

JSPM University Pune

Faculty of Science and Technology

School of Electrical and Communication Sciences



**NEP aligned Syllabus Structure
for**

**S. Y. B.Tech. (Electronics and Telecommunication Engineering)
(Regular and Lateral Students)**

(Effective from AY: 2025-26)



JSPM University Pune

FACULTY OF SCIENCE & TECHNOLOGY
SCHOOL OF ELECTRICAL AND COMMUNICATION SCIENCES

COURSE STRUCTURE (NEP 2020 Aligned)

W. E. F

2024-2025

RELEASE DATE

01/07/2025

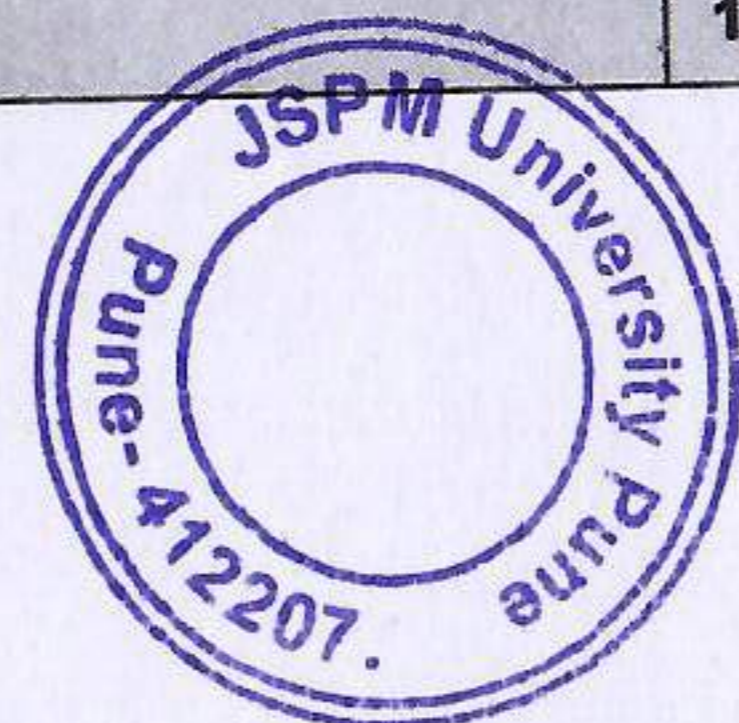
REVISION NO.

1.0 (NEP)

SECOND YEAR BACHELOR OF TECHNOLOGY
(ELECTRONICS AND TELECOMMUNICATION) (REGULAR STUDENTS)

SEMESTER III (LEVEL 5)


COURSE			TEACHING SCHEME				EXAMINATION SCHEME AND MARKS								TOTAL	CREDITS
TYPE	CODE	COURSE NAME	Hours / Week				THEORY (Equal Weightage for CIE and ESE)				PRACTICAL (Equal Weightage for CIE and ESE)		ORAL (Equal Weightage for CIE and ESE)			
			L	T	P	EL	CONTINUOUS IN SEMESTER EVALUATION (100 Marks)			END SEMESTER EXAMINATION (100 / 50 Marks)	CONTINUOUS IN SEMESTER EVALUATION (50 Marks)	END SEMESTER EXAMINATION (50 Marks)	CONTINUOUS IN SEMESTER EVALUATION (50 Marks)	END SEMESTER EXAMINATION (50 Marks)		
							T1 (30 Marks)	T2 (30 Marks)	Assignments (40 Marks)							
BSC	230GMAB07_03	Ordinary Differential Equations and Multivariate Calculus	2	1	-	-	30	30	40	100	-	-	-	-	100	3
	231GETB03_03	Electronic Circuits and Applications	2	-	-	-	30	30	40	50	-	-	-	-	50	2
PCC	230GETB04_03	Digital Electronics	3	-	-	-	30	30	40	100	-	-	-	-	100	2.5
	231GETB05_03	Network Analysis	2	-	-	2	30	30	40	100	-	-	-	-	100	2
MMC	-	Multidisciplinary Minor Course	1	-	2	-	-	-	-	-	50	50	50	50	100	2
IOC	-	Interdisciplinary Open Course	2	-	-	-	30	30	40	100	-	-	-	-	100	2
VEC (HSMC)	230USYB02_03	Professional Laws, Ethics, Values and Harmony	2	-	-	-	30	30	40	50	-	-	-	-	50	2
LC	230GETB06_03	Electronic Circuits and Applications Lab	-	-	2	-	-	-	-	-	50	50	-	-	50	1
	230GETB07_03	Digital Electronics Lab	-	-	2	-	-	-	-	-	50	50	-	-	50	1
LLC	230HFSB80_03	Health and Nutrition	1	-	-	2	-	-	-	-	-	-	50	-	50	1.5
TOTAL			15	1	6	4									750	20

