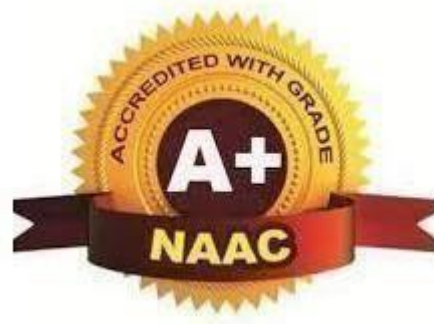




TULSIRAMJI GAIKWAD-PATIL
College of Engineering & Technology

Mohgaon, Wardha Road, Nagpur - 441 108

An Autonomous Institute



Department
of
Electronics & Communication Engineering
B.Tech. Electronics & Communication
Engineering

Teaching Scheme

Considering

National Education
Policy 2020

From
Academic Year 2026-27

Vision of Institute

To emerge as a learning Center of Excellence in the National Ethos in domains of Science, Technology and Management.

Mission of Institute

1. To strive for rearing standard and stature of the students by practicing high standards of professional ethics, transparency and accountability.
2. To provide facilities and services to meet the challenges of Industry and Society.
3. To facilitate socially responsive research, innovation and entrepreneurship.
4. To ascertain holistic development of the students and staff members by inculcating knowledge and profession as work practices.

Vision of the Department

“To emerge as a learning Hub and center of excellence in the domain of Electronics and Communication Engineering.”

Mission of the Department

- To impart quality technical education through effective teaching learning process.
- To provide a platform for addressing societal issues and challenges encountered by industries.
- To foster a culture of research and instill innovative and entrepreneurial skills.
- To promote lifelong learning in order to foster the holistic development of students and staff through the knowledge and professional ethics.

Program Education Objectives (PEO)

- PEO 1: Demonstrate essential technical skills to identify, analyze and solve problems and design issues in Electronics and Communication Engineering.
- PEO 2: Apply field knowledge, research and professional practices to meet the requirements of industries.
- PEO 3: Imbibe lifelong learning practices and entrepreneurship skills in tune with emerging technologies.
- PEO 4: Inculcate professional ethics and managerial skills to satisfy real life problems for serving the needs of society and environment.

Program Outcomes (PO)

- PO1: Engineering Knowledge:** Apply knowledge of mathematics, natural science, computing, engineering fundamentals and an engineering specialization as specified in WK1 to WK4 respectively to develop to the solution of complex engineering problems.
- PO2: Problem Analysis:** Identify, formulate, review research literature and analyze complex engineering problems reaching substantiated conclusions with consideration for sustainable development. (WK1 to WK4)
- PO3: Design/Development of Solutions:** Design creative solutions for complex engineering problems and design/develop systems/ components/ processes to meet identified needs with consideration for the public health and safety, whole-life cost, net zero carbon, culture, society and environment as required. (WK5)
- PO4: Conduct Investigations of Complex Problems:** Conduct investigations of complex engineering problems using research-based knowledge including design of experiments, modelling, analysis & interpretation of data to provide valid conclusions. (WK8).

PO5: Engineering Tool Usage: Create, select and apply appropriate techniques, resources and modern engineering & IT tools, including prediction and modelling recognizing their limitations to solve complex engineering problems. (WK2 and WK6)

PO6: The Engineer and The World: Analyze and evaluate societal and environmental aspects while solving complex engineering problems for its impact on sustainability with reference to economy, health, safety, legal framework, culture and environment. (WK1, WK5, and WK7). **PO7: Ethics:** Apply ethical principles and commit to professional ethics, human values, diversity and inclusion; adhere to national & international laws. (WK9)

PO8: Individual and Collaborative Team work: Function effectively as an individual, and as a member or leader in diverse/multi-disciplinary teams.

PO9: Communication: Communicate effectively and inclusively within the engineering community and society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations considering cultural, language, and learning differences

PO10: Project Management and Finance: Apply knowledge and understanding of engineering management principles and economic decision-making and apply these to one's own work, as a member and leader in a team, and to manage projects and in multidisciplinary environments.

