



**SRES'S SANJIVANI COLLEGE OF ENGINEERING KOPARGAON**

*(An Autonomous Institute Affiliated to SPPU Pune)*

**F.Y. B. TECH. COURSE STRUCTURE-2021 PATTERN**

**SEMESTER-I**

**GROUP A: MECHANICAL, MECHATRONICS, CIVIL, STRUCTURAL**

Branch	Course Code	Course Title	Course type	Teaching Scheme			Credits	Evaluation Scheme			
				L (hrs.)	T (hrs.)	P (hrs.)		TW	CIA	ESE	Total
<b>Mechanical Engg. Mechtronics Engg. Civil Engg. Structural Engg.</b>	BS1001	Engineering Mathematics-I	TH	3	1	--	4	--	40	60	100
	BS1002	Engineering Physics	TH	3	--	--	3	--	40	60	100
	ES1001	Engineering Graphics	TH	2	--	--	2	--	20	30	50
	ES1003	Basic Electrical and Electronics Engineering	TH	3	--	--	3	--	40	60	100
	<b>MLC</b>	<b>Induction Program</b>	--	--	--	--	--	--	--	--	--
<b>BRANCH SPECIFIC COURSES(THEORY)</b>											
<b>Mechanical Engg.</b>	ES1006	Basics of Mechanical Engg.	TH	2	--	--	2	--	20	30	50
<b>Mechtronics Engg.</b>	ES1008	Theory of Development and Engineering Thinking	TH		--	--					
<b>Civil Engg.</b>	ES1009	Engg. Mechanics-Statics	TH		--	--					
<b>Structural Engg.</b>	ES1009	Engg. Mechanics-Statics	TH		--	--					
<b>TERM WORK</b>											
<b>Mechanical Engg. Mechtronics Engg. Civil Engg. Structural Engg.</b>	BS1102	Engineering Physics Lab	TW	--	--	2	1	25	--	--	25
	ES1101	Engineering Graphics Lab.	TW	--	--	2	1				
	ES1103	Basic Electrical and Electronics Engineering Lab.	TW	--	--	2	1	25	--	--	25
	HS1101 HS1102 HS1103	Language Proficiency Lab.I (English/German/Japanese)	TW	--	--	2	1	50	--	--	50
<b>TERM WORK (BRANCH-SPECIFIC COURSES)</b>											
<b>Mechanical Engg.</b>	ES1106	Basics of Mechanical Engg Lab.	TW	--	--	2	1	50	--	--	50
<b>Mechtronics Engg.</b>	ES1108	Theory of Development and Engineering Thinking Lab.	TW	--	--				--	--	
<b>Civil Engg.</b>	ES1109	Engg. Mechanics-Statics Lab	TW	--	--				--	--	
<b>Structural Engg.</b>	ES1109	Engg. Mechanics-Statics Lab	TW	--	--				--	--	
<b>Total</b>				<b>13</b>	<b>01</b>	<b>10</b>	<b>19</b>	<b>175</b>	<b>160</b>	<b>240</b>	<b>575</b>

*CIA- Continuous Internal Assessment TW - Term work (Practical work in Lab.) T - Tutorial*

**Minimum Marks for Passing Theory and Laboratory Course**

- In End, Semester Examination (ESE) out of 60 marks, 24 marks and CIA+ESE = 40 marks are required.*
- In End, Semester Examination (ESE) out of 30 marks, 12 marks and CIA+ESE = 20 marks are required.*
- In Term Work (TW) out of 25 marks, 10 marks and out of 50 marks, 20 marks are required.*



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**F.Y. B. TECH. COURSE STRUCTURE – 2021 PATTERN**

