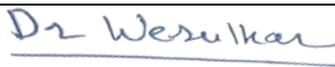




**ANNEXURE – I**

**Credit Structure for Undergraduate programs**

Sr. No.	Category Code	Category	Credits
1	HSSM	Ability Enhancement Course (AEC), Indian Knowledge System (IKS), Value Education Course (VEC), Entrepreneurship/Economics/Management courses	10
2	BSC	Basic Science courses	14
3	ESC	Engineering Science courses including workshop, drawing, basics of electrical/mechanical/computer etc.	16
4	PCC	Professional core courses	70
5	PEC	Professional Elective courses relevant to chosen specialization/branch	9
6	OE	Open subjects – Electives from other technical and /or emerging subjects	8
7	ELC	Project work, seminar and internship in industry or elsewhere, Industry Training and Skill Development, Capstone Course	22
8	VSEC	Vocations Skill Courses (VSC) , Skill Enhancement Courses(SEC)	10
9	CC	Co-curricular Courses (CC) such as Health and Wellness, Yoga education sports, and fitness, Cultural Activities, NSS/NCC and Fine/ Applied/ Visual/ Performing Arts	04
10	MDM	Compulsory Multidisciplinary Minor	14
		<b>TOTAL</b>	<b>176</b>

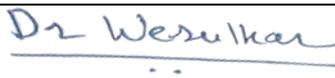
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Sr No	Course Category	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		
				L	T	P		Continual Assessment	End Sem Examination	Total
1	BSC	AS101T	Engineering Physics & Material Sciences	2	0	-	2	15	35	50
2	BSC	AS101P	Engineering Physics & Material Sciences Lab	-	-	2	1	25	25	50
3	BSC	AS102T	Applied Mathematics – I	4	-	-	4	30	70	100
4	ESC	AS103T	Engineering Practices-I (Electrical & Electronics)	3	-	-	3	30	70	100
5	ESC	AS103P	Engineering Practices-I Lab(Electrical & Electronics)	-	-	2	1	25	25	50
6	ESC	AS104T	Logic building with C	2	-	-	2	15	35	50
7	ESC	AS104P	Logic building with C Lab	-	-	2	1	25	25	50
8	AEC	AS105P	Business Communication Skills I Lab	-	-	2	1	25	25	50
9	IKS	AS106T	Indian Knowledge Systems	2	-	-	2	15	35	50
10	SEC	AS107T	Career Development I	-	-	2	1	50	-	50
11	PCC	ET101T	Program Foundation I	2	-	-	2	15	35	50
12	CC	AS108T	Co-curricular Course - I	-	-	-	2	50	-	50
<b>Total</b>				<b>17</b>	<b>-</b>	<b>10</b>	<b>22</b>	<b>320</b>	<b>380</b>	<b>700</b>

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**GROUP 1: SEMESTER II / GROUP 2: SEMESTER I**

Sr No	Course Category	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		
				L	T	P		Continual Assessment	End Sem Examination	Total
1	BSC	AS201T	Engineering Chemistry & Environmental Science	2	-	--	2	15	35	50
2	BSC	AS201P	Engineering Chemistry & Environmental Science Lab	-	-	2	1	25	25	50
3	BSC	AS202T	Applied Mathematics–II	4	-	-	4	30	70	100
4	ESC	AS203T	Engineering Practices-II (Civil & Mechanical)	3	-	-	3	30	70	100
5	ESC	AS203P	Engineering Practices-II Lab (Civil & Mechanical)	-	-	2	1	25	25	50
6	ESC	AS204T	Problem Solving with Python	2	-	-	2	15	35	50
7	ESC	AS204P	Problem Solving with Python Lab	-	-	2	1	25	25	50
8	AEC	AS205P	Business Communication Skills II Lab	-	-	2	1	25	25	50
9	SEC	AS206T	Career Development II	-	-	2	1	50	-	50
10	PCC	ET201T	Program Foundation II	2	-	-	2	15	35	50
11	ESC	AS207T	Design Thinking	2	-	-	2	30	70	100
12	CC	AS208T	Co-curricular Course - I	2	-	-	2	50	-	50
<b>Total</b>				<b>17</b>	<b>-</b>	<b>10</b>	<b>22</b>	<b>345</b>	<b>405</b>	<b>750</b>