PO11: Life-Long Learning: Recognize the need for, and have the preparation and ability for
i) independent and life-long learning ii) adaptability to new and emerging technologies and iii) critical thinking in the broadest context of technological change. (WK8)

Program Specific Outcomes (PSO)

PSO 1:	Formulate solutions to intricate engineering problems by applying fundamental principles from the <u>Electronics and Communication Engineering</u> technology.
PSO 2:	Develop methodologies to analyze and design circuits in electronics for communication applications to meet the societal needs.
PSO 3:	Implement project-based learning techniques to conduct experiments in Embedded Systems, communication system, signal and Image processing, Circuit analysis and design to work professionally in the industry or as an entrepreneur.



TULSIRAMJI GAIKWAD-PATIL COLLEGE OF ENGINEERING & TECHNOLOGY



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 Approved by AICTE, New Delhi, Govt. of Maharashtra
 (An Autonomous Institution Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur)



Department of Basic Sciences and Humanities

Scheme of Instruction for First Year of B. Tech. (UG) Programme Group-B Semester – I (EE/ECE)

SN	Sem	Type	BoS / Dept	Sub. Code	Subject	IP	Contact Hours				Credits	% Weightage				ESE Duration Hours
							L	P	SL	Hrs		CT/A	CA	ESE	TOTAL	
FIRST SEMESTER (GROUP-B)																
1	1	BSC	S&H	BSH41101	Linear Algebra and Calculus	T	4	0	2	6	4	30	10	60	100	3
2	1	BSC	S&H	BSH41109	Energy and Battery Technology	T	3	0	2	5	3	30	10	60	100	3
3	1	BSC	S&H	BSH41110	Energy and Battery Technology -Lab	P	0	2	-	2	1	25	-	25	50	-
4	1	ESC	ECE	BEC41101	Digital Circuits and Design	T	3	0	2	5	3	30	10	60	100	3
5	1	IKS	S&H	BSH41204	Indian Ancient Knowledge	T	2	0	2	4	2	14	05	30	50	1
6	1	ESC	ME	BME41101	IDEA-Lab & Engineering Workshop	P	0	4	-	4	2	50	-	-	50	-
7	1	ESC	CE	BCE41102	Environment Sustainability -Lab	P	0	2	-	2	1	25	-	25	50	-
8	1	VSEC	CSE	BCS41104	Fundamentals of Computer-Lab	P	0	2	-	2	1	25	-	25	50	-
9	1	VSEC	S&H	BSH41205	Social Intemship	P	0	2	-	2	1	25	-	-	25	-
10	1	PCC	ECE	BEC41102	Digital Circuits and Design -Lab	P	0	4	-	4	2	25	-	25	50	-
11	1	CC	S&H	BSH41X01	Liberal Learning Module-I	P	0	4	-	4	2	50	-	-	50	-
TOTAL FIRST SEM							12	20	08	40	22	330	35	310	675	10

SECOND SEMESTER (GROUP-B)																
1	2	BSC	S&H	BSH41201	Differential Equation and Statistics	T	4	0	2	6	4	30	10	60	100	3
2	2	BSC	S&H	BSH41207	Semiconductor Physics & Optics	T	3	0	2	5	3	30	10	60	100	3
3	2	BSC	S&H	BSH41208	Semiconductor Physics & Optics -Lab	P	0	2	-	2	1	25	-	25	50	-
4	2	ESC	EE	BEE41201	Principle of Electrical Engineering	T	3	0	2	5	3	30	10	60	100	3
5	2	ESC	EE	BEE41202	Principle of Electrical Engineering -Lab	P	0	2	-	2	1	25	-	25	50	-
6	2	ESC	ME	BME41202	Engineering & Computer Graphics	T	2	0	2	4	2	15	5	30	50	1
7	2	ESC	IT	BIT41205	'C' Language Lab	P	0	2	2	4	1	25	-	25	50	-
8	2	VSEC	CE	BCE41203	Computer Aided Drawing-Lab	P	0	2	-	2	1	25	-	25	50	-
9	2	VSEC	S&H	BSH41202	Professional Etiquette-Lab	P	0	2	-	2	1	25	-	-	25	-
10	2	AEC	S&H	BSH41204	Digital Wellness & Basic Communication Lab	P	0	4	-	4	2	50	-	-	50	-
11	2	CC	S&H	BSH41Y01	Liberal Learning Module-II	P	0	4	-	4	2	50	-	-	50	-
TOTAL SECOND SEM							12	18	10	40	21	330	35	310	675	10