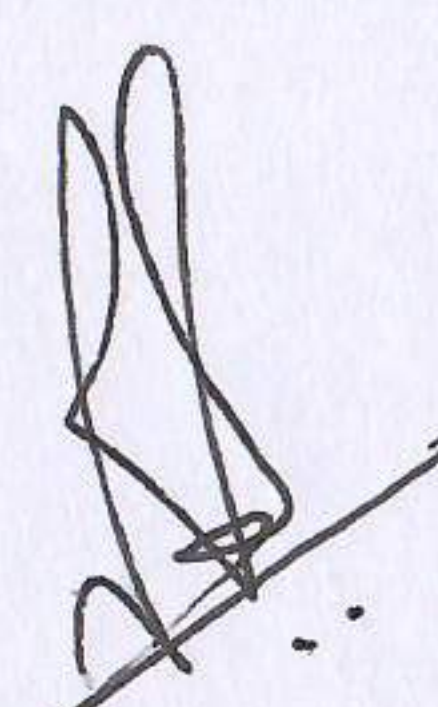


Multidisciplinary Minor Course (MMC)					
Sem.	Specialization				
III	Course Code	230GCSB111_03			
	Course Name	Basics of Data Structures and Algorithms			
IV	Course Code	230GMTB01_04			
	Course Name	Sensors and Actuators			
V	Course Code	230GCSB125_05			
	Course Name	Internet and Cloud Computing			
VI	Course Code	230GCSB116_06			
	Course Name	Data Science and Analytics			
VII	Course Code	230GMEB52_07			
	Course Name	3-D Printing			
VII	Course Code	230GRAB55_07			
	Course Name	Industrial Robots			

Interdisciplinary Open Course (IOC)					
Sem.	Specialization				
III	Course Code	250GBTB01_03			
	Course Name	Bioengineering			
V	Course Code	230GCSB168_05			
	Course Name	Fundamentals of Computer Networks			
VII	Course Code	230GETB33_07			
	Course Name	Electric Vehicle (EV) Technology			



Dr. Arjuna Muduli
 Programme Coordinator, E&TC


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 Director, School of Electrical &
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L-Lecture
 Format No.: JSPMUni/ACAD/001

