

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: 2024-25)



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

01/07/2024

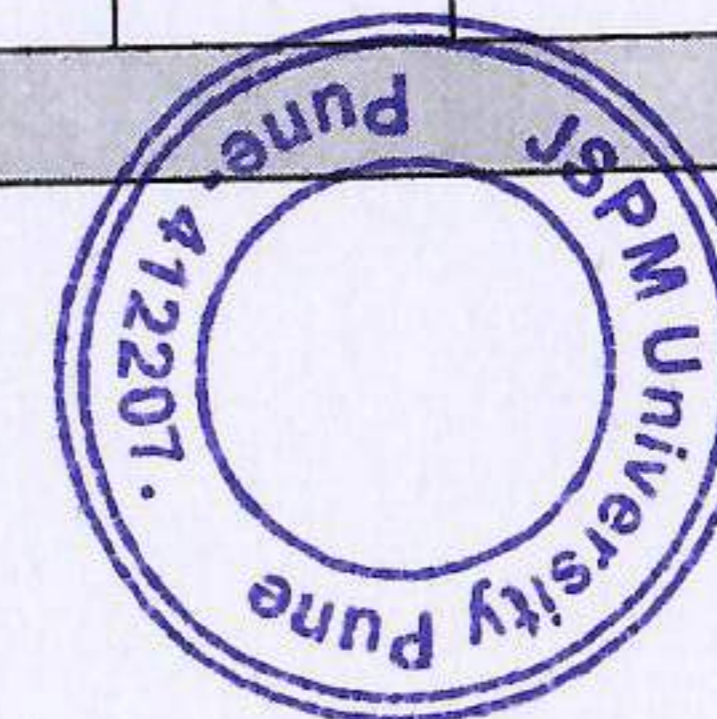
REVISION NO.

0.0 (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
PCC	231GETB03_03	Electronic Circuits and Applications	2	-	-	-	30	30	40	50	-	-	-	-	50	2
	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
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	230UPYB02_03	Mindfulness and Wellbeing	1	-	-	2	-	-	-	-	-	-	50	-	50	1.5
TOTAL			15	1	6	4									750	20




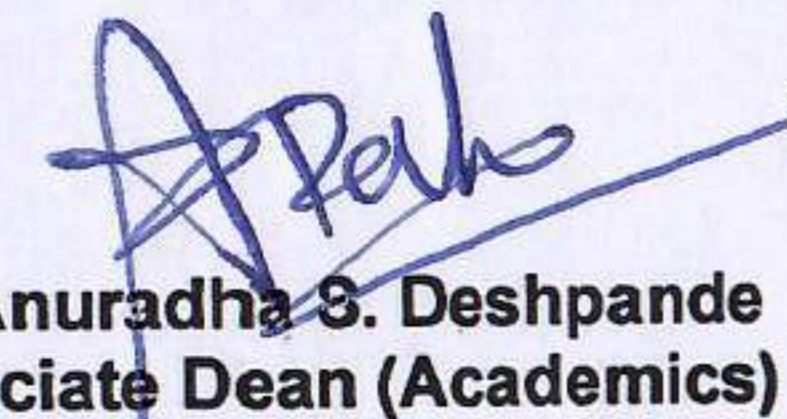
Multidisciplinary Minor Course (MMC)					
Sem.	Specialization				
III	Course Code	230GCSB111_03			
	Course Name	Basics of Data Structures and Algorithms			
IV	Course Code	230GMTB01_04			
	Course Name	Sensors and Actuators			
V	Course Code	230GCSB125_05			
	Course Name	Internet and Cloud Computing			
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	230HFSB16_03			
	Course Name	Biology for Engineers			
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


Director, School of Electrical & Communication Sciences


Prof. R. S. Deshpande
 Dean, Faculty of Science and Technology


Dr. Anuradha S. Deshpande
 Associate Dean (Academics)




Prof. B.B. Ahuja
 Vice Chancellor, JSPM University Pune

Vice Chancellor
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Pune



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

SEMESTER III ((LEVEL 5))