Course Category	BSC/ESC (Basic Science Course/ Engineering Science Course)	PCC (Programme Core courses)	Multidisciplinary courses	VSEC (Skill Course)	Social Science & Management		Experiential Learning Courses	CC (Co-Curricular Courses)
					AEC (Ability Enhancement Course)	IKS (Indian Knowledge System)		
Credits SEM-I	08 / 06	--	--	02	02	--	--	02
Credits SEM-II	08 / 07	02	--	02	--	02	--	02
Cumulative Sum	16 / 13	02	--	04	02	02	--	04

ROGRESSIVE TOTAL CREDITS: 22+21=43

				July, 2025	4.00	Applicable for AY 2025-26 Onwards
Chairperson	Dean Academics	Vice Principal	Principal	Date of Release	Version	



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Department of Basic Sciences and Humanities

Scheme of Instruction for First Year of B. Tech. (UG) Programme Group-B (EE/ECE)

Liberal Learning Modules for SEM-I

SN	Sem	Type	BoS / Dept	Sub. Code	Subject	T/P	Contact Hours			Credits	Weightage		
							L	P	Hrs		INT (1-Certificate)	ESE (MCQ)	External Practical
1	1	CC	S&H	BSH42Y01	Art & Craft	P	2	2	4	2	25	-	25
2	1	CC	S&H	BSH42Y02	Poster & Video Design	P	2	2	4	2	25	-	25
3	1	CC	S&H	BSH42Y03	IPD (Integrated of Personality Development)	P	2	2	4	2	25	25	-
4	1	CC	S&H	BSH42Y04	Sports (Outdoor & Indoor)	P	2	2	4	2	25	-	25
5	1	CC	S&H	BSH41X05	Yoga Practices & NSS	P	2	2	4	2	25	-	25
6	1	CC	S&H	BSH41X06	Interactive English (Level-1)	P	2	2	4	2	25	25	-
7	1	CC	S&H	BSH41X07	Gateway to Competitive Exams (Level-1)	P	2	2	4	2	25	25	-
8	1	CC	S&H	BSH41X08	Foreign Language -French (Level-1)	P	2	2	4	2	25	25	-
9	1	CC	S&H	BSH41X09	Foreign Language -German (Level-1)	P	2	2	4	2	25	25	-
10	1	CC	S&H	BSH41X10	Foreign Language -Japanese (Level-1)	P	2	2	4	2	25	25	-

Liberal Learning Modules for SEM-II

SN	Sem	Type	BoS / Dept	Sub. Code	Subject	T/P	Contact Hours			Credits	Weightage		
							L	P	Hrs		INT (1-Certificate)	ESE (MCQ)	External Practical
1	2	CC	S&H	BSH41X01	Art of Theater	P	2	2	4	2	25	-	25
2	2	CC	S&H	BSH41X02	Fundamental of Music	P	2	2	4	2	25	-	25
3	2	CC	S&H	BSH41X02	CPD (Communication for Personality Development)	P	2	2	4	2	25	-	25
4	2	CC	S&H	BSH41X03	EBCD (Every Body Can Dance)	P	2	2	4	2	25	-	25
5	2	CC	S&H	BSH42Y05	Indian Cuisine	P	2	2	4	2	25	-	25
6	2	CC	S&H	BSH42Y06	Interactive English (Level-2)	P	2	2	4	2	25	25	-
7	2	CC	S&H	BSH42Y07	Gateway to Competitive Exams (Level-2)	P	2	2	4	2	25	25	-
8	2	CC	S&H	BSH42Y08	Foreign Language -French (Level-2)	P	2	2	4	2	25	25	-
9	2	CC	S&H	BSH42Y09	Foreign Language -German (Level-2)	P	2	2	4	2	25	25	-
10	2	CC	S&H	BSH42Y010	Foreign Language -Japanese (Level-2)	P	2	2	4	2	25	25	-