T-Tutorial
 Rev. No.:1.0

P-Practical Session (Laboratory)
 Rev. Date:01/07/2025

EL-Experiential Learning



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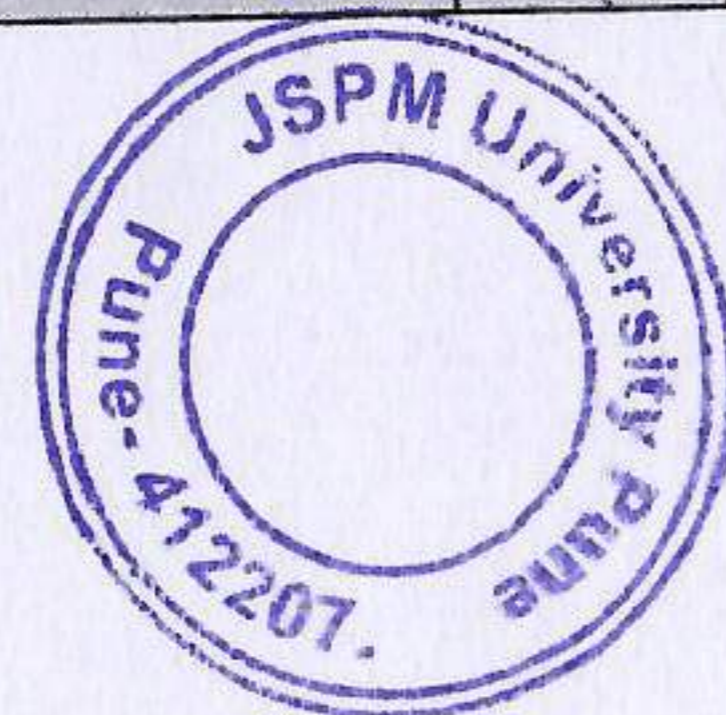
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SECOND YEAR BACHELOR OF TECHNOLOGY
(ELECTRONICS AND TELECOMMUNICATION) (LATERAL ENTRY)

SEMESTER III ((LEVEL 5))

COURSE			TEACHING SCHEME				EXAMINATION SCHEME AND MARKS								TOTAL	CREDITS
TYPE	CODE	COURSE NAME	Hours / Week				THEORY (Equal Weightage for CIE and ESE)			PRACTICAL (Equal Weightage for CIE and ESE)		ORAL (Equal Weightage for CIE and ESE)				
			L	T	P	EL	CONTINUOUS INSEMESTER EVALUATION (100 Marks)			END SEMESTER EXAMINATION (100 / 50 Marks)	CONTINUOUS INSEMESTER EVALUATION (50 Marks)	END SEMESTER EXAMINATION (50 Marks)	CONTINUOUS INSEMESTER EVALUATION (50 Marks)	END SEMESTER EXAMINATION (50 Marks)		
							T1 (30 Marks)	T2 (30 Marks)	Assignments (40 Marks)							
BSC	230GMAL01_03	Linear Algebra and Univariate Calculus	3	1	-	-	30	30	40	100	-	-	-	-	100	4
	231GETB03_03	Electronic Circuits and Applications	2	-	-	-	30	30	40	50	-	-	-	-	50	2
PCC	230GETB04_03	Digital Electronics	3	-	-	-	30	30	40	100	-	-	-	-	100	3
	231GETB05_03	Network Analysis	2	-	-	2	30	30	40	100	-	-	-	-	100	2.5
MMC	-	Multidisciplinary Minor Course	1	-	2	-	-	-	-	-	50	50	50	50	100	2
IOC	-	Interdisciplinary Open Course	2	-	-	-	30	30	40	100	-	-	-	-	100	2
VSC	230IDCB01_03	Design Thinking and Creativity	1	-	-	2	-	-	-	-	-	-	50	50	50	1.5
AEC (HSMC)	230UENB01_03	Effective Communication Skills	1	-	2	-	30	30	40	50	-	-	-	-	50	2
LC	230GETB06_03	Electronic Circuits and Applications Lab	-	-	2	-	-	-	-	-	50	50	-	-	50	1
	230GETB07_03	Digital Electronics Lab	-	-	2	-	-	-	-	-	50	50	-	-	50	1
TOTAL			15	1	8	4									750	21

L-Lecture
Format No.: JSPMUni/ACAD/001



T-Tutorial
Rev. No.:1.0


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Rev. Date:01/07/2025


EL-Experiential Learning

Multidisciplinary Minor Course (MMC)					
Sem.	Specialization				
III	Course Code	230GCSB111_03			
	Course Name	Basics of Data Structures and Algorithms			
IV	Course Code	230GMTB01_04			
	Course Name	Sensors and Actuators			
V	Course Code	230GCSB125_05			
	Course Name	Internet and Cloud Computing			
VI	Course Code	230GCSB116_06			
	Course Name	Data Science and Analytics			
VII	Course Code	230GMEB52_07			
	Course Name	3-D Printing			
VII	Course Code	230GRAB55_07			
	Course Name	Industrial Robots			