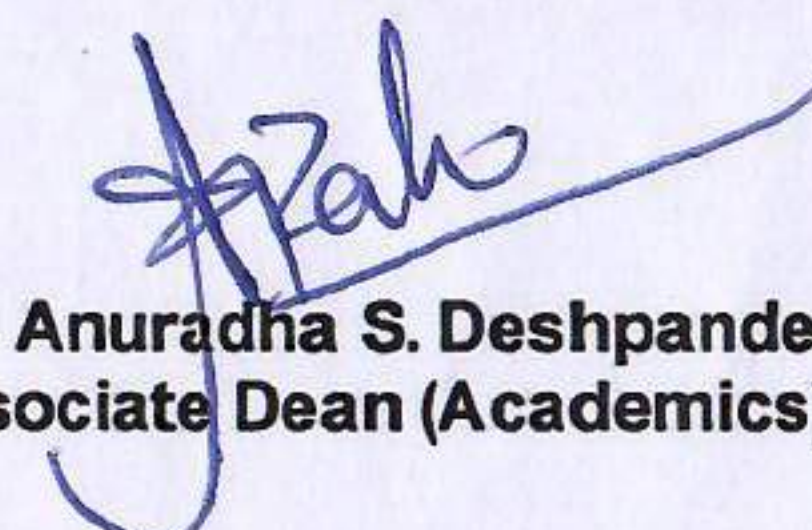
COURSE			TEACHING SCHEME				EXAMINATION SCHEME AND MARKS								TOTAL	CREDITS
TYPE	CODE	COURSE NAME	Hours / Week				THEORY (Equal Weightage for CIE and ESE)				PRACTICAL (Equal Weightage for CIE and ESE)		ORAL (Equal Weightage for CIE and ESE)			
			L	T	P	EL	CONTINUOUS INSEMESTER EVALUATION (100 Marks)			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
PCC	231GETB03_03	Electronic Circuits and Applications	2	-	-	-	30	30	40	50	-	-	-	-	50	2
	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




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	230HFSB16_03			
	Course Name	Biology for Engineers			
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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JSPM University
Pune

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

T-Tutorial
 Rev. No.:0.0

P-Practical Session (Laboratory)
 Rev. Date:01/07/2024

EL-Experiential Learning



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SEMESTER IV (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	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	3	
SEC_MOOC	240GCSB30_04	The Joy of Computing using Python	-	-	2	-	25			75	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			12	1	8	4									750	22	
DSH	-	Domain Specific Honours	3	-	-	-	30	30	40	100	-	-	-	-	100	3	
MLC#	-	Audit Course	1	-	-	-	-	-	-	50	-	-	-	-	50	1	

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



T-Tutorial
Rev. No.:0.0

P-Practical Session (Laboratory)
Rev. Date:01/07/2024

EL-Experiential Learning

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).

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			

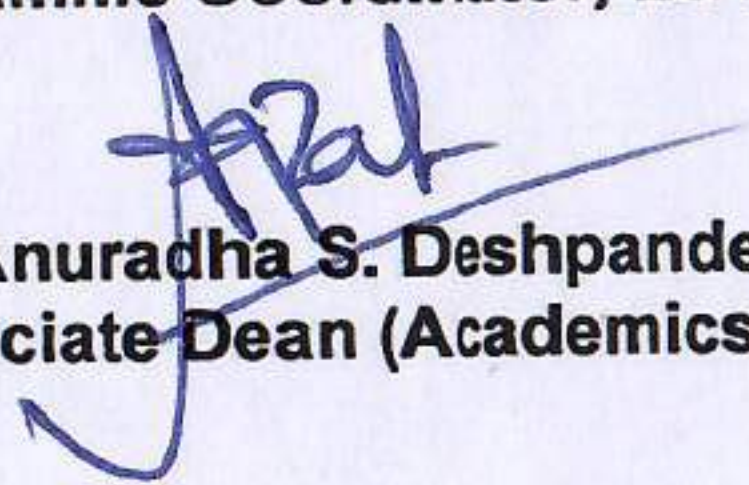
Interdisciplinary Open Course (IOC)					
Sem.	Specialization				
III	Course Code	230HFSB16_03			
	Course Name	Biology for Engineers			
V	Course Code	230GCSB168_05			
	Course Name	Fundamentals of Computer Networks			
VII	Course Code	230GETB33_07			
	Course Name	Electric Vehicle (EV) Technology			


