



ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ
ವಿಜ್ಞಾನ ಅಧಿನಿಯಮ ಗಳಾಗಳ ಅಧಿಯಲ್ಲಿ ಕನಾರ್ಫಿಕ್ ಸಾರ್ಕಾರದಿಂದ ಸ್ಥಾಪಿತವಾದ ರಾಜ್ಯವಿಶ್ವವಿದ್ಯಾಲಯ
VISVESVARAYA TECHNOLOGICAL UNIVERSITY
State University of Government of Karnataka Established as per the VTU Act, 1994 "JnanaSangama" Belagavi-590018, Karnataka, India



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REGISTRAR

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REF: VTU/BGM/879/CVFeedback/2025-26/ 5062
CIRCULAR

DATE:

26 DEC 2025

To

The Principals / Heads of Department,
Electrical & Electronics Engineering Departments,
All Affiliated Colleges of VTU.

Subject: Request for Feedback on Draft scheme of 3-8 semester Electrical & Electronics Engineering
Reference: Chairperson's email dated: 24.12.2025

Dear Sir/Madam,

The Board of Studies in Electrical & Electronics Engineering of Visvesvaraya Technological University (VTU), Belagavi has prepared the draft Scheme (3-8 sem) of Teaching and Examination for the undergraduate programme Electrical & Electronics Engineering programs.

The University seeks constructive feedback from faculty members of all affiliated colleges. Your insights and suggestions will be invaluable in refining the schemes to ensure they meet contemporary academic standards, industry requirements, and the evolving needs of students.

You are kindly requested to:

- Review the draft schemes thoroughly.
- Provide specific comments, suggestions, or recommendations regarding the structure, content, and examination framework.
- Submit consolidated feedback from your institution to the University by 03.01.2026

Feedback may be sent electronically to [sbhvtuso2022@gmail.com] or in hard copy to the undersigned.

We sincerely appreciate your cooperation and contribution in this academic exercise. Your active participation will help us strengthen the teaching-learning process and uphold the quality benchmarks of VTU.

Thank you for your support.

Sd/-

Registrar

To,

1. The Principals of all Affiliated Autonomous/Non-Autonomous/Constituent Engineering Colleges under the ambit of the university
2. The Chairpersons/ Programme Coordinator, University Departments at Kalaburgi, Mysuru, and Bengaluru(Muddenhalli)

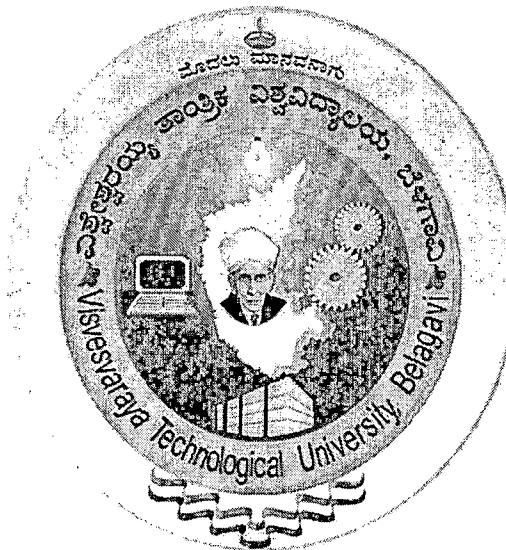
Copy to:

- The Hon'ble Vice-Chancellor, through the Secretary to the VC, for information
- The Dean, Faculty of Engineering, VTU, & Chairperson BoS in EEE VTU, Belagavi for information
- The Registrar (Evaluation) for information
- The Director ITI SMU, VTU Belagavi, for information and request to make the arrangement to upload the circular on VTU's web portal
- Office file

Ram/26/12/25
REGISTRAR

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

Jnana Sangam, Machhe, Belagavi-590018



Scheme of Teaching and Examinations 2025

Outcome-Based Education (OBE) and Choice-Based Credit System (CBCS)
(Effective from the academic year 2025-26)