Interdisciplinary Open Course (IOC)					
Sem.	Specialization				
III	Course Code	250GBTB01_03			
	Course Name	Bioengineering			
V	Course Code	230GCSB168_05			
	Course Name	Fundamentals of Computer Networks			
VII	Course Code	230GETB33_07			
	Course Name	Electric Vehicle (EV) Technology			

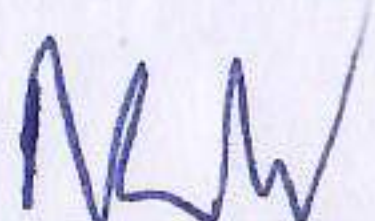

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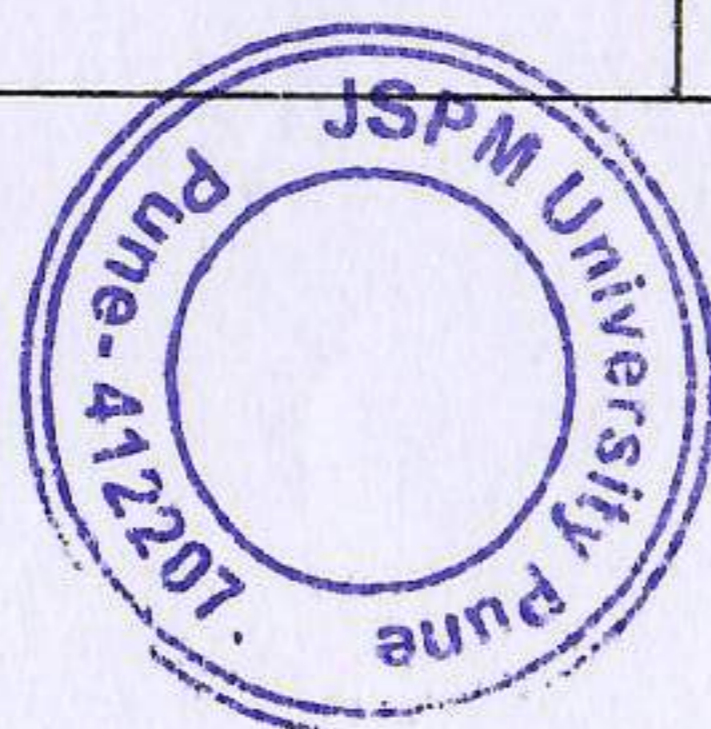
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SEMESTER IV (LEVEL 5)

TYPE	CODE	COURSE NAME	TEACHING SCHEME				EXAMINATION SCHEME AND MARKS										TOTAL	CREDITS
			Hours / Week				THEORY (Equal Weightage for CIE and ESE)				PRACTICAL (Equal Weightage for CIE and ESE)		ORAL (Equal Weightage for CIE and ESE)					
			L	T	P	EL	CONTINUOUS IN SEMESTER EVALUATION (100 Marks)			END SEMESTER EXAMINATION (100 / 50 Marks)	CONTINUOUS IN SEMESTER EVALUATION (50 Marks)	END SEMESTER EXAMINATION (50 Marks)	CONTINUOUS IN SEMESTER EVALUATION (50 Marks)	END SEMESTER EXAMINATION (50 Marks)				
							T1 (30 Marks)	T2 (30 Marks)	Assignments (40 Marks)									
BSC	230GMAB08_04	Vector Calculus and Partial Differential Equations	2	1	-	-	30	30	40	100	-	-	-	-	100	3		
PCC	231GETB11_04	Signals and Systems	2	-	-	2	30	30	40	100	-	-	-	-	100	2.5		
	231GETB12_04	Analog Communication	2	-	-	-	30	30	40	50	-	-	-	-	50	2		
	231GETB13_04	Control Systems	2	-	-	2	30	30	40	100	-	-	-	-	100	2.5		
VEC/EEC	230GCEB02_04	Environment and Sustainability	2	-	-	-	30	30	40	50	-	-	-	-	50	2		
MMC	-	Multidisciplinary Minor Course	1	-	2	-	-	-	-	-	50	50	50	50	100	2		
SEC	250GCSB202_04	Introduction to R Programming	2	-	2	-	-	-	-	-	50	50	50	50	100	3		
AEC (HSMC)	230UENB02_04	Communicative Proficiency Skills	1	-	2	-	30	30	40	50	-	-	-	-	50	2		
LC	230GETB14_04	Analog Communication Lab	-	-	2	-	-	-	-	-	50	50	-	-	50	1		
IITP/FP/CEP	230GETB15_04	Internship / Field Project / Community Engagement Programme	4 to 6 weeks				-	-	-	-	-	-	-	50	50	50	2	
TOTAL			14	1	8	4											750	22
DSH	-	Domain Specific Honours	3	-	-	-	30	30	40	100	-	-	-	-	100	3		
MLC#	-	Audit Course	-	-	2	-	-	-	-	-	-	-	50	-	50	1		