**SEMESTER-I**

**GROUP B : COMPUTER, IT, ECE, ELECTRICAL**

Branch	Course Code	Course Title	Course type	Teaching Scheme			Credits	Evaluation Scheme			
				L (hrs.)	T (hrs.)	P (hrs.)		TW	CIA	ESE	Total
1. Computer Engg.	BS1001	Engineering Mathematics-I	TH	3	1	--	4	--	40	60	100
2. IT	BS1003	Engineering Chemistry	TH	3	--	--	3	--	40	60	100
3. Electronics and Computer Engg.	ES1002	Computer Fundamentals and Programming	TH	3	--	--	3	--	40	60	100
4. Electrical Engg.	ES1004	IT for Engineers	TH	2	--	--	2	--	20	30	50
	<b>MLC</b>	<b>Induction Program</b>	--	--	--	--	--	--	--	--	--
<b>BRANCH SPECIFIC COURSES(THEORY)</b>											
Computer Engg.	ES1007	Problem Solving using Python	TH	2	--	--	2	--	20	30	50
IT	ES1007	Problem Solving using Python	TH		--	--		--			
Electronics and Computer Engg.	ES1007	Problem Solving using Python	TH		--	--		--			
Electrical Engg.	ES1010	Electrical Technology	TH		--	--		--			
<b>TERM WORK</b>											
1. Computer Engg. 2. IT 3. Electronics and Computer Engg. 4. Electrical Engg.	BS1103	Engineering Chemistry Lab.	TW	--	--	2	1	25	--	--	25
	ES1102	Computer Fundamentals and Programming Lab.	TW	--	--	2	1	25	--	--	25
	ES1105	Workshop Practice Lab.	TW	--	--	2	1	25	--	--	25
	HS1101 HS1102 HS1103	Language Proficiency Lab.I (English/German/Japanese)	TW	--	--	2	1	50	--	--	50
<b>TERM WORK (BRANCH-SPECIFIC COURSES)</b>											
Computer Engg.	ES1107	Problem Solving using Python Lab.	TW	--	--	2	1	50	--	--	50
IT	ES1107	Problem Solving using Python Lab.	TW	--	--				--	--	
Electronics and Computer Engg.	ES1107	Problem Solving using Python Lab.	TW	--	--				--	--	
Electrical Engg.	ES1110	Electrical Technology Lab.	TW	--	--				--	--	
<b>Total</b>				<b>13</b>	<b>01</b>	<b>10</b>	<b>19</b>	<b>175</b>	<b>160</b>	<b>240</b>	<b>575</b>

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**F.Y. B. TECH. COURSE STRUCTURE – 2021 PATTERN**

**SEMESTER-II**

**GROUP A: MECHANICAL, MECHATRONICS, CIVIL, STRUCTURAL**

Branch	Course Code	Course Title	Course type	Teaching Scheme			Credits	Evaluation Scheme			
				L	T	P		TW	CIA	ESE	Total
				(hrs.)	(hrs.)	(hrs.)					
Mechanical Engg. Mechtronics Engg. Civil Engg. Structural Engg.	BS2004	Engineering Mathematics-II	TH	3	1	--	4	--	40	60	100
	BS1003	Engineering Chemistry	TH	3	--	--	3	--	40	60	100
	ES1002	Computer Fundamentals and Programming	TH	3	--	--	3	--	40	60	100
	ES1004	IT for Engineers	TH	2	--	--	2	--	20	30	50
	HS2004	Physical Education and Sport	TH	1	--	--	1	--	--	--	--
	MLC	Environmental Science	TH	2	--	--	--	--	--	--	--
<b>BRANCH SPECIFIC COURSES(THEORY)</b>											
Mechanical Engg.	ES2011	Engineering Mechanics	TH	2	--	--	2	--	20	30	50
Mechtronics Engg.	ES2013	Engineering Mechanics	TH		--	--		--			
Civil Engg.	ES2014	Engg. Mechanics-Dynamics	TH		--	--		--			
Structural Engg.	ES2014	Engg. Mechanics-Dynamics	TH		--	--		--			
<b>TERM WORK</b>											
Mechanical Engg. Mechtronics Engg. Civil Engg. Structural Engg.	BS1102	Engineering Chemistry Lab.	TW	--	--	2	1	25	--	--	25
	ES1102	Computer Fundamentals and Programming Lab.	TW	--	--	2	1	25	--	--	25
	HS2101	Language Proficiency Lab.II (English/German/Japanese)	TW	--	--	2	1	50	--	--	50
	HS2102										
	HS2103	Workshop Practice	TW	--	--	2	1	25	--	--	25
		HS2107	Physical Education and Sport	TW	--	--	2	1	50	--	--
<b>TERM WORK (BRANCH SPECIFIC COURSES)</b>											
Mechanical Engg.	ES2111	Engineering Mechanics Lab.	TW	--	--	2	1	50	--	--	50
Mechtronics Engg.	ES2113	Engineering Mechanics Lab.	TW	--	--				--	--	
Civil Engg.	ES2114	Engg.Mechanics- Dynamics Lab.	TW	--	--				--	--	
Structural Engg.	ES2114	Engg Mechanics-Dynamics Lab.	TW	--	--				--	--	
<b>Total</b>				<b>16</b>	<b>01</b>	<b>12</b>	<b>21</b>	<b>225</b>	<b>160</b>	<b>240</b>	<b>625</b>