B.E. in Electrical and Electronics Engineering Scheme of Teaching and Examinations 2025 Outcome-Based Education (OBE) and Choice-Based Credit System (CBCS) (Effective from the academic year 2025-26)																				
III SEMESTER																				
Sl. No	Course	Course Code	Course Title	Teaching Department (TD), Question Paper Setting Board (PSB), and Examining department /body	Teaching Hours /Week				Examination				Credits							
					L	T	P	SL	Duration in hours	CIE Marks	SEE Marks	Total Marks								
1	ASC	1BMAT301	Program Specific Mathematics	Mathematics	3	2	0	-	3	50	50	100	4							
2	IPCC	1BXX302	Analog and Digital Electronic Circuits	EEE	3	0	2	-	3	50	50	100	4							
3	PCC	1BXX303	Electric Circuit Analysis	EEE	4	0	0	-	3	50	50	100	4							
4	PCC	1BXX304	Transformers and Generators	EEE	3	0	0	-	3	50	50	100	3							
5	PCC	1BXX305	Electric Power Generation and Economics	EEE	3	0	0	-	3	50	50	100	3							
6	PCCL	1BXXL306	Transformers and Generators lab	EEE	0	0	2	-	2	50	50	100	1							
7	AEC	1BXXL307x	Ability Enhancement Course Laboratory	EEE	0	0	2	-	2	50	50	100	1							
8	SDC	1BCP308	Community Project (Project-Based Learning)	EEE	0	0	0	2	2	50	50	100	1							
9	NCMC	1BNSS309	National Service Scheme (NSS)	Concerned campus Staff. (CIE by Viva-Voce & Demonstration)	NSS coordinator		0	0	2	--	100	---	PP							
		1BPE309	Physical Education (PE) (Sports and Athletics)		Physical Education Director															
		1BYOG309	Yoga		Yoga Teacher															
		1BMUK309	Music		Music Teacher															
10	NCMC	1BMATDIP310	Mathematics course for Lateral Entry Students	TD -Maths Dept/ VTU Online (COE). CIE by VTU online COE	3	0	0	3	3	100	---	100	PP							
										Total	500/ 600	400	900/ 1000	21						
Ability Enhancement Course (Laboratory)																				
1BxxL307A	Multisim /PSpice Lab for Circuit Analysis			1BxxL307C	Python Programming															
1BxxL307B	Transducers and Sensors Lab			1Bxx307D	Electrical Measurements Lab															

B.E. in Electrical and Electronics Engineering Scheme of Teaching and Examinations-2025																		
Outcome-Based Education (OBE) and Choice-Based Credit System (CBCS) (Effective from the academic year 2025-26)																		
IV SEMESTER																		
Sl. No	Course and Course Code		Course Title	Teaching Department (TD), Question Paper Setting Board (PSB), and Examining department /body	Teaching Hours /Week				Examination				Credits					
					Theory Lecture	Tutorial	Practical/ Drawing	Self- Learning	Duration in hours	CIE Marks	SEE Marks	Total Marks						
					L	T	P	SL										
1	PCC	1BXX401	Electric Motors	EEE	3	0	0		3	50	50	100	3					
2	IPCC	1BXX402	Microcontroller	EEE	3	0	2		3	50	50	100	4					
3	PCC	1BXX403	Field Theory	EEE	4	0	0		3	50	50	100	4					
4	PCC	1BXX404	Transmission and Distribution	EEE	3	0	0		3	50	50	100	3					
5	PCCL	1BXXL405	Electric Motors Lab	EEE	0	0	2		2	50	50	100	1					
6	AEC	1BxxL406	Ability Enhancement Course Laboratory	EEE	0	0	2		2	50	50	100	1					
7	BSC	1Bxx407	Programme Specific Biology	EEE	2	0	0		3	50	50	100	2					
8	SDC	1BEP408	Environmental Science Project	EEE	0	0	0	2	3	50	50	100	1					
9	NCMC	1BNSK409	National Service Scheme (NSS)	Concerned campus Staff. (CIE by Viva-Voce & demonstration)	NSS coordinator			0	100	---	100	PP						
		1BPEK409	Physical Education (PE) (Sports and Athletics)		Physical Education Director													
		1BYOK409	Yoga		Yoga Teacher													
		1BMUS409	Music		Music Teacher													
10	NCMC	1BMATDIP410	Mathematics course for Lateral Entry Students	TD -Maths Dept/ VTU Online (COE). CIE by VTU online COE					--	100	--	100	PP					
										Total	500/ 600	400	900/ 1000	19				
Ability Enhancement Course (Laboratory) 1BxxL406x																		
1BxxL406A	Audino, ARM & Raspberry PI Based Projects			1BxxL406C	Electrical Drawing (CAD)													
1BxxL406B	Java Programming			1BxxL406D	Printed Circuit Board (PCB) Design Lab													

