



# Sardar Patel Institute of Technology

Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai-400058-India  
(Autonomous Institute Affiliated to University of Mumbai)

## Scheme for First Year B.Tech (2019-20)

**Total Credits: 160 credits with SEM VIII Internship**

**Effective for students admitted in first year in Academic Year 2019-20**

### Group 1: Computer Engineering and Information Technology

SEM I (Group 1)						
Course Code	Course Name	Group	Teaching Scheme (Hrs/week)			Credits Total
			L	T	P	
BS11	Linear Algebra & Differential Calculus	BS	3	--	--	3
BS12	Engineering Physics	BS	4	1	--	5
ES11	Structured Programming Approach	ES	3	--	--	3
ES12	Digital Circuits	PC	3	--	--	3
BSL11	Computational Mathematics Lab-I	BS	--	--	2	1
BSL12	Engineering Physics Lab	BS	--	--	2	1
ESL11	Structured Programming Approach Lab	ES	--	--	4(2+2)	2
ESL12	Digital Circuits Lab	PC	--	--	2	1
ESL16	Workshop I	ES	--	--	2	1
HSS11	Communication Skills	HSS	2	--	2	3
MC21	Environmental Studies (Non-Credit)	MC	1	--	--	--
ABL-A	Essence of Indian Traditional Knowledge (Non-Credit)	MC	1	--	--	--
	<b>Total</b>		<b>17</b>	<b>1</b>	<b>14</b>	<b>23</b>

SEM II (Group 1)						
Course Code	Course Name	Group	Teaching Scheme (Hrs/week)			Credits Total
			L	T	P	
BS21	Differential Equations & Integral Calculus	BS	3	--	--	3
BS23	Engineering Chemistry	BS	2	--	--	2
ES23	Basic Electrical and Electronics Engineering	ES	3	--	--	3
ES24	Engineering Graphics	ES	2	--	--	2
BSL21	Computational Mathematics Lab-II	BS	--	--	2	1
BSL23	Engineering Chemistry Lab	BS	--	--	2	1
ESL23	Basic Electrical and Electronics Engineering Lab	ES	--	--	2	1
ESL24	Engineering Graphics Lab	ES	--	--	4(2+2)	2
ESL25	Python Programming Lab	ES	--	--	2	1
ESL26	Workshop II	ES	--	--	2	1
MC22	Constitution of India (Non-Credit)	MC	1	--	--	--
LSC	Life Skill Courses (Non-Credit)	LA	1	--	--	--
	<b>Total</b>		<b>12</b>	<b>--</b>	<b>14</b>	<b>17</b>

Dean Academics

Principal, S.P.I.T.



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### Group 2: Electronics and Electronics & Telecommunication

SEM I (Group 2)						
Course Code	Course Name	Group	Teaching Scheme (Hrs/week)			Credits
			L	T	P	
BS11	Linear Algebra & Differential Calculus	BS	3	--	--	3
BS13	Engineering Chemistry	BS	2	--	--	2
ES13	Basic Electrical Technology	ES	3	--	--	3
ES14	Engineering Graphics	ES	2	--	--	2
BSL11	Computational Mathematics Lab-I	BS	--	--	2	1
BSL13	Engineering Chemistry Lab	BS	--	--	2	1
ESL13	Basic Electrical Technology Lab	ES	--	--	2	1
ESL14	Engineering Graphics Lab	ES	--	--	4(2+2)	2
ESL15	Python Programming Lab	ES	--	--	2	1
ESL16	Workshop I	ES	--	--	2	1
HSS11	Communication Skills	HSS	2	--	2	3
MC22	Constitution of India (Non-Credit)	MC	1	--	--	--
ABL-A	Essence of Indian Traditional Knowledge (Non-Credit)	MC	1	--	--	--
	<b>Total</b>		<b>14</b>	<b>--</b>	<b>16</b>	<b>20</b>