<u>Dr. Wesulkar</u>	<u>M. S. Pandey</u>	July 2023	1.0	Applicable for 2023-24
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**SEMESTER III**

Sr No	Course Category	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		
				L	T	P		Continual Assessment	End Sem Examination	Total
1	BSC	ET301T	Mathematics III	3	-	-	3	30	70	100
2	PCC	ET302T	Electronic Devices & Circuits	3	-	-	3	30	70	100
3	PCC	ET302P	Electronic Devices & Circuits lab	-	-	2	1	25	25	50
4	PCC	ET303T	Digital Electronics	3	-	-	3	30	70	100
5	PCC	ET30P	Digital Electronics Lab	-	-	2	1	25	25	50
6	PCC	ET304T	Electronics Measurement and Instrumentation	3	-	-	3	15	35	50
7	PCC	ET304P	Electronics Measurement and Instrumentation lab	-	-	2	1	25	25	50
8	PCC	ET305T	Network Theory	3	-	-	3	30	70	100
9	SEC	ET306P	Career Development III	-	-	2	1	50	-	50
10	VEC	ET307T	Value Education Course I	2	-	-	2	15	35	50
11	ELC	ET306P	Micro Project I*	-	-	2	1	50	-	50
<b>Total</b>				<b>17</b>	<b>-</b>	<b>10</b>	<b>22</b>	<b>325</b>	<b>425</b>	<b>750</b>
12	MDM		Multidisciplinary Minor - I	2	-	-	2	15	35	50
<b>Total</b>				<b>19</b>	<b>-</b>	<b>10</b>	<b>24</b>	<b>340</b>	<b>460</b>	<b>800</b>

\* Field Project or Community engagement project in the major discipline

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**SEMESTER IV**

Sr No	Course Category	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		
				L	T	P		Continual Assessment	End Sem Examination	Total
1	PCC	ET401T	Electromagnetic Fields	3	-	-	3	30	70	100
2	PCC	ET402T	Analog Circuits	3	-	-	3	30	70	100
3	PCC	ET402P	Analog Circuits lab	-	-	2	1	25	25	50
4	PCC	ET403T	Microprocessor & Microcontroller	3	-	-	3	30	70	100
5	PCC	ET403P	Microprocessor & Microcontroller lab	-	-	2	1	25	25	50
6	PCC	ET404T	Signals & Systems	3	-	-	3	30	70	100
7	OE	ET405T	Open Elective - I	2	-	-	2	15	35	50
8	VSC	ET406T	Technical Skill Development - I	2	-	-	2	50	-	50
9	VEC	ET407T	Value Education Course II	2	-	-	2	15	35	50
10	SEC	ET408T	Career Development - IV	2	-	-	1	50	-	50
11	ELC	ET409P	Micro Project II*			2	1	50	-	50
<b>Total</b>				<b>20</b>	<b>-</b>	<b>6</b>	<b>22</b>	<b>350</b>	<b>400</b>	<b>750</b>
	MDM		Multidisciplinary Minor - II	3	-	-	3	30	70	100
<b>Total</b>				<b>23</b>	<b>-</b>	<b>6</b>	<b>25</b>	<b>380</b>	<b>470</b>	<b>850</b>

\* Field Project or Community engagement project in the major discipline

Open Elective - I	
ET405T	Consumer Electronics

<i>Dr. Wessukar</i>	<i>W. S. Pandey</i>	July 2023	1.0	Applicable for 2023-24
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**SEMESTER V**