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Tulsiramji Gaikwad-Patil College of Engineering & Technology, Nagpur

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SCHEME OF INSTRUCTIONS & SYLLABI

Programme: Electronics & Communication Engineering (NBA Accredited)

Scheme of Instructions: Second Year B.Tech. in Electronics & Communication Engineering




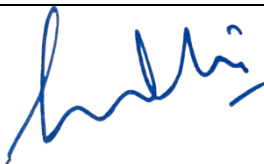
Semester--III



Sr. No.	Course Category	Course Code	Course Title	T/P	Contact Hours				Credits	Exam Scheme			ESE Duration (Hours)	Total Marks
					L	P	SL	Hrs.		CT/IA	CA	ESE		
1	PCC	BEC42301	Network Analysis	T	3	-	-	3	3	30	10	60	3	100
2	PCC	BEC42302	Electronics Systems & Design	T	3	-	-	3	3	30	10	60	3	100
3	MDM	BSH42301	Mathematical Transform & Signal Series	T	2	-	-	2	2	14	6	30	2	50
4	OEC	BEC42303	Principles of Electronics & Communication	T	4	-	-	4	4	30	10	60	3	100
5	HSSM	BBA42301	Human Resource Management	T	2	-	-	2	2	14	6	30	2	50
6	VEC	BCE42309	Sustainable Development Goals	T	2	-	-	2	2	14	6	30	2	50
7	PCC	BEC42304	Network Analysis Lab	P	-	2	-	2	1	-	25	25	2	50
8	PCC	BEC42305	Electronics Systems & Design Lab	P	-	2	-	2	1	-	25	25	2	50
9	CEP	BEC42306	Field Project (Micro project)	P	-	4	-	4	2	-	50	50	2	100
10	AEC	BSH423XX	Liberal Learning Module-III	P	-	2	-	2	1	50	-	-	2	50
Total				-	16	10		26	21	182	148	370	23	700

Course Category	BSC/ESC (Basic Science Course/Engineering Science Course.)	PCC (Programme Core courses)	PEC (Programme Elective courses)	OEC (Open Elective Course)	Multi-disciplinary courses	VSEC (Skill Course)	VEC (Value Education Courses)	Humanities Social Science & Management		Experiential Learning Courses	CC (Liberal Learning Courses)
								AEC (Ability Enhancement Course)	IKS (Indian Knowledge System)		
Credits	-	10	-	4	2	-	2	1		2	-
Cumulative Sum	16/13	12	-	4	2	4	2	5		2	4

PROGRESSIVE TOTAL CREDITS: 43+21=64

				June, 2026	1.00	Applicable for AY 2026-27
Chairperson	Vice-Principal / Director Academics	Director (Administration)	Principal	Date of Release	Version	



Tulsiramji Gaikwad-Patil College of Engineering & Technology, Nagpur

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SCHEME OF INSTRUCTIONS & SYLLABI

Programme: Electronics & Communication Engineering (NBA Accredited)

Scheme of Instructions: Second Year B.Tech. in Electronics & Communication Engineering

