



ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ  
ವಿಟಿಯು ಅಧಿನಿಯಮ ೧೯೯೪ರ ಅಡಿಯಲ್ಲಿ ಕರ್ನಾಟಕ ಸರ್ಕಾರದಿಂದ ಸ್ಥಾಪಿತವಾದ ರಾಜ್ಯವಿಶ್ವವಿದ್ಯಾಲಯ  
**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**  
State University of Government of Karnataka Established as per the VTU Act, 1994 "JnanaSangama" Belagavi-590018, Karnataka, India



**Dr. Prasad B. Rampure , M.E., Ph.D**  
REGISTRAR

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

DATE:

26 DEC 2025

CIRCULAR

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

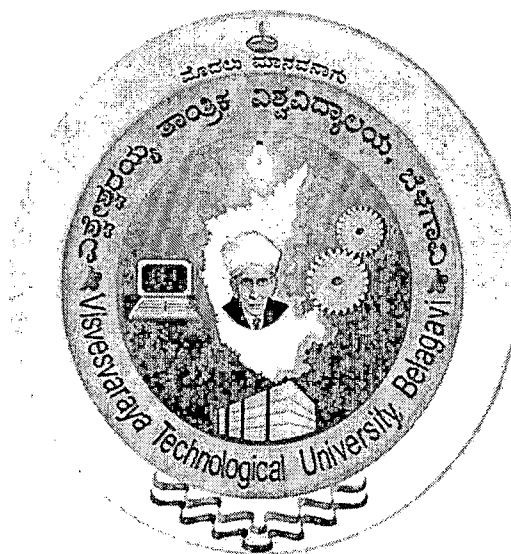
*Rampure*/26/12/25

REGISTRAR

*[Signature]*

# 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)

V3/HB/KM/Dean/ Overview of Courses, Credits, Projects, and Internships under VTU Curriculum-Details are listed on page number 11 (onwards)

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	
						Theory Lecture	Tutorial	Practical/ Drawing	Self- Learning	Duration in hours	CIE Marks	SEE Marks	Total Marks		
						L	T	P	SL						
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	---	100	PP	
		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		1BxxL307D		Electrical Measurements Lab									

V3/HB/KM/Dean/ Overview of Courses, Credits, Projects, and Internships under VTU Curriculum-Details are listed on page number 11 (onwards)

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	0	2		--	100	---	100	PP
		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	Tutorial	Practical/ Drawing	Self - Learning	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	
					L	T	P	SL					
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)													
VII 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	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
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)	Online Evaluation					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:														
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 Internship: Shall be opted by students unable to secure internships, offering credit equivalence through curated online courses available at <a href="http://www.online.vtu.ac.in">http:// www.online.vtu.ac.in</a>														
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>B.E. in Electrical and Electronics Engineering</b> <b>Scheme of Teaching and Examinations 2025</b> 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	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P	SL					
1	IPCC	1BXX701	To be completed by registering for the course in the Summer Semester, after 6 <sup>th</sup> 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
									<b>Total</b>	<b>400</b>	<b>300</b>	<b>700</b>	<b>20</b>
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
									<b>Total</b>	<b>150</b>	<b>150</b>	<b>300</b>	<b>18</b>
<b>7<sup>th</sup> semester and 8<sup>th</sup> semester Credits Total</b>													<b>38</b>

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)
<b>Types of Internships (Course Code: 1Bxx803)</b> Students shall undertake one of the following internship types during the eighth semester, as per academic guidelines: <ol style="list-style-type: none"> <li><b>1Bxx803A – Industry Internship:</b> Shall involve practical exposure and training within an industrial or corporate setting.</li> <li><b>1Bxx803B – Research Internship:</b> Shall focus on academic or applied research under the guidance of faculty or research institutions.</li> <li><b>1Bxx803C – Post-Placement Internship:</b> Shall be undertaken by students who have secured placement, aligning with their future employment domain.</li> <li><b>1Bxx803D – Societal Internship:</b> Shall engage students in community-based or social impact projects with NGOs, government bodies, or civic organizations.</li> <li><b>1Bxx803E – Online Internship:</b> Shall be conducted through recognized digital platforms offering structured internship modules.</li> <li><b>1Bxx803F – Skill Enhancement Courses (SEC):</b> Shall be opted by students unable to secure internships, offering credit equivalence through curated online courses available at <a href="http://www.online.vtu.ac.in">http:// www.online.vtu.ac.in</a></li> </ol> To ensure uniformity, quality, and transparency in the internship process, VTU has launched a <b>centralized web portal</b> that serves as a <b>single platform</b> for all internship opportunities. Reputed industries, Centres of Excellence, Research Laboratories, and other recognized bodies will be registered on this portal. <b>Students must choose internships exclusively through this portal. No other mode of internship selection will be permitted.</b>			