Sr No	Course Category	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		
				L	T	P		Continual Assessment	End Sem Examination	Total
1	PCC	ET501T	Analog & Digital Communication	3	-	-	3	30	70	100
2	PCC	ET501P	Analog & Digital Communication lab	-	-	2	1	25	25	50
3	PCC	ET502T	Introduction to IoT	3	-	-	3	30	70	100
4	PCC	ET502P	Introduction to IoT lab	-	-	2	1	25	25	50
5	PCC	ET503T	Computer communication network	3	-	-	3	30	70	100
6	PCC	ET503P	Computer communication network lab	-	-	2	1	25	25	50
7	PCC	ET504P	Circuit Simulation & Coding Lab	-	-	2	1	25	25	50
8	PEC	ET505T	Professional Elective course -I	3	-	-	3	30	70	100
9	OE	ET506T	Open Elective - II	3	-	-	3	30	70	100
10	VSC	ET507T	Technical Skill Development - II	2	-	-	2	50	-	50
11	SEC	ET508P	Career Development - V	-	-	2	1	50	-	50
<b>Total</b>				<b>17</b>		<b>10</b>	<b>22</b>	<b>350</b>	<b>450</b>	<b>800</b>
12	MDM		Multidisciplinary Minor - III	3	-	-	3	30	70	100
<b>Total</b>				<b>20</b>	<b>-</b>	<b>10</b>	<b>25</b>	<b>380</b>	<b>520</b>	<b>900</b>

ET506T	Professional Elective course -I
ET505T(i)	Information Theory and Coding
ET505T(ii)	Smart sensor
ET505T(iii)	Power Electronics
ET505T(iv)	Wireless communication

Open Elective - II	
ET506T	Introduction to Solar Photovoltaic systems

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**SEMESTER VI**

Sr No	Course Category	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		
				L	T	P		Continual Assessment	End Sem Examination	Total
1	PCC	ET601T	Digital Signal Processing	3	-	-	3	30	70	100
2	PCC	ET601P	Digital Signal Processing lab	-	-	2	1	25	25	50
3	PCC	ET602T	Digital system design	3	-	-	3	30	70	100
4	PCC	ET602P	Digital system design lab	-	-	2	1	25	25	50
5	PCC	ET603T	OOPS and DS	3	-	-	3	15	25	50
6	PCC	ET603P	OOPS and DS Lab	-	-	2	1	25	25	50
7	PEC	ET604T	Professional Elective course -II	3	-	-	3	30	70	100
8	AEC	AS601T	Economics. & Management	2	-	-	2	15	35	50
9	OE	ET605T	Open Elective- III	3	-	-	3	30	70	100
10	ELC	ET606P	Project - I	-	-	2	1	50	50	100
11	SEC	ET607P	Career Development -VI	-	-	2	1	50	-	50
<b>Total</b>				<b>17</b>	<b>-</b>	<b>10</b>	<b>22</b>	<b>325</b>	<b>465</b>	<b>800</b>
12	MDM		Multidisciplinary Minor - IV	3	-	-	3	30	70	100
<b>Total</b>				<b>20</b>	<b>-</b>	<b>-</b>	<b>25</b>	<b>355</b>	<b>535</b>	<b>900</b>

Professional Elective course -II	
ET604T(i)	Antenna and Wave Propagation
ET604T9(ii)	Data base management system
ET604T9(iii)	Control Systems
ET604T(iv)	Wireless Sensors Network

Open Elective - III	
ET606T	Bio Medical Electronics

**SEMESTER VII**

<i>Dr. Wesulkar</i>	<i>mschpande</i>	July 2023	1.0	Applicable for 2023-24
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Sr No	Course Category	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		
				L	T	P		Continual Assessment	End Sem Examination	Total
1	PCC	ET701T	Microwave theory & Technique	3	-	-	3	30	70	100
2	PCC	ET702P	Microwave theory & Technique lab	-	-	2	1	25	25	50
3	PCC	ET702T	Embedded system	3	-	-	3	30	70	100
4	PCC	ET702P	Embedded system lab	-	-	2	1	25	25	50
5	PCC	ET703T	VLSI Design	3	-	-	3	30	70	100
6	PCC	ET703P	VLSI Design lab	-	-	2	1	25	25	50
7	PEC	ET704T	Professional Elective Course -III	3	-	-	3	30	70	100
8	ELC	ET705P	Project - II	-	-	8	4	50	50	100
9	ELC	ET706P	Summer / Winter Internship*	-	-	-	2	50	--	50
<b>Total</b>				<b>12</b>	<b>-</b>	<b>14</b>	<b>21</b>	<b>295</b>	<b>405</b>	<b>700</b>
<b>10</b>	MDM		Multidisciplinary Minor - V	3	-	-	3	30	70	100
<b>Total</b>				<b>15</b>	<b>-</b>	<b>14</b>	<b>24</b>	<b>325</b>	<b>475</b>	<b>800</b>

