ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ
("ವಿ ಟ ಯು ಅಧಿನಿಯಮ 1994"ರ ಅಡಿಯಲ್ಲಿ ಕರ್ನಾಟಕ ಸರ್ಕಾರದಿಂದ ಸ್ಥಾಪಿತವಾದ ರಾಜ್ಯ ವಿಶ್ವವಿದ್ಯಾಲಯ)
VISVESVARAYA TECHNOLOGICAL UNIVERSITY
(State University of Government of Karnataka Established as per the VTU Act, 1994)
Phone : 0831-2498100 / 2405
Fax : 0831-2405467
Email : registrar@vtu.ac.in
Web : https://vtu.ac.in

Prof. B. E. Rangaswamy, Ph.D
REGISTRAR

REF: VTU/BGM/BOS/PG Scheme 2022/2024-25/ 774
Date: 21 MAY 2024

NOTIFICATION

Sir,

Subject: **The 2022 scheme's 4th Semester AEC's SEE Details** regarding...

Reference: VTU/BGM/BOS/AEC-SEE Details/AY2023-24/6884, Dated: 26.03.2024.
VTU/BGM/.../2024-25/601, Dated: 11.05.2024

Annexure I and II, which are attached, include information about the **fourth-semester** Ability Enhancement Courses' SEE (Semester End Examinations) details for the 2022 Scheme.

This notice serves as an official notice to all principals of engineering colleges under the purview of the university, to instruct all teachers concerned to strictly adhere to the course type and SEE details as listed in Annexure I and II.

Please take note that principals have until May 23, 2024, to email the undersigned a scanned copy of the notification that has been signed by every teacher concerned.

Encl: Annexure-I and II

Sd/-
REGISTRAR

To,

1. **The Principals of Affiliated, Constituent Engineering Colleges under the ambit of the university**
2. **The Chairpersons/Program coordinators of the University departments at Kalaburgi, Belagavi, Mysuru, and Bengaluru**
3. **The Director, ITI SMU VTU Belagavi**

Copy to.

1. To the Hon'ble Vice-Chancellor through the secretary to VC, VTU Belagavi for information
2. The Registrar(Evaluation) VTU Belagavi for information and needful
3. The Special Officer(QPDS) for information and needful
4. The Director, ITI SMU, VTU Belagavi for information and arrange for uploading the circular on the VTU web portal
5. The Special Officer Academic Section VTU Belagavi
6. Office Copy

21/05/24
REGISTRAR

2022 SCHEME

Annexure-I

Ability Enhancement Course / Skill Enhancement Course 2022 SCHEME

4th SEM

S.NO.	Subject Code in Scheme	Subject Code in Syllabus	To be read as	Subject Tittle	SEE Options	SEE Duration	REMARKS
				Civil Engineering			
1	BVCL456A	BCVL456A	**BVCL456A**	Building Information Modelling In Civil Engineering - Basic	Practical	2 Hour	
2	**BCV456B**	**BCVL456B**	**BCVL456B**	**GIS with Quantum GIS(Lab)**	**Practcal**	**2 Hour**	
3	BCV456C	BCV456C		Electronic Waste Management - Issues and Challenges	MCQ	1 Hour	
4	BCV456D	BCV456D		Technical Writing Skills	MCQ	1 Hour	
				Mining Engineering			
1	BMN456A	BMN456A		Finance for Professionals	MCQ	1 Hour	
2	BMN456B	BMN456B	**BMNL456B**	Programming in Python	Practical	2 Hours	
3	BMN456C	BMN456C	**BMNL456C**	Quantum GIS	Practical	2 Hours	
4	BMN456D	BMN456D		Technical Writing Skills	MCQ	1 Hour	
				Computer Science & Engineering			
1	BCS456A	BCS456A		Green IT and Sustainability	MCQ	1 Hour	
2	BCS456B	BCS456B		Capacity Planning for IT	MCQ	1 Hour	
3	BCS456C	BCS456C		**UI/UX**	MCQ	1 Hour	
4	BCSL456D	BCSL456D		Technical writing using LATEX	Practical	2 Hour	
				Computer Engineering			
1	BCS456A	BCS456A		Green IT and Sustainability	MCQ	1 Hour	
2	BCS456B	BCS456B		Capacity Planning for IT	MCQ	1 Hour	
3	BDSL456C	BDSL456C		MERN (0:0:2)	Practical	2 Hours	
4	BCSL456D	BCSL456D		Technical writing using LATEX (0:0:2)	Practical	2 Hours	
				Artificial Intelligence & Data Science			
1	BDSL456A	BDSL456A		Scala (0:0:2)	Practical	2 Hours	
2	BDSL456B	BDSL456B		MangoDB (0:0:2)	Practical	2 Hours	
3	BDSL456C	BDSL456C		MERN (0:0:2)	Practical	2 Hours	
4	BDSL456D	BDS456D	**BDSL456D**	Julia (0:0:2)	Practical	2 Hours	
				Artificial Intelligence and Machine Learning			
1	BDSL456A	BDSL456A		Scala (0:0:2)	Practical	2 Hours	
2	BDSL456B	BDSL456B		Mango DB (0:0:2)	Practical	2 Hours	
3	BDSL456C	BDSL456C		MERN (0:0:2)	Practical	2 Hours	
4	BDSL456D	BDSL456D	**BDSL456D**	Julia (0:0:2)	Practical	2 Hours	