SEM II (Group 2)						
Course Code	Course Name	Group	Teaching Scheme (Hrs/week)			Credits
			L	T	P	
BS21	Differential Equations & Integral Calculus	BS	3	--	--	3
BS22	Engineering Physics	BS	4	1	--	5
ES21	Structured Programming Approach	ES	3	--	--	3
ES22	Digital Circuits	PC	3	--	--	3
BSL21	Computational Mathematics Lab-II	BS	--	--	2	1
BSL22	Engineering Physics Lab	BS	--	--	2	1
ESL21	Structured Programming Approach Lab	ES	--	--	4(2+2)	2
ESL22	Digital Circuits Lab	PC	--	--	2	1
ESL26	Workshop II	ES	--	--	2	1
MC21	Environmental Studies (Non-Credit)	MC	1	--	--	--
LSC	Life Skill Courses (Non-Credit)	LA	1	--	--	--
	<b>Total</b>		<b>15</b>	<b>1</b>	<b>12</b>	<b>20</b>

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SEM III						
Course Code	Course Name	Group	Teaching Scheme (Hrs/week)			Credits Total
			L	T	P	
BS31	Applied Mathematics I*	BS	3	1		4
EL31	Department Core-1	PC	3	--	--	3
EL32	Department Core-2	PC	3	--	--	3
EL33	Department Core-3	PC	3	1	--	4
ELL31	Department Core Lab-1	PC	--	--	2	1
ELL32	Department Core Lab-2	PC	--	--	2	1
ELL33	Department Core Lab-3	PC	--	--	2	1
ELL34	Object Oriented Programming Lab*	PC	--	1	2	2
BS32	Human Health Systems Approach	BS	1	--	--	1
SDX	SCOPE Course (Optional)	SD	--	--	--	--
ABL1	Building Automation, Fire Safety and Electronic Security	ABL	--	--	2	1
CEP1	Introduction to CEP (Optional)	CEP	--	--	--	--
BC	Fundamentals of Mathematics(Noncredit) (only for direct second year students)	BC	2	--	--	--
AC	Additional Course (For Fast Learners)	PC	2	--	2	3
	<b>Total</b>		<b>13+2</b>	<b>3</b>	<b>10</b>	<b>21</b>
SEM IV						
Course Code	Course Name	Group	Teaching Scheme (Hrs/week)			Credits Total
			L	T	P	
BS41	Applied Mathematics II*	BS	3	1	--	4
EL41	Department Core-4	PC	3	--	--	3
EL42	Department Core-5	PC	3	--	--	3
EL43	Department Core-6	PC	3	--	--	3
ELL41	Department Core Lab-4	PC	--	--	2	1
ELL42	Department Core Lab-5	PC	--	--	2	1
ELL43	Department Core Lab-6	PC	--	--	2	1
ELL44	Department Core Lab-7	PC	--	--	2	1
ELL45	Department Core Lab-8	PC	--	--	2	1
ELP41	Minor Project-I	PR	--	--	2	1
LSC^	Life Skill Course (Non credit)	LA	1	--	--	--
SDX	SCOPE Course (Optional)	SD	--	--	--	--
ABL2	Occupational Safety & Legal Studies for Engineers	ABL	--	--	2	1
CEP2	Problem solving module-I (Optional)	CEP	--	--	--	--
AC	Additional Course (For Fast Learners)	PC	2	--	2	3
	<b>Total</b>		<b>13</b>	<b>1</b>	<b>14</b>	<b>20</b>