Semester-IV



Sr. No.	Course Category	Course Code	Course Title	T/P	Contact Hours			Credits	Exam Scheme			ESE Duration (Hours)	Total Marks
					L	P	Hrs.		CT/IA	CA	ESE		
1	PCC	BEC42401	Analog Systems Design	T	4	-	4	4	30	10	60	3	100
2	PCC	BEC42402	Signals & Systems	T	3	-	3	3	30	10	60	3	100
3	MDM	BIT42410	Python for Data Handling & Automation	T	2	-	2	2	14	6	30	2	50
4	OEC	BEC42403	OE-II - Digital System & Microprocessor	T	2	-	2	2	14	6	30	2	50
5	VSEC	BEC42404	Electronics Workshop (Idea Lab)	P	-	4	4	2	-	50	50	2	100
6	HSSM	BBA42401	Business Economics & Entrepreneurship	T	2	-	2	2	14	6	30	2	50
7	VEC	BSH42401	Intellectual Property Rights	T	2	-	2	2	14	6	30	2	50
8	PCC	BEC42405	Analog Systems Design Lab	P	-	2	2	1	-	25	25	2	50
9	PCC	BEC42406	Digital System Design Lab	P	-	2	2	1	-	25	25	2	50
10	AEC	BSH424XX	Liberal Learning Module-IV	P	-	2	2	1	50	-	-	-	50
Total				-	15	10	25	20	166	144	340	24	650

Course Category	BSC/ESC (Basic Science Course/Engineering Science Course.)	PCC (Programme Core courses)	PEC (Programme Elective courses)	OEC (Open Elective Course)	Multi-disciplinary courses	VSEC (Skill Course)	VEC (Value Education Courses)	Humanities Social Science & Management		Experiential Learning Courses	CC (Liberal Learning Courses)	VAC (Value added Course)
								AEC (Ability Enhancement Course)	IKS (Indian Knowledge System)			
Credits		9	-	2	2	2	-	1		-	-	-
Cumulative Sum	16/13	21	-	6	4	6	2	6		2	4	2

PROGRESSIVE TOTAL CREDITS: 64+20=84

				June, 2026	1.00	Applicable for AY 2026-27
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SCHEME OF INSTRUCTIONS & SYLLABI

Programme: Electronics & Communication Engineering (NBA Accredited)

Scheme of Instructions: Third Year B.Tech. in Electronics & Communication Engineering

Semester-V



Sr. No.	Course Category	Course Code	Course Title	T/P	Contact Hours			Credits	Exam Scheme			ESE Duration (Hours)	Total Marks
					L	P	Hrs.		CT/IA	CA	ESE		
1	PCC	BEC43501	Integrated Communication System	T	4	-	4	4	30	10	60	3	100
2	PCC	BEC43502	Digital Signal Processing	T	4	-	4	4	30	10	60	3	100
3	PEC	BEC43507-09	Program Elective-I	T	4	-	4	4	30	10	60	3	100
4	MDM	EE43610	Control System	T	4	-	4	4	30	10	60	3	100
5	OEC	BEC43503	OE-III- Internet of Things	T	2	-	2	2	14	06	30	2	50
6	PCC	BEC43504	Integrated Communication System Lab	P	-	2	2	1	-	25	25	2	50
7	PCC	BEC43505	Digital Signal Processing Lab	P	-	2	2	1	-	25	25	2	50
8	PCC	BEC43506	Internet of Things Lab	P	-	4	4	2	-	50	50	2	100
Total				-	18	8	26	22	134	146	370	20	650

Course Category	BSC/ESC (Basic Science Course/Engineering Science Course.)	PCC (Programme Core courses)	PEC (Programme Elective courses)	OEC (Open Elective Course)	Multi-disciplinary courses	VSEC (Skill Course)	VEC (Value Education Courses)	Humanities Social Science & Management		Experiential Learning Courses	CC (Liberal Learning Courses)	VAC (Value added Course)
								AEC (Ability Enhancement Course)	IKS (Indian Knowledge System)			
Credits	-	12	4	2	4	-	-	-	-	1	-	-
Cumulative Sum	16/13	33	4	8	8	6	2	10	3	4	2	

PROGRESSIVE TOTAL CREDITS: 84+22=106

				June, 2026	1.00	Applicable for AY 2026-27
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SCHEME OF INSTRUCTIONS & SYLLABI