Mandatory Learning Course (MLC [#]) Audit Course			
Course Code	240GETB01_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, E&TC


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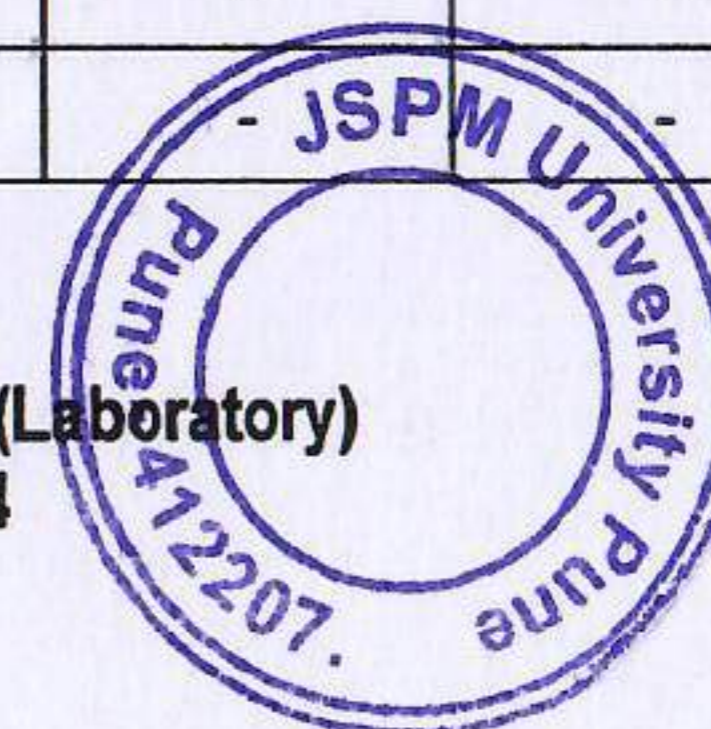
COURSE			TEACHING SCHEME				EXAMINATION SCHEME AND MARKS								TOTAL	CREDITS	
TYPE	CODE	COURSE NAME	Hours / Week				THEORY (Equal Weightage for CIE and ESE)			PRACTICAL (Equal Weightage for CIE and ESE)		ORAL (Equal Weightage for CIE and ESE)					
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							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_MOOC	240GCSB30_04	The Joy of Computing using Python	-	-	2	-	25			75	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			13	1	8	4									750	23	
DSH	-	Domain Specific Honours	3	-	-	-	30	30	40	100	-	-	-	-	100	3	
MLC#	-	Audit Course	1	-	-	-	-	-	-	50	-	-	-	-	50	1	

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Multidisciplinary Minor Course (MMC)				
Sem.	Specialization			
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	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		

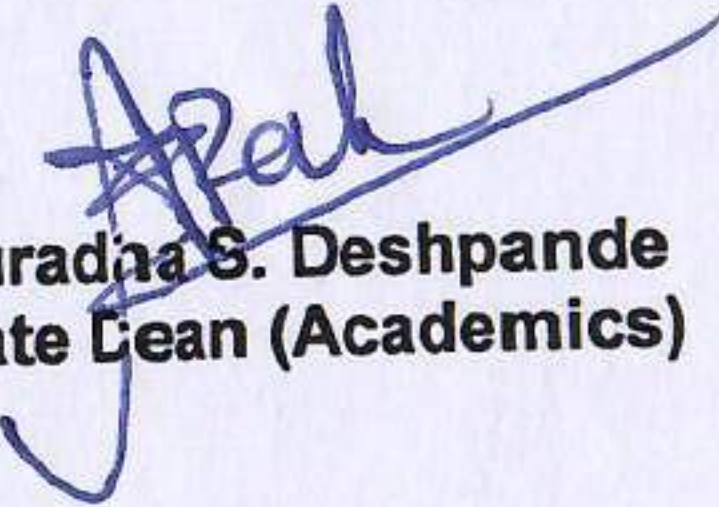
Interdisciplinary Open Course (IOC)				
Sem.	Specialization			
III	Course Code	230HFSB16_03		
	Course Name	Biology for Engineers		
V	Course Code	230GCSB168_05		
	Course Name	Fundamentals of Computer Networks		
VII	Course Code	230GETB33_07		
	Course Name	Electric Vehicle (EV) Technology		