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**F.Y. B. TECH. COURSE STRUCTURE - 2021 PATTERN**

**SEMESTER-II**

**GROUP B : COMPUTER, IT, ECE, ELECTRICAL**

Branch	Course Code	Course Title	Course type	Teaching Scheme			Credits	Evaluation Scheme			
				L (hrs.)	T (hrs.)	P (hrs.)		TW	CIA	ESE	Total
<b>1. Computer Engg.</b> <b>2. IT</b> <b>3. Electronics and Computer Engg.</b> <b>4. Electrical Engg.</b>	BS2004	Engineering Mathematics-II	TH	3	1	--	4	--	40	60	100
	BS1002	Engineering Physics	TH	3	--	--	3	--	40	60	100
	ES1001	Engineering Graphics	TH	2	--	--	2	--	20	30	50
	ES1003	Basic Electrical and Electronics Engineering	TH	3	--	--	3	--	40	60	100
	HS2007	Physical Education and Sport	TH	1	--	--	1	--	--	--	--
	MLC	Environmental Science	TH	2	--	--	--	--	--	--	--
<b>BRANCH SPECIFIC COURSES(THEORY)</b>											
<b>Computer Engg.</b>	ES2012	Fundamentals of Data Structure	TH	2	--	--	2	--	20	30	50
<b>IT</b>	ES2012		TH		--	--					
<b>Electronics and Computer Engg</b>	ES2012		TH		--	--					
<b>Electrical Engg.</b>	ES2012		TH		--	--					
<b>TERM WORK</b>											
<b>1. Computer Engg.</b> <b>2. IT</b> <b>3. Electronics and Computer Engg.</b> <b>4. Electrical Engg.</b>	BS1102	Engineering Physics Lab.	TW	--	--	<b>2</b>	1	25	--	--	25
	ES1101	Engineering Graphics Lab.	TW	--	--	<b>2</b>	1	25	--	--	25
	ES1103	Basic Electrical and Electronics Engineering Lab.	TW	--	--	<b>2</b>	1	25	--	--	25
	HS2104 HS2105 HS2106	Language Proficiency Lab.II (English/German/Japanese)	TW	--	--	<b>2</b>	1	50	--	--	50
	HS2107	Physical Education and Sport	TW	--	--	<b>2</b>	1	50	--	--	50
<b>TERM WORK (BRANCH SPECIFIC COURSES)</b>											
<b>Computer Engg.</b>	ES2112	Fundamentals of Data Structure Lab.	TW	--	--	2	1	50	--	--	50
<b>IT</b>	ES2112		TW	--	--						
<b>Electronics and Computer Engg</b>	ES2112		TW	--	--						
<b>Electrical Engg.</b>	ES2112		TW	--	--						
<b>Total</b>				<b>16</b>	<b>01</b>	<b>12</b>	<b>21</b>	<b>225</b>	<b>160</b>	<b>240</b>	<b>625</b>

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**F.Y. B. TECH. GROUPWISE COURSE CODE**