B.E. in Electrical and Electronics Engineering Scheme of Teaching and Examinations 2025 Outcome-Based Education (OBE) and Choice-Based Credit System (CBCS) (Effective from the academic year 2025-26)														
V SEMESTER														
Sl. No	Course and Course Code	Course Title	Teaching Department (TD), Question Paper Setting Board (PSB), and Examining department /body	Teaching Hours /Week				Examination				Credits		
				Theory Lecture L	Tutorial T	Practical/ Drawing P	Self- Learning SL	Duration in hours	CIE Marks	SEE Marks	Total Marks			
1	HSMC	1BXX501	Engineering Management and Entrepreneurship	EEE	3	0	0		3	50	50	100	3	
2	IPCC	1BXX502	Signals and DSP	EEE	3	0	2		3	50	50	100	4	
3	PCC	1BXX503	Power Electronics	EEE	3	0	0		3	50	50	100	3	
4	PCC	1BXX504	Op-Amp and LIC	EEE	3	0	0		3	50	50	100	3	
5	PEC	1BXX505x	Professional Elective Course-I	EEE	3	0	0		3	50	50	100	3	
6	BSC	1BRM506	Research Methodology and IPR (Online)	VTU online CoE CIE and SEE by COE	2	0	0	0	02	50	50	100	2	
7	PCCL	1BxxL507	Power Electronics Lab	EEE	0	0	2	0	02	50	50	100	1	
8	SDC	1BXX508	Hackathon-Based Project	CIE: EEE SEE: Evaluation by industry experts	0	0	0	2	--	50	50	100	2	
										Total	400	400	800	21
Professional Elective Course-I														
1BXX505A	High Voltage Engineering			1BXX505C	Electric Vehicle Fundamentals									
1BXX505B	IOT and Embedded systems			1BXX505D	Programmable Logic Controllers									

B.E. in Electrical and Electronics Engineering Scheme of Teaching and Examinations-2025														
Outcome-Based Education (OBE) and Choice-Based Credit System (CBCS) (Effective from the academic year 2025-26)														
VI SEMESTER														
Sl. No	Course and Course Code		Course Title	Teaching Department (TD), Question Paper Setting Board (PSB), and Examining department /body	Teaching Hours /Week				Examination				Credits	
					Theory lecture	Tutorial	Practical/ Drawing	Self- Learning	Duration in hours	CIE Marks	SEE Marks	Total Marks		
1	IPCC	1BXX601	Power system Analysis - I	EEE	3	0	2		3	50	50	100	4	
2	PCC	1BXX602	Control Systems	EEE	3	0	0		3	50	50	100	3	
3	PCC	1BXX603	Electric Vehicle Fundamentals	EEE	3	0	0		3	50	50	100	3	
4	PCC	1Bxx604	Switchgear and Protection	EEE	3	0	0		3	50	50	100	3	
5	PEC	1BXX605x	Professional Elective Courses-II	EEE	3	0	0		3	50	50	100	3	
6	PCCL	1BxxL606	Control Systems lab	EEE	0	0	2	0	2	50	50	100	1	
7	AEC	1BxxL607x	Ability Enhancement Course Laboratory	EEE	0	0	2	0	2	50	50	100	1	
8	SDC	1BXX608	Capstone Project - Phase I	EEE + concerned interdisciplinary staff/s, if any.	0	0	0	6	3	100	--	100	3	
9	NCMC	1Bxx609	Universal Human Value (VTU ONLINE Course)	CIE: By VTU online COE	1	0	0	0		100	---	100	PP	
										Total	550	350	900	21
Professional Elective Course-II														
1BXX605A	Industrial Utilization of Electrical Power			1BXX605C	Cyber Security									
1BXX605B	Fundamentals of VLSI			1BXX605D	Drone Technology									
Ability Enhancement Course Laboratory														
1BxxL607A	Programmable Logic Controllers Lab			1BxxL607C	IOT and Embedded systems Lab									
1BxxL607B	Protection and High Voltage Lab			1BxxL607D	Cyber Security Lab									