				Biotechnology		
1	BBT456A	BBT456A		Hydroponics, Aquaponics and Aeroponics	MCQ	1 Hour
2	BBTL456B	BBTL456B		Water Analysis Lab	Practical	2 Hours
3	BBTL456C	BBTL456C		Extraction methods and herbal products lab	Practical	2 Hours
4	BBT456D	BBT456D		Biopesticides and Biofertilizers	MCQ	1 Hour
				Computer & Communication Engineering		
1	BCS456A	BCS456A		Green IT and Sustainability	MCQ	1 Hour
2	BCS456B	BCS456B		Capacity Planning for IT	MCQ	1 Hour
3	BCML456C	BCML456C		System Programming	Practical	2 Hours
4	BCSL456D	BCSL456D		Technical writing using LATEX	Practical	2 Hours
				Computer Science & Business System		
1	BCS456A	BCS456A		Green IT and Sustainability	MCQ	1 Hour
2	BCS456B	BCS456B		Capacity Planning for IT	MCQ	1 Hour
3	BCS456C	BCS456C		**UI/UX**	MCQ	1 Hour
4	BCB456D	BCB456D		Business Communication	MCQ	1 Hour
				Computer Science & Design		
1	BCGL456A	BCS456A	**BCGL456A**	JavaScript and jQuery: Interactive Front-End Web Development	Practical	2 Hours
2	BCGL456B	BCS456B	**BCGL456B**	Responsive Web design with Bootstrap 5.0	Practical	2 Hours
3	BCGL456C	BCS456C	**BCGL456C**	Mobile First Web design with W3.CSS	Practical	2 Hours
4	BCSL456D	BCB456D	**BCSL456D**	Technical writing using LATEX	Practical	2 Hours
				Computer Science & Engineering (IoT)		
1	BCO456A	BCO456A		Data Analytics for IOT	MCQ	1 Hour
2	BCS456B	BCS456B		Capacity Planning for IT	MCQ	1 Hour
3	BDSL456C	BDSL456C		MERN	Practical	2 Hours
4	BCS456D	BCSL456D		Technical writing using LATEX	Practical	2 Hours
				CSE (Artificial Intelligence & Machine Learning)		
1	BDSL456A	BDSL456A		Scala (0:0:2)	Practical	2 Hours
2	BDSL456B	BDSL456B		MangoDB (0:0:2)	Practical	2 Hours
3	BDSL456C	BDSL456C		MERN (0:0:2)	Practical	2 Hours
4	BCSL456D	BCSL456D		Technical writing using LATEX (0:0:2)	Practical	2 Hours
				CSE (Artificial Intelligence)		
1	BDSL456A	BDSL456A		Scala (0:0:2)	Practical	2 Hours
2	BDSL456B	BDSL456B		MangoDB (0:0:2)	Practical	2 Hours
3	BDSL456C	BDSL456C		MERN (0:0:2)	Practical	2 Hours
4	BCSL456D	BCSL456D		Technical writing using LATEX (0:0:2)	Practical	2 Hours