**SEMESTER-I : PATTERN-2021**

<b>Group-A: (Mechanical, Civil, Structural, Mechatronics )</b>			<b>Group- B: (CE, IT, ECE, Electrical)</b>		
<b>Course code</b>	<b>Course Name</b>	<b>Course code</b>	<b>Course Name</b>	<b>Course code</b>	<b>Course Name</b>
BS1001	Engineering Mathematics-I (TH)	BS1001	Engineering Mathematics-I (TH)		
BS1002 BS1102	Engineering Physics(TH + TW)	BS1003 BS1103	Engineering Chemistry ( TH + TW)		
ES1001 ES1101	Engineering Graphics(TH +TW)	ES1002 ES1102	Computer Fundamentals and Programming ( TH + TW)		
ES1003 ES1103	Basic Electrical and Electronics Engineering ( TH + TW)	ES1004	IT for Engineers(TH)		
HS1101 HS1102 HS1103	Language Proficiency Lab-I (English/German/Japanese)/ ( TW)	HS1101 HS1102 HS1103	Language Proficiency Lab-I (English/German/Japanese)/ ( TW)		
		ES1105	Workshop Practice (TW)		
<b>MLC</b>	<b>Induction Program</b>	<b>MLC</b>	<b>Induction Program</b>		
<b>BRANCH SPECIFIC COURSES</b>					
<b>Course code</b>	<b>BRANCH</b>	<b>COURSE</b>	<b>Course code</b>	<b>BRANCH</b>	<b>COURSE</b>
ES1006 ES1106	Mechanical Engg.	Basics of Mechanical Engg. (TH + TW)	ES1007 ES1107	Comp. Engg	Problem Solving using Python (TH + TW)
ES1008 ES1108	Mechtronics Engg.	Theory of Development and Engineering Thinking (TH + TW)	ES1007 ES1107	IT	Problem Solving using Python (TH + TW)
ES1009 ES1109	Civil Engg.	Engg. Mechanics- Statics (TH + TW)	ES1007 ES1107	Elect.& Comp. Engg.	Problem Solving using Python (TH + TW)
ES1009 ES1109	Structural Engg.	Engg. Mechanics- Statics (TH + TW)	ES1010 ES1110	Electrical Engg.	Electrical Technology (TH + TW)

BS10 - BASIC SCIENCES (SEM-I THEORY COURSE)

BS11- BASIC SCIENCES (SEM-I TERM WORK)

ES10 - ENGINEERING SCIENCES (SEM-I THEORY COURSE)

ES11 - ENGINEERING SCIENCES (SEM-I TW)

HS10 -HUMANITIES AND SOCIAL SCIENCES (SEM-I THEORY)

HS11 -HUMANITIES AND SOCIAL SCIENCES (TW)

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**F.Y. B. TECH. GROUPWISE COURSE CODES**



**SEMESTER-II PATTERN-2021**

<b>Group-A: (Mechanical, Civil, Structural Mechatronics)</b>			<b>Group- B (Computer, IT, ECE, Electrical)</b>		
<b>Course code</b>	<b>Course Name</b>		<b>Course code</b>	<b>Course Name</b>	
BS2004	Engineering Mathematics-II (TH)		BS2004	Engineering Mathematics-II (TH)	
BS1003 BS1103	Engineering Chemistry (TH+TW)		BS1002 BS1102	Engineering Physics (TH+TW)	
ES1002 ES1102	Computer Fundamentals and Programming (TH+TW)		ES1001 ES1101	Basic Electrical and Electronics Engineering (TH + TW)	
ES1004	IT for Engineers (TH)		ES1003	Engineering Graphics (TH + TW)	
HS2104 HS2105 HS2106	Language Proficiency Lab-II (English/German/Japanese)/ (TW)		HS2104 HS2105 HS2106	Language Proficiency Lab-II (English/German/Japanese)/ (TW)	
HS2007 HS2107	Physical Education and Sport (TH + TW)		HS2007 HS2107	Physical Education and Sport (TH + TW)	
<b>MLC</b>	<b>Environmental Science (TH)</b>		<b>MLC</b>	<b>Environmental Science (TH)</b>	
<b>BRANCH SPECIFIC COURSES</b>					
<b>Course code</b>	<b>BRANCH</b>	<b>COURSE</b>	<b>Course code</b>	<b>BRANCH</b>	<b>COURSE</b>
ES2011 ES2111	Mechanical Engg.	Engineering Mechanics	ES2012 ES2112	Comp. Engg	Fundamentals of Data Structure (TH + TW)
ES2013 ES2113	Mechatronics Engg.	Engineering Mechanics	ES2012 ES2112	IT	Fundamentals of Data Structure (TH + TW)
ES2014 ES2114	Civil Engg.	Engg. Mechanics-Dyanamics (TH + TW)	ES2012 ES2112	Elect.& Comp. Engg.	Fundamentals of Data Structure (TH + TW)
ES2014 ES2114	Structural Engg.	Engg. Mechanics-Dyanamics (TH + TW)	ES2012 ES2112	Electrical Engg.	Fundamentals of Data Structure (TH + TW)