Mandatory Learning Course (MLC*) Audit Course			
Course Code	240GETB01_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		




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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JSPM UNIVERSITY PUNE

Recognized by UGC u/s 2 (f) of UGC Act 1956 and enacted by the State Government of Maharashtra - JSPM University Act, 2022 (Mah.IV of 2023)

Date: 27/6/2025

To,
The Honorable Vice Chancellor,
JSPM University Pune.

Subject: Details of NPETL courses offered in Odd semester of AY 2025-26.

Respected sir,

In alignment with the National Education Policy 2020 and to enhance flexible learning, we propose to replace the following course(s) in the current curriculum structure with equivalent MOOC/NPTEL online certification course(s) for the academic year 2025-26.

Name of Programme: BTech (E&TC)- Regular and Lateral

Semester: 5

Sr. No.	Existing Course in the Curriculum structure			Suggested equivalent MOOC Course			
	Course Code	Course Name	Credits	Course Code	Course Name	Credits	MOOC duration in weeks
1	230GETB113_05	Fiber Optic Communication	3	231GETB113_05	Fiber Optic Communication Technology	3	12




JSPM UNIVERSITY PUNE

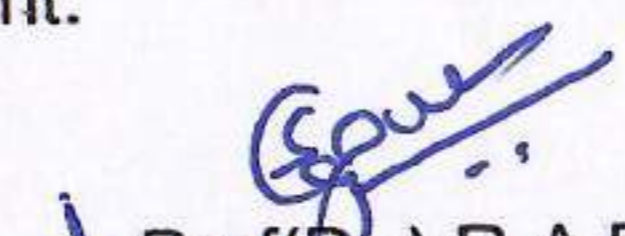
Recognized by UGC u/s 2 (f) of UGC Act 1956 and enacted by the State Government of Maharashtra - JSPM University Act, 2022 (Mah.IV of 2023)

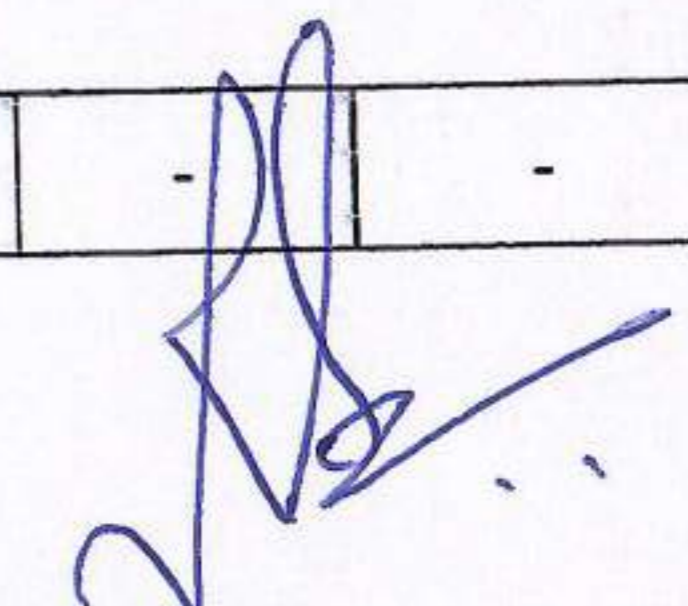
The teaching and evaluation scheme for the suggested MOOC course is follows.