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SEM V						
Course Code	Course Name	Group	Teaching Scheme (Hrs/week)			Credits Total
			L	T	P	
EL51	Department Core-7	PC	3	--	--	3
EL52	Department Core-8	PC	3	--	--	3
EL53	Department Core-9	PC	3	--	--	3
EL54	Department Core-10	PC	3	--	--	3
ELL51	Department Core Lab-9	PC	--	--	2	1
ELL52	Department Core Lab-10	PC	--	--	2	1
ELL53	Department Core Lab-11	PC	--	--	2	1
ELL54	Department Core Lab-12	PC	--	1	2	2
ELL55	Department Core Lab-13	PC	--	--	2	1
ELP51	Minor Project-II	PR	--	--	2#	1
MC^	<b>Mandatory Course</b>	MC	<b>2</b>	<b>--</b>	<b>--</b>	<b>2</b>
SDX	SCOPE Course (Optional)	SD	--	--	--	--
ABL3	Design Thinking, Diversity and Workplace Etiquettes	ABL	--	--	2	1
CEP3	Problem solving module-II (Optional)	CEP	--	--	--	--
AC	<b>Additional Course (For Fast Learners)</b>	PC	<b>2</b>	<b>--</b>	<b>2</b>	<b>3</b>
	<b>Total</b>		<b>14</b>	<b>1</b>	<b>14</b>	<b>22</b>
SEM VI						
Course Code	Course Name	Group	Teaching Scheme (Hrs/week)			Credits Total
			L	T	P	
EL61^	Department Elective-1	PC	3	--	--	3
EL62^	Department Elective-2	PC	3	--	--	3
ELL61^	Department Elective Lab-1	PC	--	--	2	1
ELL62^	Department Elective Lab-2	PC	--	--	2	1
ELL63	Department Core Lab-14	PC	--	--	2	1
ELP61	Major Project I	PR	--	--	8#	4
HSS61	Advanced Communication Skills	HSS	1	--	2	2
OE^	Open Elective @	OE	3@	--	2@	4@
SDX	SCOPE Course (Optional)	SD	--	--	--	--
ABL4	Technical Paper and Patent Drafting	ABL	--	--	2	1
CEP4	Problem solving module-III (Optional)	CEP	--	--	--	--
MC^	<b>Mandatory Course</b>	MC	<b>2</b>	<b>--</b>	<b>--</b>	<b>2</b>
AC	<b>Additional Course (For Fast Learners)</b>	PC	<b>2</b>	<b>--</b>	<b>2</b>	<b>3</b>
	<b>Total</b>		<b>9+3@</b>	<b>--</b>	<b>18+2@</b>	<b>18+4@</b>

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SEM VII						
Course Code	Course Name	Group	Teaching Scheme (Hrs/week)			Credits Total
			L	T	P	
ELE71^	Department Elective-3	PE	3	--	--	3
ELE72^	Department Elective-4	PE	3	--	--	3
ELEL71^	Department Elective Lab-3	PE	--	--	2	1
ELEL72^	Department Elective Lab-4	PE	--	--	2	1
ELL73	Department Core Lab-15	PC	--	--	2	1
HSS81	Technology Entrepreneurship Lab	HSS	--	--	2	1
ELP71	Major Project-II	PR	--	--	16#	8
OE^	Open Elective @	OE	3@		2@	4@
MOOC	MOOC	MOOC	--	--	--	2
ABL5	Financial Planning, Taxation Policies and Investment	ABL	--	--	2	1
CEP5	Problem solving module-IV (Optional)	CEP	--	--	--	--
<b>Total</b>			<b>6+3@</b>	<b>--</b>	<b>26+2@</b>	<b>21+4@</b>
SEM VIII						
Course Code	Course Name	Group	Teaching Scheme (Hrs/week)			Credits Total
			L	T	P	
INT	Internship (6 Months)	INT	--	--	--	10
CEP6	Problem solving module-V (Optional)	CEP	--	--	--	--
<b>Total</b>						<b>10</b>

SEM	Teaching Scheme (Hrs/week)			Total Hrs /Week	Credits Total
	L	T	P		
I (Gr1)	16	1	14	31	22
I (Gr2)	15	--	16	31	21
II (Gr1)	13	--	14	27	18
II (Gr2)	14	1	12	27	19
III	13+2	3	10	26+2	21
IV	13	1	14	28	20
V	14	1	14	29	22
VI	9+3@	--	18+2@	32	18+4@
VII	6+3@	--	26+2@	37 (project 16)	21+4@
VIII					10
<b>Total Credits</b>					<b>160</b>

**Additional 12 credits for advanced courses for fast learners (Students with CGPI greater than or equal to 8 can opt for these courses).**

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