L-Lecture
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Note: A Certificate will be awarded if a student exits after the First year.

For "Exit" at the end of the First Year the student must complete a total of 8 additional credits.

a) An internship / OJT of 8 - 10 weeks (4 credits) over and above semester 2 internship of minimum 4 weeks.

b) Additional one Course of 4 credits (Course offered will be Vocational Skill Course (VSC) or Skill Enhancement Course (SEC) or a mini project).

Sem.	Multidisciplinary Minor Course (MMC)			
	Specialization			
III	Course Code	230GCSB111_03		
	Course Name	Basics of Data Structures and Algorithms		
IV	Course Code	230GMTB01_04		
	Course Name	Sensors and Actuators		
V	Course Code	230GCSB125_05		
	Course Name	Internet and Cloud Computing		
VI	Course Code	230GCSB116_06		
	Course Name	Data Science and Analytics		
VII	Course Code	230GMEB52_07		
	Course Name	3-D Printing		
VII	Course Code	230GRAB55_07		
	Course Name	Industrial Robots		

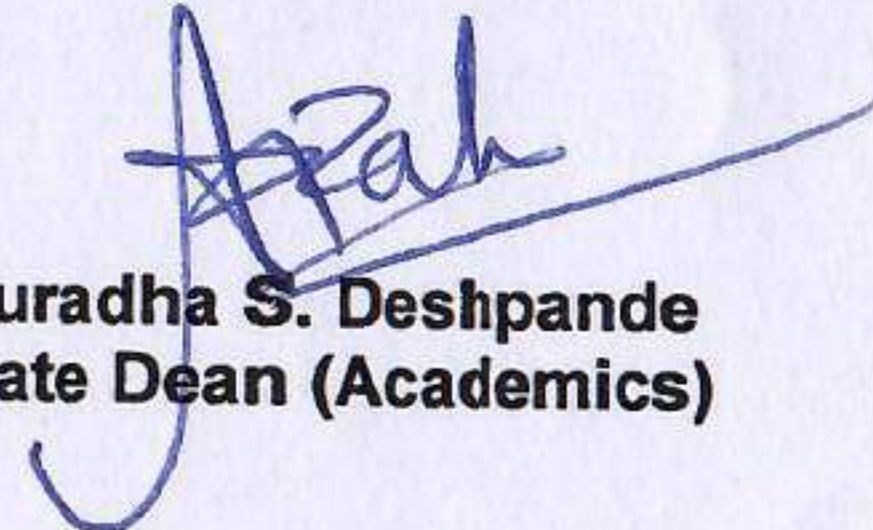
Sem.	Interdisciplinary Open Course (IOC)			
	Specialization			
III	Course Code	250GBTB01_03		
	Course Name	Bioengineering		
V	Course Code	230GCSB168_05		
	Course Name	Fundamentals of Computer Networks		
VII	Course Code	230GETB33_07		
	Course Name	Electric Vehicle (EV) Technology		