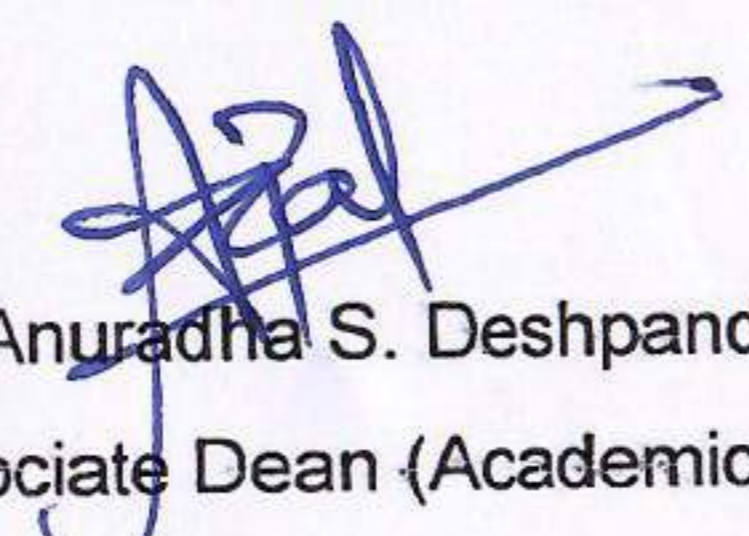
COURSE			TEACHING SCHEME				EXAMINATION SCHEME AND MARKS								TOTAL	CREDITS
TYPE	CODE	COURSE NAME	Hours / Week				THEORY (Equal Weightage for CIE and ESE)			PRACTICAL (Equal Weightage for CIE and ESE)		ORAL (Equal Weightage for CIE and ESE)				
			L	T	P	EL	CONTINUOUS INSEMESTER EVALUATION (100/ 25 Marks)			END SEMESTER EXAMINATION (100 / 50/ 75 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)							
Course to be replaced form the curriculum structure																
PEC	230GETB113_05	Fiber Optic Communication	3	-	-	-	30	30	40	100	-	-	-	-	100	3
Equivalent MOOC course																
PEC	231GETB113_05	Fiber Optic Communication Technology	3	-	-	-	25			75	-	-	-	-	100	3

We kindly request your approval for the proposed replacement.


Dr. Arjuna Muduli
Programme coordinator E&TC


Prof.(Dr.) R A Patil
Director, School of, SECS


Prof.(Dr.) R S Deshpande
Dean, Faculty of FST


Dr. Anuradha S. Deshpande
Associate Dean (Academics)



JSPM University Pune

FACULTY OF SCIENCE & TECHNOLOGY

SCHOOL OF ELECTRICAL AND COMMUNICATION SCIENCES

COURSE STRUCTURE (NEP 2020 Aligned)

W. E. F

2025-2026

RELEASE DATE

01/07/2025

Electronics & Telecommunication Engineering

REVISION NO.

0.0 (NEP)

SEMESTER V (LEVEL 5.5)

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	230GETB97_05	Electromagnetic Theory	2	1	-	-	30	30	40	100	-	-	-	-	100	3
PCC	230GETB16_05	Digital Communication	2	-	-	-	30	30	40	50	-	-	-	-	50	2
PCC	230GETB17_05	Microprocessors and Microcontrollers	2	-	-	-	30	30	40	50	-	-	-	-	50	2
PCC	230GETB18_05	Digital Signal Processing	2	-	-	2	30	30	40	100	-	-	-	-	100	2.5
PEC	-	Program Elective Course	3	-	-	-	30	30	40	100	-	-	-	-	100	3
MMC	-	Multidisciplinary Minor Course	1	-	2	-	-	-	-	-	50	50	50	50	100	2
IOC	-	Interdisciplinary Open Course	2	-	-	-	30	30	40	100	-	-	-	-	100	2
HSSM	231VBCB27_05	Finance for Engineers	1	-	-	4	-	-	-	-	-	-	50	50	50	2
VSC	230IINB02_05	Innovation	1	-	-	2	-	-	-	-	-	-	50	50	50	1.5
LC	230GETB20_05	Digital Communication Lab	-	-	2	-	-	-	-	-	50	50	-	-	50	1
LC	230GETB21_05	Microprocessors and Microcontrollers Lab	-	-	2	-	-	-	-	-	50	50	-	-	50	1
TOTAL			16	1	6	8									800	22
DSH	-	Domain Specific Honours	3	-	-	-	30	30	40	100	-	-	-	-	100	3
DSH_LC	-	Domain Specific Honours Lab	-	-	2	-	-	-	-	-	50	50	-	-	50	1
MLC#	-	Audit Course	-	-	2	-	-	-	-	-	-	-	50	-	50	1