				CSE (Cyber Security)		
1	BCY456A	BCY456A		Workplace security practices	MCQ	1 Hour
2	BCY456B	BCY456B		Managed Detection and Resolution (MDR) in Cyber Security	MCQ	1 Hour
3	BCY456C	BCY456C		Problem management in Cyber Security	MCQ	1 Hour
4	BCSL456D	BCSL456D		Technical writing using LATEX (0:0:2)	Practical	2 Hours
				CSE (Data Science)		
1	BDSL456A	BDSL456A		Scala (0:0:2)	Practical	2 Hours
2	BDSL456B	BDSL456B		MangoDB (0:0:2)	Practical	2 Hours
3	BDSL456C	BDSL456C		MERN (0:0:2)	Practical	2 Hours
4	BDSL456D	BDSL456D		Julia (0:0:2)	Practical	2 Hours
				CSE (IoT & Cyber Security including Block Chain Technology)		
1	BCO456A	BCO456A		Data Analytics for IOT	MCQ	1 Hour
2	BICL456B	BICL456B		Embedded C	Practical	2 Hours
3	BCY456C	BCY456C		Problem Management in Cyber Security	MCQ	1 Hour
4	BCSL456D	BCSL456D		Technical writing using LATEX (0:0:2)	Practical	2 Hours
				Data Science		
1	BDSL456A	BDSL456A		Scala (0:0:2)	Practical	2 Hours
2	BDSL456B	BDSL456B		MangoDB (0:0:2)	Practical	2 Hours
3	BDSL456C	BDSL456C		MERN (0:0:2)	Practical	2 Hours
4	BDSL456D	BDSL456D		Julia (0:0:2)	Practical	2 Hours
				Information Science & Engineering		
1	BCS456A	BCS456A		Green IT and Sustainability	MCQ	1 Hour
2	BCS456B	BCS456B		Capacity Planning for IT	MCQ	1 Hour
3	BCS456C	BCS456C		UI/UX	MCQ	1 Hour
4	BCSL456D	BCSL456D		Technical Writing using LaTeX	Practical	2 Hours
				Computer Science		
1	BCS456A	BCS456A		Green IT and Sustainability	MCQ	1 Hour
2	BCS456B	BCS456B		Capacity Planning for IT	MCQ	1 Hour
3	BCS456C	BCS456C		UI/UX	MCQ	1 Hour
4	BCSL456D	BCSL456D		Technical writing using LATEX (0:0:2)	Practical	2 Hours
				Electronics & Communication Engg		
1	BEC456A	BECL456A		Microcontrollers Lab	Practical	2 Hours

2	BEC456B			Programmable Logic Controllers	MCQ	1 Hopur
3	BEC456C	BECL456C		Octave Programming	Practical	2 Hours
4	BEC456D	BECL456D		Data Structures Lab Using C	Practical	2 Hours
				Biomedical Engineering		
1	BBM456A	BBM456A		Programming in MATLAB	Practical	2 Hours
2	BBM456B	BBM456B		Bioinstrumentation Techniques	MCQ	1 Hours
3	BBM456C	BBM456C		Signal Conditioning Lab using Pspice / MultiSIM	Practical	2 Hours
4	BBM456D	BBM456D		Python Programming for Instrumentation	Practical	3 Hours
				Electrical & Electronics Engineering		
1	BEEL456A	BEE456A		Basics of VHDL Lab	Practical	2 Hours
2	BEEL456B	BEEL456B		Sci Lab / MATLAB for Electrical and Electronic Measurements	Practical	2 Hours
3	BEEL456C	BEEL456C		PCB Design Laboratory	Practical	2 Hours
4	BEEL456D	BEEL456D		Aurdino & Rasberry PI Based Projects	Practical	2 Hours
				Electronics & Instrumentation Engineering		
1	BEI456A	BEI456A		Programming in MATLAB / SCILAB	Practical	2 Hours
2	BEI456B	BEI456B		Virtual Instrumentation using LabView	Practical	2 Hours
3	BEI456C	BEI456C		Python Programming for Instrumentation	Practical	2 Hours
4	BEI456D	BEI456D		Arduino UNO Programming	Practical	2 Hours
				Electronics & Telecommunication Engg		
1	BEC456A	BECL456A		Microcontrollers Lab	Practical	2 Hours
2	BEC456B	BEC456B		Programmable Logic Controllers (PLC)	MCQ	1 Hopur
3	BEC456C	BECL456C		Octave Programming	Practical	2 Hours
4	BEC456D	BECL456D		Data Structures Lab Using C	Practical	2 Hours
				Electronics Engg (VLSI Design and Technology)		
1	BVL456A	BVL456A	**BVLL456A**	Microcontroller Lab	Practical	2 Hours
2	BVL456B	BVL456B		Programmimng Logic Controllers	MCQ	1 Hour
3	BVL456C	BVL456C	**BVLL456C**	Octave Programming	Practical	2 Hours
4	BVL456D	BVL456D	**BVLL456D**	Dta Structure Lab using C	Practical	2 Hours
	Electronics and Communication (Advanced Communication Technology)(EA)					
1	BEC456A	BECL456A		Microcontrollers Lab	Practical	2 Hours
2	BEC456B			Programmable Logic Controllers	MCQ	1 Hopur
3	BEC456C	BECL456C		Octave Programming	Practical	2 Hours
4	BEC456D	BECL456D		Data Structures Lab Using C	Practical	2 Hours