\* Summer / Winter Internship (Evaluation of Four Weeks Internship Completion till 6th Semester)

Professional Elective Course -III	
ET704T(i)	Optical Fiber Communication
ET704T(ii)	Testing and Verification of VLSI circuits
ET704T(iii)	Industrial Applications of Microcontroller
ET704T(iv)	Digital Image Processing

**SEMESTER VIII**

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Sr No	Course Category	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		
				L	T	P		Continual Assessment	End Sem Examination	Total
1	ELC	ET801P*	Project based on one semester internship in Industry/Research Institute/ National Laboratories/ Incubation Center	-	-	-	12	300	100	400
<b>Total</b>				<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>300</b>	<b>100</b>	<b>400</b>

\*End semester examination will consist of evaluation of seminar & project report.

**Option B**

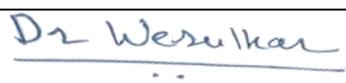
Sr No	Course Category	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		
				L	T	P		Continual Assessment	End Sem Examination	Total
1	ELC	Et801P#	Institutional Internship	-	-	12	6	100	100	200
2	ELC	Et802P	Project – III	-	-	12	6	100	100	200
<b>Total</b>				<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>300</b>	<b>100</b>	<b>400</b>

**Option B is available to students only after recommendation of the concerned Head of the department. The project and internship should contribute towards career development plan of the students.**

\* Minimum 90 days internship in any industry and project is to be carried out during internship.

# Two NPTEL courses (as per choice of student) or Institutional Internship by IEDC, SVP CET.

**EXIT OPTIONS**

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EXIT COURSES			
S.N.	Course name	Mode of conduction	Credits
1	Consumer Electronics	Offline/online/internship	3
2	Electronic Servicing & maintenance	Offline/online/internship	3
3	Word processing, spread sheet and power point presentation	Offline/online/internship	2

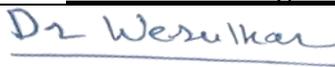
**Award of UG Diploma in Major with 84 credits and an additional 8 credits (After Second Year)**

EXIT COURSES			
*Any two			
S.N.	Course name	Mode of conduction	Credits
1	Troubleshooting of electronic system	Offline/online/internship	4
2	PCB designing and simulation	Offline/online/internship	4
3	Mobile servicing and maintenance	Offline/online/internship	4

**Award of UG Degree in Major with 132 credits and an additional 8 credits (After Third Year)**

EXIT COURSES			
S.N.	Course name	Mode of conduction	Credits
1	Embedded system design	Offline/online/internship	4
2	VLSI system design	Offline/online/internship	4

**Multidisciplinary Minor****Minor 1: - Management**

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Sr No	Sem	Course Category	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		
					L	T	P		Continual Assessment	End Sem Examination	Total
1		MDM									
2		MDM									
3		MDM									
4		MDM									
				<b>Total</b>				<b>14</b>			

**Multidisciplinary Minor**

**Minor 2 :- Emerging Trends**

Sr No	Sem	Course Category	Course Code	Course Title	Hours per Week			Credits	Maximum Marks		
					L	T	P		Continual Assessment	End Sem Examination	Total
1		MDM									
2		MDM									
3		MDM									
4		MDM									
				<b>Total</b>				<b>14</b>			

<u>Dr. Wesulkar</u>	<u>mspandey</u>	July 2023	1.0	Applicable for 2023-24
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