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Sem.	Program Elective Course			
	Specialization	Intelligent Systems and Data Analytics	Advanced Communication Systems	Microwave and Antenna Engineering
V	Course Code	230GETB112_05	230GETB113_05	230GETB114_05
	Course Name	Fundamentals of Artificial Intelligence	Fiber Optic Communication	Microwave Theory and Techniques
VI	Course Code	230GETB115_06	230GETB116_06	230GETB117_06
	Course Name	Machine Learning	Satellite Communication	Antennas and Wave Propagation
VII	Course Code	230GETB118_07	230GETB119_07	230GETB120_07
	Course Name	Big Data Analytics	Advanced Mobile Communications	Next-Generation Antenna Technologies

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	230HFSB16_03		
	Course Name	Biology for Engineers		
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	240GETB01_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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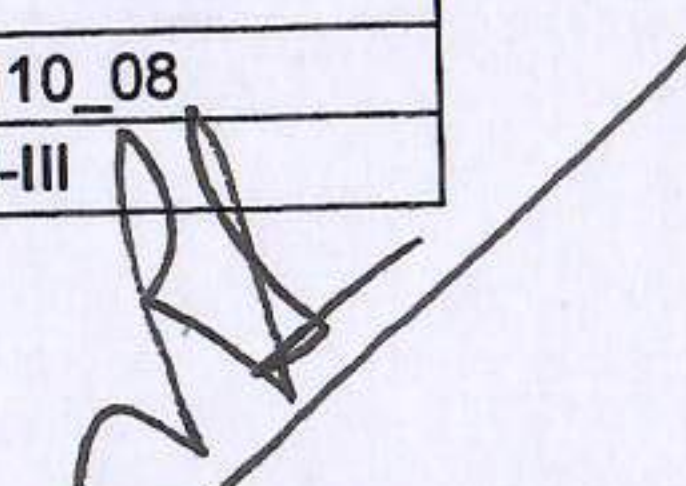
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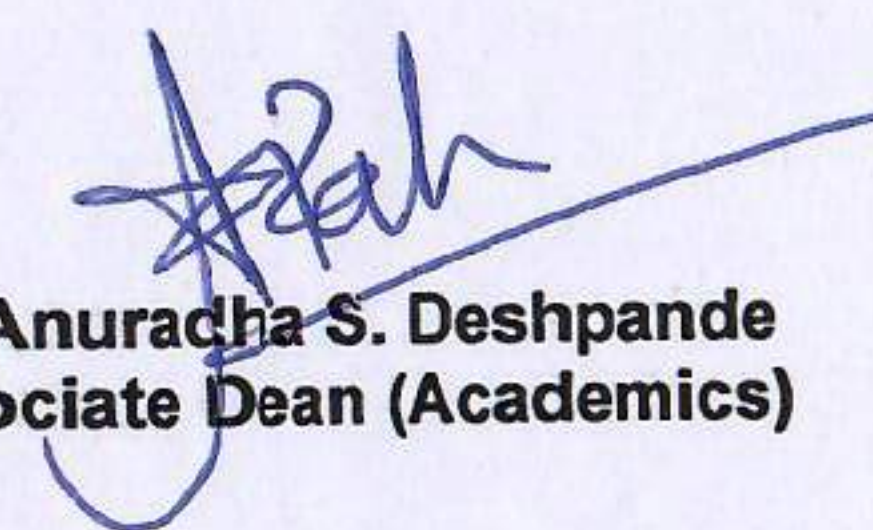
EL-Experiential Learning
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Sem.	Domain Specific Honours (DSH)			
	Specialization	EV Technology	Sustainable Energy Systems	5G Communication
IV	Course Code	230GETB82_04	230GETB75_04	230GETB127_04
	Course Name	Electrical Vehicles-Policies and Regulations	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, E&TC


Dr. Rajendra Kumar A. Patil
 Director, School of Electrical &
 Communication Sciences


Prof. R. S. Deshpande
 Dean, Faculty of Science and Technology


Dr. Anuradha S. Deshpande
 Associate Dean (Academics)