Programme: Electronics & Communication Engineering (NBA Accredited)

Scheme of Instructions: Third Year B.Tech. in Electronics & Communication Engineering

Semester-VI



Sr. No.	Course Category	Course Code	Course Title	T/P	Contact Hours			Credits	Exam Scheme			ESE Duration (Hours)	Total Marks
					L	P	Hrs.		CT/IA	CA	ESE		
1	PCC	BEC43601	Microcontroller & Embedded System	T	3	-	3	3	30	10	60	3	100
2	PCC	BEC43602	Electromagnetic Field & Antenna	T	3	-	3	3	30	10	60	3	100
3	MDM	BEE43613	Power Electronics	T	2	-	2	2	14	06	30	2	50
4	PCC	BEC43603	Microcontroller & Embedded System Lab	P	-	2	2	1	-	25	25	2	50
5	PCC	BEC43604	Power Electronics Lab	P	-	2	2	1	-	25	25	2	50
6	VSEC	BEC43605	Applied Skill Module	P	-	4	4	2	-	50	50	2	100
7	PEC	BEC43606-08	Professional Elective-II	T	4	-	4	4	30	10	60	3	100
8	PEC	BEC43609-11	Professional Elective-III	T	4	-	4	4	30	10	60	3	100
9	Project	BEC43612	Project (Mini Project)	P	-	2	2	1	-	25	25	2	50
Total				-	16	2	26	21	134	171	395	22	700

Course Category	BSC/ESC (Basic Science Course/Engineering Science Course.)	PCC (Programme Core courses)	PEC (Programme Elective courses)	OEC (Open Elective Course)	Multi-disciplinary courses	VSEC (Skill Course)	VEC (Value Education Courses)	Humanities Social Science & Management		Experiential Learning Courses	CC (Liberal Learning Courses)	VAC (Value added Course)
								AEC (Ability Enhancement Course)	IKS (Indian Knowledge System)			
Credits	-	8	8	-	2	2	-	-	-	1	-	-
Cumulative Sum	16/13	42	12	8	10	8	2	10	10	4	4	2

PROGRESSIVE TOTAL CREDITS: 106+21=127

				June, 2026	1.00	Applicable for AY 2026-27
Chairperson	Vice-Principal / Director Academics	Director (Administration)	Principal	Date of Release	Version	



Tulsiramji Gaikwad-Patil College of Engineering & Technology, Nagpur

(An Autonomous Institution Affiliated to RTM Nagpur University, Nagpur)

SCHEME OF INSTRUCTIONS & SYLLABI

Programme: Electronics & Communication Engineering (NBA Accredited)

Scheme of Instructions: Final Year B.Tech. in Electronics & Communication Engineering
Semester-VII



Sr. No.	Course Category	Course Code	Course Title	T/P	Contact Hours			Credits	Exam Scheme			ESE Duration (Hours)	Total Marks
					L	P	Hrs.		CT/IA	CA	ESE		
1	PCC	BEC44701	Mobile Communication & Networks	T	4	-	4	4	30	10	60	3	100
2	PCC	BEC44702	VLSI Design	T	3	-	3	3	30	10	60	3	100
3	PCC	BEC44703	VLSI Design Lab	P	-	2	2	1	-	25	25	2	50
4	PEC	BEC44704-06	Professional Elective - IV	T	4	-	4	4	30	10	60	3	100
5	PEC	BEC44707-09	Professional Elective - V	T	4	-	4	4	30	10	60	3	100
6	Project	BEC44710	Project (Major Project)	P	-	6	6	3	-	50	50	2	100
7	MDM	BME44711	Automation & Intelligent Robotics	T	3	-	3	3	30	10	60	3	100
8	MDM	BME44712	Automation & Intelligent Robotics Lab	p	-	2	2	1	-	25	25	2	50
Total				-	18	10	28	23	150	150	400	17	700

