESEARCH CENTRE**  
 MAHIRAVANI, TRIMBAK ROAD, TAL & DIST: NASHIK-422213, MAHARASHTRA, INDIA  
**First Year of B. Tech Program (2023 Pattern)**

**Semester – I (Common)**

SECTION	Sr. No.	Course Type	Course Code	Course Name	Teaching Scheme (Hrs./Week)						Examination Scheme				Total Marks
					L	T	CT	P	CP	TC	Formative Assessment CIA		Summative Assessment ESE		
											Theory	Lab	Theory	Lab	
I	1	IC (BS)	2301101	Engineering Mathematics-I	3	--	3	--	--	3	50	--	50	--	100
	2	IC (BS)	2301102 / 2301103	Engineering Physics / Engineering Chemistry	2	--	2	2	1	3	25	25	50	--	100
	3	IC (ES)	2312104	Elements of Mechanical Engineering	2	--	2	2	1	3	25	25	50	--	100
	4	IC (ES)	2311105 /2317106	Elements of Electrical Engineering/ Elements of Electronics Engineering	2	--	2	2	1	3	25	25	50	--	100
	5	IC (ES)	2314107	Elements of Civil Engineering	2	--	2	2	1	3	25	25	50	--	100
	6	IC (AEC1)	2301104	Language Communication Lab	--	--	--	2	1	1	--	25	--	25 <sup>a</sup>	50
	7	IC (AEC2)	2301105	Social Media Content Creation Lab	--	--	--	2	1	1	--	25	--	25 <sup>b</sup>	50
II	8	IC (VSEC)	23YYZZZ	One Group 'A' Course						2					75
	9	IC (ES)	23YYZZZ	One Group 'B' Course						1					25
	10	IC (LLC)	23YYZZZ	One Group 'C' Course						2					50
<b>TOTAL (SECTION I+ II)</b>					<b>13/12</b>	<b>00</b>	<b>13/12</b>	<b>18/20</b>	<b>9/10</b>	<b>22</b>	<b>150</b>	<b>225</b>	<b>300</b>	<b>75</b>	<b>750</b>



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**Semester – II**

SECTION	Sr. No.	Course Type	Course Code	Course Name	Teaching Scheme (Hrs./Week)						Examination Scheme				Total Marks
					L	T	CT	P	CP	TC	Formative Assessment CIA		Summative Assessment ESE		
											Theory	Lab	Theory	Lab	
I	1	IC (BS)	2301106	Engineering Mathematics-II	3	--	3	--	--	3	50	--	50	--	100
	2	IC (BS)	2301102 / 2301103	Engineering Physics / Engineering Chemistry	2	--	2	2	1	3	25	25	50	--	100
	3	IC (BS)	2314107	Environmental Science	2	--	2	--	--	2	25	--	50	--	75
	4	IC (ES)	2312108	Engineering Graphics	1	--	1	2	1	2	--	25	50	--	75
	5	IC (ES)	2311105 / 2317106	Elements of Electrical Engineering / Elements of Electronics Engineering	2	--	2	2	1	3	25	25	50	--	100
	6	PC	23YY109	Program Specific Core	2	--	2	--	--	2	25	--	50	--	75
	7	IC (IKS)	2300110	Democracy, Election and Governance	2	--	2	--	--	2	25	--	50	--	75
II	8	IC (VSEC)	23YYZZZ	One Group 'A' Course						2					75
	9	IC (ES)	23YYZZZ	One Group 'B' Course						1					25
	10	IC (LLC)	23YYZZZ	One Group 'C' Course						2					50
<b>TOTAL (SECTION I+ II)</b>					<b>12/13</b>	<b>00</b>	<b>12/13</b>	<b>20/18</b>	<b>10/9</b>	<b>22</b>	<b>175</b>	<b>150</b>	<b>400</b>	<b>25</b>	<b>750</b>



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**Grouping of Courses**  
*(Offered in both Semesters)*

Sr. No.	Course Type	Course Code	Course Name	Teaching Scheme (Hrs./Week)						Examination Scheme				Total Marks
				L	T	CT	P	CP	TC	Formative Assessment CIA		Summative Assessment ESE		
										Theory	Lab	Theory	Lab	
<b>Group A</b>														
8	IC (VSEC)	2315111	Problem Solving and Programming using Python	1	--	1	2	1	2	--	25	25	25 <sup>b</sup>	75
		2312112	Engineering Draftsmanship	1	--	1	2	1	2	--	25	50		75
<b>Group B</b>														
9	IC (ES)	2313113	Introduction to Drone Technology	1	--	1	--		1	--	--	25	--	25
		2312114	Workshop Practice	--	--	--	2	1	1	--	25	--	--	25
<b>Group C</b>														
10	IC (LLC)	2300115	Physical Education and Yoga	--	--	--	4	2	2	--	50	--	--	50
		2300116	Physical Education and Sports	--	--	--	4	2	2	--	25	--	25 <sup>b</sup>	50
<b>TOTAL</b>				<b>3</b>	<b>--</b>	<b>3</b>	<b>14</b>	<b>07</b>	<b>10</b>	<b>--</b>	<b>150</b>	<b>100</b>	<b>50</b>	<b>300</b>
<b>Certificate Course Work (Only for Exit Criteria)</b>														
11	CUG	ECYY1	Skill based Course	--	--	--	--	6*	4	--	100	--	--	100
12	CUG	ECYY2	Internship (2 Weeks)	--	--	--	--	2#	2	--	50	--	--	50
<b>TOTAL</b>				<b>-</b>	<b>--</b>	<b>6</b>	<b>--</b>	<b>--</b>	<b>10</b>	<b>--</b>	<b>150</b>	<b>--</b>	<b>--</b>	<b>150</b>
* 6 hrs/day for Skill based Course over three consecutive weeks														
# Internship of 2 weeks (36-40 hours of engagement per week) only after satisfactory completion of Skill Based Course work														



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**Program Specific Core Courses (PC)**

Sr. No.	Course Code	Course Name
Automation & Robotics/Mechanical/Civil Engineering		
1	2314109	Statics & Dynamics of Engineering Systems
Computer/ Information Technology/ Artificial Intelligence & Data Science		
1	2310109	Fundamentals of Computing & C programming
Electronics & Telecommunication Engineering		
1	2317109	Introduction to EDA tools
Electrical Engineering		
1	2311109	Component Materials and Testing



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**Skill Based Courses for UG Certificate (Exit Option)**

Sr. No.	Course Code	Course Name
<b>Automation &amp; Robotics</b>		
1	EC131	Robot Maneuverability
<b>Computer Engineering</b>		
1	EC101	Java Script
<b>Information Technology</b>		
1	EC151	Data Analytics using MS-Excel, POWER BI & Tableau
<b>Artificial Intelligence &amp; Data Science</b>		
1	EC181	Elementary Data Analytics using MS-Excel
<b>Electronics &amp; Telecommunication Engineering</b>		
1	EC171	Identification of active and passive components
<b>Electrical Engineering</b>		
1	EC111	Basics of Electrical Wiring System
<b>Civil Engineering</b>		
1	EC141	Basics of Civil Engineering for Construction
<b>Mechanical Engineering</b>		
1	EC121	Basic Machining operations using Lathe