Prof. B.B. Ahuja
 Vice Chancellor, JSPM University Pune
Vice Chancellor
JSPM University
 EL-Experiential Learning
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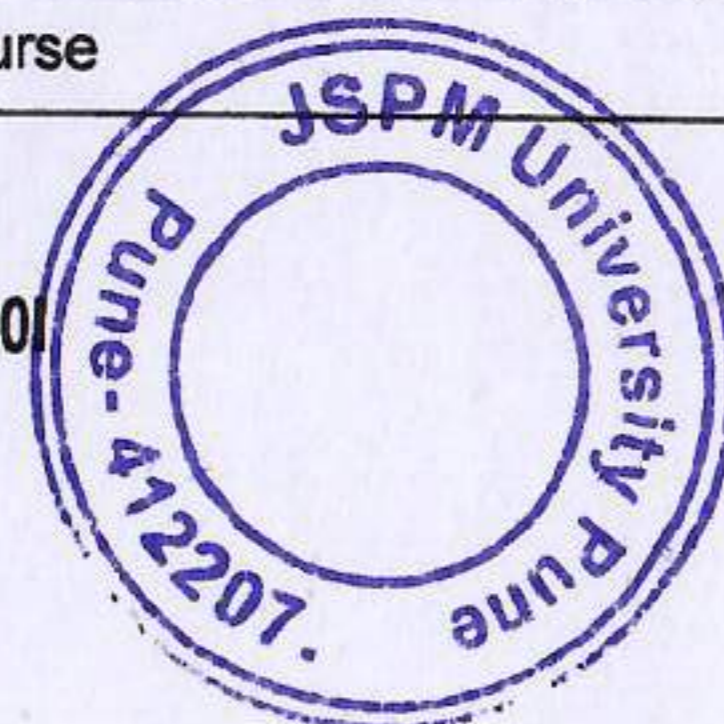
REVISION NO.

0.0 (NEP)

SEMESTER VI (LEVEL 5.5)

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)								
PSBC	230GETB96_06	Probability Statistics and Queuing Theory	2	1	-	-	30	30	40	100	-	-	-	-	100	3	
PCC	230GETB122_06	Internet of Things	2	-	-	2	30	30	40	100	-	-	-	-	100	2.5	
PCC	230GETB27_06	VLSI Design	2	-	-	-	30	30	40	50	-	-	-	-	50	2	
PEC	-	Program Elective Course	3	-	-	-	30	30	40	100	-	-	-	-	100	3	
AEC	230UENB03_06	Soft Skill Development	1	-	2	-	30	30	40	50	-	-	-	-	50	2	
HSSM	230UEEB19_06	Engineering Economics	2	-	-	-	30	30	40	50	-	-	-	-	50	2	
MMC	-	Multidisciplinary Minor Course	1	-	2	-	-	-	-	-	50	50	50	50	100	2	
VSC	230IESB03_06	Entrepreneurship	1	-	-	2	-	-	-	-	-	-	50	50	50	1.5	
LC	230GETB123_06	Internet of Things Lab	-	-	2	-	-	-	-	-	50	50	-	-	50	1	
LC	230GETB49_06	VLSI Design Lab	-	-	2	-	-	-	-	-	50	50	-	-	50	1	
IITP/ FP/ CEP	230GETB126_06	Internship / Field Project / Community Engagement Program	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	
DSH_ LC	-	Domain Specific Honours Lab	-	-	2	-	-	-	-	-	50	50	-	-	50	1	
MLC#	-	Audit Course	-	-	2	-	-	-	-	-	-	-	50	-	50	1	

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Sem.	Program Elective Course		
	Specialization	Intelligent Systems and Data Analytics	Advanced Communicat
V	Course Code	230GETB112_05	230GETB113_
	Course Name	Fundamentals of Artificial Intelligence	Fiber Optic Commu
VI	Course Code	230GETB115_06	230GETB116_
	Course Name	Machine Learning	Satellite Communi
VII	Course Code	230GETB118_07	230GETB119_
	Course Name	Big Data Analytics	Advanced Mobile Comm

ms	Microwave and Antenna Engineering
	230GETB114_05
	Microwave Theory and Techniques
	230GETB117_06
	Antennas and Wave Propagation
	230GETB120_07
s	Next-Generation Antenna Technologies