Mandatory Learning Course (MLC#) Audit Course			
Course Code	241GETB01_04	Course Code	240GETB04_06
Course Name	PCB Design and Fabrication	Course Name	Android App Development
Course Code	240GETB02_05	Course Code	230UPOB02_07
Course Name	Drone Technology: Quadcopter Design and Control	Course Name	Introduction to Indian Constitution
Course Code	240GETB03_06		
Course Name	Amateur Radio: Theory and Practice		



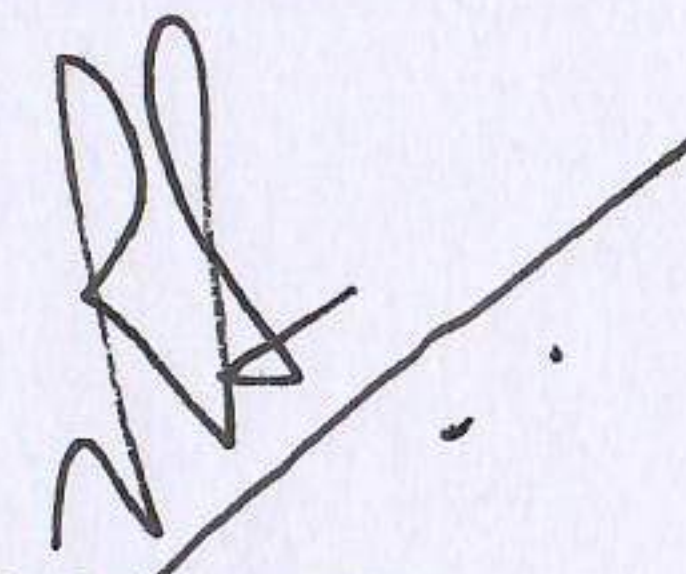
Sem.	Domain Specific Honours (DSH)			
	Specialization	EV Technology	Sustainable Energy Systems	Next Generation Communication
IV	Course Code	230GETB82_04	230GETB75_04	230GETB127_04
	Course Name	Electrical Vehicles-Policies and Regulations	Renewable Energy	4G Cellular Communication
V	Course Code	230GETB83_05	230GETB76_05	230GETB107_05
	Course Name	Introduction to Automobiles	Climate Change and Environmental Science	Cognitive Radio Technology
	Course Code	-	-	230GETB108_05
	Course Name	-	-	Cognitive Radio Technology Lab
VI	Course Code	230GETB84_06	230GETB77_06	230GETB105_06
	Course Name	EV Charging Technology	Sustainable and Green Technology	Advanced Antenna Design for 5G
VI	Course Code	230GETB85_06	230GETB78_06	230GETB106_06
	Course Name	EV Charging Technology Lab	Sustainable and Green Technology Lab	Advanced Antenna Design for 5G Lab
VII	Course Code	230GETB86_07	230GETB79_07	230GETB109_07
	Course Name	Introduction of EV in Utility Grid	Smart Grid	Software Defined Networks
VII	Course Code	230GETB87_07	230GETB80_07	-
	Course Name	Introduction of EV in Utility Grid Lab	Smart Grid Lab	-
VIII	Course Code	230GETB88_08	230GETB81_08	230GETB110_08
	Course Name	MOOC-I	MOOC- II	MOOC-III