B.E. in Electrical and Electronics Engineering Scheme of Teaching and Examinations 2025														
Outcome-Based Education (OBE) and Choice-Based Credit System (CBCS) (Effective from the academic year 2025-26)														
Sl. No	Course and Course Code		Course Title	Teaching Department(TD), Question Paper Setting Board (PSB), and Examining department /body	Teaching Hours /Week				Examination				Credits	
					L	T	P	SL						
1	IPCC	1BXX701	Power system analysis- II		EEE	3	0	2		3	50	50	100	4
2	PEC	1BXX702x	Professional Elective Course-III		EEE	3	0	0		3	50	50	100	3
3	PEC	1BXX703x	Professional Elective Course -IV		EEE	3	0	0		3	50	50	100	3
4	OEC	1BXX704x	Open Elective Course-I		EEE	3	0	0		3	50	50	100	3
5	SDC	1BXX705	Capstone Project - Phase-II	EEE + concerned interdisciplinary staff/s, if any.	0	0	0	14	3	100	100	200	7	
6	NCMC	1BIKS706	Indian Knowledge System (VTU online Course)	VTU Online CoE, CIE: By COE	1	0	0	0	---	100	-	100	PP	
										Total	400	300	700	20
Professional Elective Course-III														
1Bxx702A	Power System Operation and Control			1Bxx702C	AI Applications to Power System									
1Bxx702B	Flexible AC Transmission Systems (FACTS)			1Bxx702D	Motors for Electric Vehicles									
Professional Elective Course-IV														
1BXX703A	EHVDC and EHVAC Transmission Systems			1BXX703C	Battery Management in Electric Vehicles									
1BXX703B	AI Applications to EVs			1BXX703D	Verilog and VHDL									
Open Elective Course-I														
1BXX704A	Renewable Energy Sources			1BXX704C	Energy Audit and Conservation									
1BXX704B	Utilization Of Electrical Power			1BXX704D	Foreign Language (NPTEL/SWAYAM/online VTU)									

B.E. in Electrical and Electronics Engineering
Scheme of Teaching and Examinations 2025

Outcome-Based Education (OBE) and Choice-Based Credit System (CBCS) (Effective from the academic year 2025-26)

VIII SEMESTER (Swappable VII and VIII SEMESTER) (SCHEME-A)

Sl. No	Course and Course Code	Course Title	Teaching Department (TD), Question Paper Setting Board (PSB), and Examining department /body	Teaching Hours /Week				Examination			Credits		
				Theory Lecture	Tutorial	Practical/ Drawing	Self-Learning	Duration in hours	CIE Marks	SEE Marks	Total Marks		
				L	T	P	SL						
1	PEC	1Bxx801x	Professional Elective-V (NPTEL/VTU Online Course)	Online Evaluation				As per the online platform norms	3	50	50	100	3
2	OEC	1Bxx802x	Open Elective-II (NPTEL/VTU Online Course)						3	50	50	100	3
3	SDC	1Bxx803x	Internship (15 weeks or 90 working days)	Viva-Voce EEE + participating Industry expert/s, if any.	--	--	--	3	100	100	200	12	
								Total	200	200	400	18	

Professional Elective Course (Online courses)-V

1Bxx801A	NPTEL/VTU Online Course	1Bxx801C	NPTEL/VTU Online Course
1Bxx801B	NPTEL/VTU Online Course	1Bxx801D	NPTEL/VTU Online Course
Open Elective Courses -II (Online Courses)			
1Bxx802A	NPTEL/VTU Online Course	1Bxx802C	NPTEL/VTU Online Course
1Bxx802B	NPTEL/VTU Online Course	1Bxx802D	Foreign Language (NPTEL/SWAYAM/online VTU)

Types of Internships (Course Code: 1Bxx803x)

Students shall undertake one of the following internship types during the eighth semester, as per academic guidelines:

- 1Bxx803A – **Industry Internship:** Shall involve practical exposure and training within an industrial or corporate setting.
- 1Bxx803B – **Research Internship:** Shall focus on academic or applied research under the guidance of faculty or research institutions.
- 1Bxx803C – **Post-Placement Internship:** Shall be undertaken by students who have secured placement, aligning with their future employment domain.
- 1Bxx803D – **Societal Internship:** Shall engage students in community-based or social impact projects with NGOs, government bodies, or civic organizations.
- 1Bxx803E – **Online Internship:** Shall be conducted through recognized digital platforms offering structured internship modules.
- 1Bxx803F – **Skill Enhancement Internship:** Shall be opted by students unable to secure internships, offering credit equivalence through curated online courses available at <http://www.online.vtu.ac.in>

To ensure uniformity, quality, and transparency in the internship process, VTU has launched a centralized web portal that serves as a single platform for all internship opportunities. Reputed industries, Centres of Excellence, Research Laboratories, and other recognized bodies will be registered on this portal. Students must choose internships exclusively through this portal. No other mode of internship selection will be permitted.