Course Category	BSC/ESC (Basic Science Course/Engineering Science Course.)	PCC (Programme Core courses)	PEC (Programme Elective courses)	OEC (Open Elective Course)	Multi-disciplinary courses	VSEC (Skill Course)	VEC (Value Education Courses)	Humanities Social Science & Management		Experiential Learning Courses	CC (Liberal Learning Courses)	VAC (Value added Course)
								AEC (Ability Enhancement Course)	IKS (Indian Knowledge System)			
Credits	-	8	8	-	4	-	-	-	-	3	-	-
Cumulative Sum	16/13	50	20	8	14	8	2	10	7	4	2	

PROGRESSIVE TOTAL CREDITS: 127+23=150

				June, 2026	1.00	Applicable for AY 2026-27
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SCHEME OF INSTRUCTIONS & SYLLABI

Programme: Electronics & Communication Engineering (NBA Accredited)

Scheme of Instructions: Final Year B.Tech. in Electronics & Communication Engineering




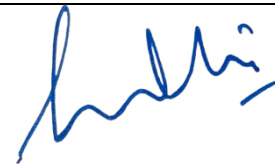
Semester-VIII



Sr. No.	Course Category	Course Code	Course Title	T/P	Contact Hours			Credits	Exam Scheme			ESE Duration (Hours)	Total Marks
					L	P	Hrs.		CT/IA	CA	ESE		
1	RM	BEC44801	Research Methodology (Online)	T	4	-	4	4	-	25	75	3	100
3	Project	BEC44802	Internship	P	-	24	24	12	-	150	150	3	300
Total				-	8	24	32	16	-	200	300	9	500

Course Category	BSC/ESC (Basic Science Course/Engineering Science Course.)	PCC (Programme Core courses)	PEC (Programme Elective courses)	OEC (Open Elective Course)	Multi-disciplinary courses	VSEC (Skill Course)	VEC (Value Education Courses)	Humanities Social Science & Management		Experiential Learning Courses	CC (Liberal Learning Courses)	VAC (Value added Course)
								AEC (Ability Enhancement Course)	IKS (Indian Knowledge System)			
Credits	-	-	-	-	-	-	-	-	-	16	-	-
Cumulative Sum	16/13	50	20	8	14	8	2	10	10	23	4	2

PROGRESSIVE TOTAL CREDITS: 150+16=166

				June, 2026	1.00	Applicable for AY 2026-27
Chairperson	Vice-Principal / Director Academics	Director (Administration)	Principal	Date of Release	Version	



Tulsiramji Gaikwad-Patil College of Engineering & Technology, Nagpur

(An Autonomous Institution Affiliated to RTM Nagpur University, Nagpur)

SCHEME OF INSTRUCTIONS & SYLLABI

Program: Electronics & Communication Engineering (NBA Accredited)

List of Electives offered by

Electronics & Communication Engineering



Track Name	Course Code	Professional Elective- I	Course Code	Professional Elective- II	Course Code	Professional Elective- III
		Semester V		Semester VI		Semester VI
Communication	BEC43507	Optical Communication	BEC43606	Mobile Communication	BEC43609	Satellite Communication
Image Processing	BEC43508	Digital Image Processing	BEC43607	Speech & Video Processing	BEC43610	Machine learning for Image Processing
Industrial Automation	BEC43509	Industrial Instrumentation	BEC43608	PLC Fundamentals	BEC43611	SCADA

Course Code	Professional Elective- IV	Course Code	Professional Elective-V
	Semester VII		Semester VII
BEC44704	Advance Wireless Communication	BEC44707	AI-Based Network Security
BEC44705	Deep learning for Computer Vision	BEC44708	Biomedical Image Processing
BEC44706	Robotics Engineering	BEC44709	Automation with AI & ML

List of Open Electives offered by Electronics & Communication Engineering

Course Code	Subject
BEC42303 (OE-I)	Principles of Electronics & Communication
BEC42403 (OE-II)	Digital System & Microprocessor
BEC43503 (OE-III)	Internet of Things