Dr. Arjuna Muduli
 Programme Coordinator, SECS


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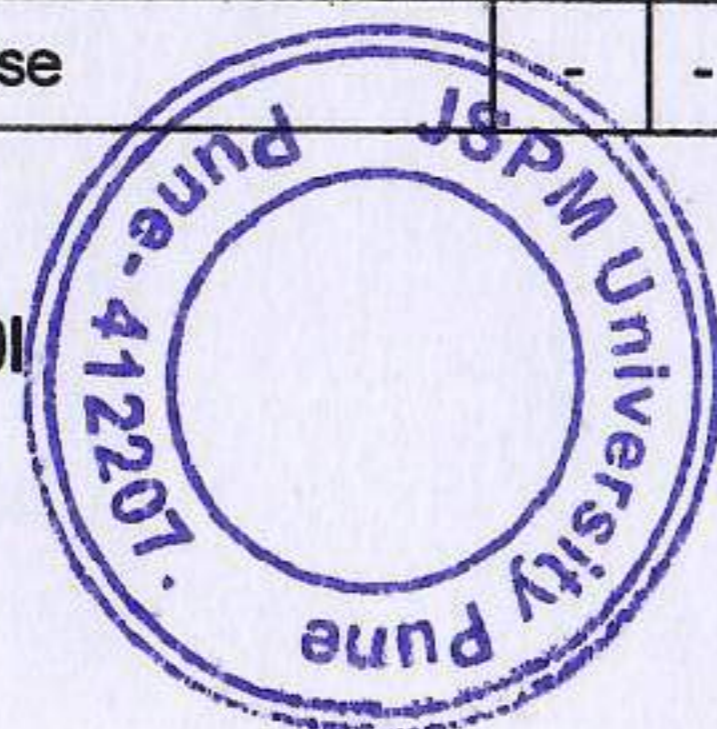
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							T1 (30 Marks)	T2 (30 Marks)	Assignments (40 Marks)								
BSC	230GMAL02_04	Multivariate Calculus and Differential Equations	3	1	-	-	30	30	40	100	-	-	-	-	100	4	
PCC	231GETB11_04	Signals and Systems	2	-	-	2	30	30	40	100	-	-	-	-	100	2.5	
	231GETB12_04	Analog Communication	2	-	-	-	30	30	40	50	-	-	-	-	50	2	
	231GETB13_04	Control Systems	2	-	-	2	30	30	40	100	-	-	-	-	100	2.5	
VEC/EEC	230GCEB02_04	Environment and Sustainability	2	-	-	-	30	30	40	50	-	-	-	-	50	2	
MMC	-	Multidisciplinary Minor Course	1	-	2	-	-	-	-	-	50	50	50	50	100	2	
SEC	250GCSB202_04	Introduction to R Programming	2	-	2	-	-	-	-	-	50	50	50	50	100	3	
AEC (HSM C)	230UENB02_04	Communicative Proficiency Skills	1	-	2	-	30	30	40	50	-	-	-	-	50	2	
LC	230GETB14_04	Analog Communication Lab	-	-	2	-	-	-	-	-	50	50	-	-	50	1	
IITP/FP/CEP	230GETB15_04	Internship / Field Project / Community Engagement Programme	4 to 6 weeks				-	-	-	-	-	-	-	50	50	50	2
TOTAL			15	1	8	4									750	23	
DSH	-	Domain Specific Honours	3	-	-	-	30	30	40	100	-	-	-	-	100	3	
MLC#	-	Audit Course	-	-	2	-	-	-	-	-	-	-	50	-	50	1	

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- b) Additional one Course of 4 credits (Course offered will be Vocational Skill Course (VSC) or Skill Enhancement Course (SEC) or a mini project).

Multidisciplinary Minor Course (MMC)				
Sem.	Specialization			
III	Course Code	230GCSB111_03		
	Course Name	Basics of Data Structures and Algorithms		
IV	Course Code	230GMTB01_04		
	Course Name	Sensors and Actuators		
V	Course Code	230GCSB125_05		
	Course Name	Internet and Cloud Computing		
VI	Course Code	230GCSB116_06		
	Course Name	Data Science and Analytics		
VII	Course Code	230GMEB52_07		
	Course Name	3-D Printing		
VII	Course Code	230GRAB55_07		
	Course Name	Industrial Robots		