B.E. in Electrical and Electronics Engineering Scheme of Teaching and Examinations 2025															
Outcome-Based Education (OBE) and Choice-Based Credit System (CBCS) (Effective from the academic year 2025-26)															
VII and VIII semesters for the candidates who opt for a two-semesters internship along with Capstone Project (Scheme B)															
Sl. No	Course and Course Code	Course Title	Teaching Department(TD), Question Paper Setting Board (PSB), and Examining department /body	Teaching Hours /Week					Examination					Credits	
				Theory Lecture	Tutorial	Practical/ Drawing	Self- Learning								
1	IPCC	1BXX701	To be completed by registering for the course in the Summer Semester, after 6 th semester	EEE	3	0	2		3	50	50	100	4		
2	PEC	1BXX702x	Professional Elective Course-III (NPTEL/VTU Online Course)	Online Evaluation	As per the online platform norms					--	50	50	100	3	
3	PEC	1BXX703x	Professional Elective Course-IV (NPTEL/VTU Online Course)	Online Evaluation						--	50	50	100	3	
4	OEC	1BXX704x	Open Elective Course (NPTEL/VTU Online course)-I	Online Evaluation						---	50	50	100	3	
5	SDC	1BXX705	Capstone Project - Phase-II	EEE + concerned interdisciplinary staff, if any.	--	--	--	--	3	100	100	200	7		
6	NCMC	1BIKS706	Indian Knowledge System (VTU online)	Online Evaluation	1	0	0	0	--	100	—	100	PP		
										Total	400	300	700	20	
1	PEC	1Bxx801x	Professional Elective-V (NPTEL/VTU Online Course)	Online Evaluation	As per the online platform norms					---	50	50	100	3	
2	OEC	1Bxx802x	Open Elective-II (NPTEL/VTU Online Course)	Online Evaluation						---	50	50	100	3	
3	SDC	1Bxx803x	Internship (Two- semester internship for a minimum Period of 180 working days or -30 weeks)	Viva-Voce EEE + participating Industry expert/s, if any.	--	--	--	--	3	50	50	100	12		
										Total	150	150	300	18	
					7 th semester and 8 th semester Credits Total										
					38										

NPTEL/VTU Online Professional Elective Course - III			
1Bxx703A	NPTEL/VTU Online Courses	1Bxx703C	NPTEL/VTU Online Courses
1Bxx703B	NPTEL/VTU Online Courses	1Bxx704D	NPTEL/VTU Online Courses
NPTEL/VTU Online Open Elective Courses - I			
1Bxx704A	NPTEL/VTU Online Courses	1Bxx704C	NPTEL/VTU Online Courses
1Bxx704B	NPTEL/VTU Online Courses	1Bxx704D	NPTEL/VTU Online Courses
NPTEL/VTU Online Professional Elective Course (Online Courses)-IV			
1Bxx801A	NPTEL/VTU Online Courses	1Bxx801C	NPTEL/VTU Online Courses
1Bxx801B	NPTEL/VTU Online Courses	1Bxx801D	NPTEL/VTU Online Courses
NPTEL/VTU Online Open Elective Courses (Online Courses)-III			
1Bxx802A	NPTEL/VTU Online Courses	1Bxx802C	NPTEL/VTU Online Courses
1Bxx802B	NPTEL/VTU Online Courses	1Bxx802D	Foreign Language (NPTEL/MOOC/online VTU)

Types of Internships (Course Code: 1Bxx803)

Students shall undertake one of the following internship types during the eighth semester, as per academic guidelines:

- 1 **1Bxx803A – Industry Internship:** Shall involve practical exposure and training within an industrial or corporate setting.
- 2 **1Bxx803B – Research Internship:** Shall focus on academic or applied research under the guidance of faculty or research institutions.
- 3 **1Bxx803C – Post-Placement Internship:** Shall be undertaken by students who have secured placement, aligning with their future employment domain.
- 4 **1Bxx803D – Societal Internship:** Shall engage students in community-based or social impact projects with NGOs, government bodies, or civic organizations.
- 5 **1Bxx803E – Online Internship:** Shall be conducted through recognized digital platforms offering structured internship modules.
- 6 **1Bxx803F – Skill Enhancement Courses (SEC):** Shall be opted by students unable to secure internships, offering credit equivalence through curated online courses available at <http://www.online.vtu.ac.in>

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