Title is missing in Syllabus

Same as ECE Syllabus

				Electronics and Computer Engineering		
1	BUEL456A	BUEL456A		Software Tools and Technologies	Practical	2 Hours
2	BUEL456B	BUE456B	**BUEL456B**	Electronic Circuit Application Lab	Practical	2 Hours
3	BUEL456C	BUEL456C		Introduction to Raspberry Pi	Practical	2 Hours
4	BUEL456D	BUEL456D		Octave /Scilab for Signals	Practical	2 Hours
				Aeronautical Engineering		
1	BAEL456A	BAE456A	**BAEL456A**	Fundamentals on Spreadsheet	Practical	2 Hours
2	BAE456B/ BAS456B			DRONE Pilot Training	MCQ	1 Hour
3	BAE456C			Concept of Augmented Reality	MCQ	1 Hour
4	BAE456D	BAE456A	**BAEL456D**	Introduction to programming with MATLAB and Python	Practical	2 Hours
				Aerospace Engineering		
1	BAS456A	BAS456A	**BASL456A**	Introduction to Programming in Matlab	Practical	2 Hours
2	BAS456B/ BAE456B	BAS456B/ BAE456B		DRONE Pilot Training	MCQ	1 Hour
3	BAS456C	BAS456C		High Temperature and Smart Materials	MCQ	1 Hour
4	BAS456D	BAS456D		Engineering and Society	MCQ	1 Hour
				Agricultural Engineering		
1	BAGL456A	BAGL456A		Simulation and Analysis using Ansys workbench	Practical	2 Hours
2	BAG456B	BAG456B		Economics for Engineers	MCQ	1 Hour
3	BAGL456C	BAGL456C		Introduction to Data Analytics	Practical	2 Hours
4	BAG456D	BAG456D		Human Engineering & Safety	MCQ	1 Hour
				Automation and Robotics		
1						
2				Refer Robotics and Automation Syllabus		
3						
4						
				Automobile Engineering		
1	BAU456A	BAU456A		Theory and Applications of Sensors and Actuators	MCQ	1 Hour
2	BAU456B	BAU456B	**BAUL456B**	MATLAB for Engineers (Lab)	Practical	2 Hours
3	BAU456C	BAU456C		Autonomous vehicles	MCQ	1 Hour
4	BAU456D	BAU456D		Drive Cycles of Electric Vehicles	MCQ	1 Hour
				Chemical Engineering		
1	BCH456A	BCH456A		Data Analytics	MCQ	1 Hours

In Syllabus wrongly writen as Theory (SEE-Practical)

in SEE MCQ wrongly typed

2	BCH456B	BCH456B		Entrepreneurship Development	Theory	2 Hours
3	BCH456C	BCH456C		Basics of Accounting and Taxation	Theory	2 Hours
4	BCH456D	BCH456D		Energy and Environmental Auditing	MCQ	1 Hours
				Industrial & Production Engineering		
1	BIP456A	BIP456A		Essentials of New Product Development	MCQ	1 Hours
2	BIP456B	BIP456B		An overview of Quality Improvement Tools	MCQ	1 Hours
3	BIP456C	BIP456C		Basics of Financial Management	MCQ	1 Hours
4	BIPL456D	BIPL456D		Basics of MATLAB (Laboratory)	Practical	2 hours
				Marine Engineering		
1	BMR456A	BMR456A	**BMRL456A**	Advanced Programming in Python (0-0-2-0)	Practical	2 Hours
2	BMR456B	BMR456B		PLC and SCADA (1:0:0)	MCQ	1 Hour
3	BMR456C	BMR456C		Maritime law (1-0-0-0)	MCQ	1 Hour
4	BMR456D	BMR456D		Fundamentals of Virtual Reality (1-0-0-0)	MCQ	1 Hour
				Mechanical & Smart Manufacturing		
1	BMM456A	BMM456A		Quality Engineering	MCQ	1 Hour
2	BMM456B	BMM456B		Mechanical Design Concepts	MCQ	1 Hour
3	BMM456C	BMM456C		Special Manufacturing Processes	MCQ	1 Hour
4	BMM456D	BMM456D				
				Mechanical Engineering		
1	BME456A	BME456A	**BMEL456A**	Introduction to AI & ML [0-0-2]	Practical	2 Hours
2	BME456B	BME456B		Digital Marketing [0-2-0]	MCQ	1 Hour
3	BME456C	BME456C	**BMEL456C**	Introduction to Data Analytics [0-0-2]	Practical	2 Hours
4	BME456D	BME456D	**BMEL456D**	Introduction to Programming in C++ [0-0-2]	Practical	2 Hours
				Mechatronics		
1	BMT456A	BMT456A	**BMTL456A**	Mechanism Design and Animation (0-0-2)	Practical	2 Hours
2	BMT456B	BMT456B	**BMTL456B**	3-D Printing Technology (0-0-2)	Practical	2 Hours
3	BMT456C	BMT456C	**BMTL456C**	CNC programming and simulation (0-0-2)	Practical	2 Hours
4	BMT456D	BMT456D	**BMTL456D**	IoT (0-0-2)	Practical	2 Hours
				Robotics & Automation		
1	BRA456A	BRA456A		Introduction to AI and ML	MCQ	1 Hour
2	BRA456B	BRA456B	**BRAL456B**	Embedded C Basics	Practical	2 Hours
3	BRA456C	BRA456C		Supervisory Control & Data Acquisition System (SCADA)	MCQ	1 Hour