Interdisciplinary Open Course (IOC)				
Sem.	Specialization			
III	Course Code	250GBTB01_03		
	Course Name	Bioengineering		
V	Course Code	230GCSB168_05		
	Course Name	Fundamentals of Computer Networks		
VII	Course Code	230GETB33_07		
	Course Name	Electric Vehicle (EV) Technology		

Mandatory Learning Course (MLC#) Audit Course			
Course Code	241GETB01_04	Course Code	240GETB04_06
Course Name	PCB Design and Fabrication	Course Name	Android App Development
Course Code	240GETB02_05	Course Code	230UPOB02_07
Course Name	Drone Technology: Quadcopter Design and Control	Course Name	Introduction to Indian Constitution
Course Code	240GETB03_06		
Course Name	Amateur Radio: Theory and Practice		



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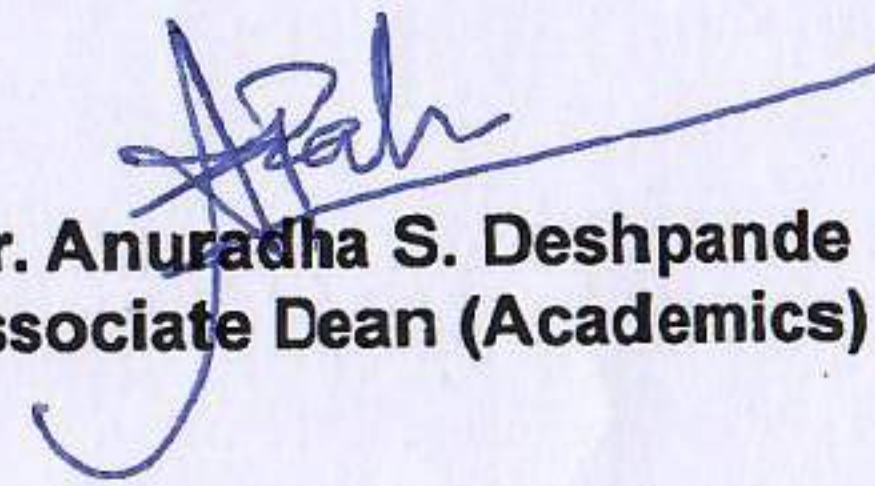
EL-Experiential Learning

Domain Specific Honours (DSH)				
Sem.	Specialization	EV Technology	Sustainable Energy Systems	Next Generation Communication
IV	Course Code	230GETB82_04	230GETB75_04	230GETB127_04
	Course Name	Electrical Vehicles-Policies and Regulations	Renewable Energy	4G Cellular Communication
V	Course Code	230GETB83_05	230GETB76_05	230GETB107_05
	Course Name	Introduction to Automobiles	Climate Change and Environmental Science	Cognitive Radio Technology
	Course Code	-	-	230GETB108_05
	Course Name	-	-	Cognitive Radio Technology Lab
VI	Course Code	230GETB84_06	230GETB77_06	230GETB105_06
	Course Name	EV Charging Technology	Sustainable and Green Technology	Advanced Antenna Design for 5G
VI	Course Code	230GETB85_06	230GETB78_06	230GETB106_06
	Course Name	EV Charging Technology Lab	Sustainable and Green Technology Lab	Advanced Antenna Design for 5G Lab
VII	Course Code	230GETB86_07	230GETB79_07	230GETB109_07
	Course Name	Introduction of EV in Utility Grid	Smart Grid	Software Defined Networks
VII	Course Code	230GETB87_07	230GETB80_07	-
	Course Name	Introduction of EV in Utility Grid Lab	Smart Grid Lab	-
VIII	Course Code	230GETB88_08	230GETB81_08	230GETB110_08
	Course Name	MOOC-I	MOOC- II	MOOC-III

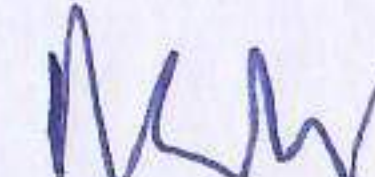

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