BS20 - BASIC SCIENCES (SEM-II THEORY COURSE)

BS21- BASIC SCIENCES (SEM-II TERM WORK)

ES20 - ENGINEERING SCIENCES (SEM-II THEORY COURSE)

ES21 - ENGINEERING SCIENCES (SEM-II TW)

HS20 -HUMANITIES AND SOCIAL SCIENCES (SEM-II THEORY)

**COURSE CODING AND CREDITS**

<b>BASIC SCIENCES</b>			
<b>Course Code</b>	<b>COURSE NAME</b>	<b>Course Type</b>	<b>Credit</b>
BS1001	Engineering Mathematics-I	TH	4
BS1002	Engineering Physics	TH	3
BS1102	Engineering Physics Lab.	TW	1
BS1003	Engineering Chemistry	TH	3
BS1003	Engineering Chemistry Lab.	TW	1
BS2004	Engineering Mathematics-II	TH	4
BS3005	Engineering Mathematics-III	TH	4
<b>Total Credits</b>			<b>20</b>
<b>HUMANITIES &amp; SOCIAL SCIENCES</b>			
<b>Course Code</b>	<b>COURSE NAME</b>	<b>Course Type</b>	<b>Credit</b>
	<b>Language Proficiency Lab. I</b>		
HS1101	English	TW	1
HS1102	German		
HS1103	Japanese		
	<b>Language Proficiency Lab.II</b>		
HS2104	English	TW	1
HS2105	German		
HS2106	Japanese		
HS2007	Physical Education and Sport	TH	1
HS2107	Physical Education and Sport	TW	1
<b>Total Credits</b>			<b>04</b>
<b>ENGINEERING SCIENCES</b>			
<b>Course Code</b>	<b>COURSE NAME</b>	<b>Course Type</b>	<b>Credit</b>
ES1001	Engineering Graphics( All Branches)	TH	2
ES1101	Engineering Graphics Lab.( All Branches)	TW	1
ES1002	Computer Fundamentals and Programming ( All Branches)	TH	3
ES1102	Computer Fundamentals and Programming Lab. ( All Branches)	TW	1
ES1003	Basic Electrical and Electronics Engineering ( All Branches)	TH	3
ES1103	Basic Electrical and Electronics Engineering Lab.( All Branches)	TW	1
ES1004	IT for Engineers( All Branches)	TH	2
ES1105	Workshop Practice Lab. ( All Branches)	TW	1
ES1006	Basics of Mechanical Engg.(Mechanical Engg)	TH	2
ES1106	Basics of Mechanical Engg.Lab.(Mechanical Engg)	TW	1
ES1007	Problem Solving using Python	TH	2
ES1107	Problem Solving using Python Lab( Comp, IT, ECE)	TW	1
ES1008	Theory of Development and Engineering Thinking	TH	2
ES1108	Theory of Development and Engineering Thinking Lab.(Mechatronics)	TW	1
ES1009	Engineering Mechanics-Statics ( Civil , Structural)	TH	2
ES1109	Engineering Mechanics-Statics Lab. ( Civil , Structural)	TW	1
ES1010	Electrical Technolgy (Electrical Engineering)	TH	2
ES1110	Electrical Technolgy Lab.( Electrical Engineering)	TW	1
ES2011	Engineering Mechanics (Mechanical Engg.)	TH	2
ES2111	Engineering Mechanics Lab. (Mechanical Engg.)	TW	1
ES2012	Fundamentals of Data Structure (Comp, IT,ECE,Electrical)	TH	2
ES2112	Fundamentals of Data Structure Lab. (Comp, IT,ECE,Electrical)	TW	1
ES2013	Engineering Mechanics (Mechatronics Engg)	TH	2

ES2113	Engineering Mechanics Lab. (Mechatronics Engg)	TW	1
ES2014	Engineering Mechanics-Dynamics (Civil, Strutral)	TH	2
ES2114	Engineering Mechanics-Dynamics Lab. (Civil, Strutral)	TW	1