General Question paper pattern

General Question paper pattern

4	BRA456D	BRA456D	**BRAL456D**	Introduction to Raspberry Pi Controllers	Practical	2 Hours
				Robotics and Artificial Intelligence		
1	BRI456A	BRI456A	**BRIL456A**	Spread Sheets for Engineers (0:0:2:0)	Practical	2 Hour
2	BRI456B	BRI456B	**BRIL456B**	Embedded C Basics (0:0:2:0)	Practical	2 Hour
3	BRI456C	BRI456C		Supervisory Control and Data Acquisition System (SCADA) (1:0:0:0)	MCQ	1 Hour
4	BRI456D	BRI456D	**BRIL456D**	Applications of Raspberry Pi Controllers (0:0:2:0)	Practical	2 Hour
				Silk Technology		
1	BTX456A	BTX456A		Processing of MMFs and Blends	**Theory**	2 Hour
2	BTX456B	BTX456B		Textured yarn Technology	Theory	2 Hours
3	BTX456C	BTX456C		Eco-friendly process of Textiles	**Theory**	2 Hours
4	BTXL456D	BTXL456D		Evaluation of textiles fibres using modern tools -lab	Practical	2 hours
				Textile Technology		
1	BTX456A	BTX456A		Processing of MMFs and Blends	Theory	2 Hour
2	BTX456B	BTX456B		Textured yarn Technology	Theory	2 Hours
3	BTX456C	BTX456C		Eco-friendly process of Textiles	Theory	2 Hour
4	BTXL456D	BTXL456D		Evaluation of textiles fibers using modern tools -lab	Practical	2 hours
				Smart Agritech		
1	BSAL456A	BSAL456A		Mastering MS - Office (MS Word, Excel, PPT, Outlook)	Practical	2 Hours
2	BSAL456B	BSAL456B		Animation in agriculture	Practical	2 Hours
3	BSAL456C	BSAL456C		Principles of Soil Science	Practical	2 Hours
4	BSA456D	BSA456D		Technical writing skills	MCQ	1 Hour

General question paper
Refer Textile Syllabus
General question paper

General question paper
General question paper
General question paper

Annexure-II

CIE and SEE marks entry details on VTU web portal for AEC subjects

Type of the SEE	About CIE	About SEE
MCQ	Actual Marks scored out of 50 are entered on the VTU portal by the concerned teacher	SEE paper shall be set for 50 questions, each of the 01 marks. The pattern of the question paper is MCQ (multiple choice questions). The time allotted for SEE is **01 hour.** The student has to secure a minimum of 35% of the maximum marks meant for SEE. **Actual Marks are entered on VTU web portal by the evaluator as per maximum marks of question paper (**No scale down by system further).
Practical	Actual Marks scored out of 50 are entered on the VTU portal by the concerned teacher	SEE for practical shall be evaluated for 100 marks and **scored marks out of 100 marks are entered on the VTU portal by the examiner** (System will scale down the marks to 50).
General Theory Question paper	Actual Marks scored out of 50 are entered on the VTU portal by the concerned teacher	• The question paper will have ten questions. Each question is set for 10 marks. • There will be 2 questions from each module. Each of the two questions under a module may or may not have the sub-questions (with maximum sub-questions of 02, with marks distributions 5+5, 4+6, 3+7). • The students have to answer 5 full questions, selecting one full question from each module. **Digital Valuation is done and marks are evaluated according to question paper defragmentation (**No scale-down by the system further)