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.	Specialization			
III	Course Code			
	Course Name			
V	Course Code			
	Course Name			
VII	Course Code			
	Course Name			

Interdisciplinary Open Course (IOC)			
	DHFSB16_03		
	gy for Engineers		
	GCSB168_05		
	ndamentals of puter Networks		
	GETB33_07		
	ic Vehicle (EV) echnology		

Course Code	
Course Name	
Course Code	
Course Name	
Course Code	
Course Name	

Library Learning Course (MLC*) Audit Course		
GETB01_04	Course Code	240GETB04_06
Design and abrication	Course Name	Android App Development
GETB02_05	Course Code	230UPOB02_07
Technology: opter Design d Control	Course Name	Introduction to Indian Constitution
GETB03_06		
teur Radio: and Practice		



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Note: A (For B.Tech. Students)


Bachelor's degree in Vocation (B.Voc.) or B.Sc. (Engg./Tech.) will be awarded if a student exits after third year. For Exit at the end of third year the student must complete: (Total credits = 8)


a) An internship / OJT of 8 - 10 weeks (4 credits)

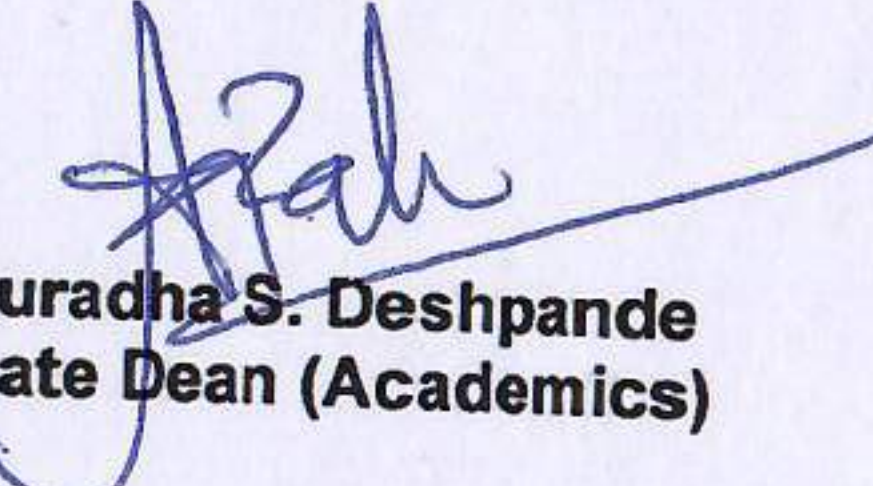
b) Additional Course 1 (4 credits) (Vocational Skill Course (VSC) / Skill Enhancement Course (SEC))

Sem.	Specialization	Domain Specific Honours (DSH)		
		EV Technology	Sustainable Energy Systems	5G 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
VI	Course Code	230GETB84_06	230GETB77_06	Cognitive Radio Technology Lab
	Course Name	EV Charging Technology	Sustainable and Green Technology	230GETB105_06
VI	Course Code	230GETB85_06	230GETB78_06	Advanced Antenna Design for 5G
	Course Name	EV Charging Technology Lab	Sustainable and Green Technology Lab	230GETB106_06
VII	Course Code	230GETB86_07	230GETB79_07	Advanced Antenna Design for 5G Lab
	Course Name	Introduction of EV in Utility Grid	Smart Grid	230GETB109_07
VII	Course Code	230GETB87_07	230GETB80_07	Software Defined Networks
	Course Name	Introduction of EV in Utility Grid Lab	Smart Grid Lab	-
VIII	Course Code	230GETB88_08	230GETB81_08	-
	Course Name	MOOC-I	MOOC- II	230GETB110_08
				MOOC-III

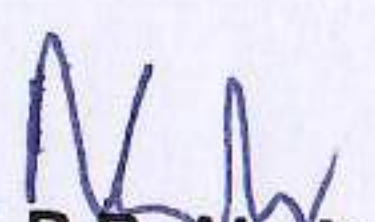

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