



# ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ

ವಿಜಯಲದಿನಿಯಮಂ ೯೯೪ರಲದಿಯಲ್ಲಿಕರ್ನಾಟಕಸರ್ಕಾರದಿಂದಸ್ಥಾಪಿತವಾದರಾಜ್ಯವಿಶ್ವವಿದ್ಯಾಲಯ

## VISVESVARAYA TECHNOLOGICAL UNIVERSITY

State University of Government of Karnataka Established as per the VTU Act, 1994 "JnanaSangama" Belagavi-590018, Karnataka, India

Prof. B. E. Rangaswamy, Ph.D

REGISTRAR

Phone: (0831) 2498100

Fax: (0831) 2405467

REF: VTU/BGM/BOS/AEC-SEE details/2023-24/5099

DATE: 26 DEC 2023

### Revised-CIRCULAR

**Subject:** SEE details of the courses of AEC of 3<sup>rd</sup> semester 2022 scheme regarding...

**Reference:** Approved by the Chairpersons BoS VTU Belagavi.

REF: VTU/BGM/BOS/AEC-SEE details/2023-24/4982, Dated:19.12.2023

The 2022 scheme contains one credit course under the Ability enhancement/Skill enhancement category, out of which employ the semester-end evaluation (SEE) pattern, either MCQ / Practical /Theory. This circular includes a list of AEC courses of the 3<sup>rd</sup> semester 2022 scheme UG programs, as well as SEE information.

All the principals of affiliated and constituent engineering colleges are hereby informed to bring the content of the circular to the notice of all students and teachers concerned. If any clarification is needed email to [sbhalbhavi@vtu.ac.in](mailto:sbhalbhavi@vtu.ac.in).

Thanking you

*R*  
26/12/23  
REGISTRAR  
29/12/23

To,

1. All the Principals of all affiliated, constituent Engineering Colleges under the ambit of the university.
2. The Chairpersons /Program Coordinator of the University departments at Kalaburagi, Mysuru Belagavi, and Muddenhalli Bengaluru

CC to

- The Hon'ble Vice-Chancellor through the secretary to VC for information
- The Registrar (Evaluation) for information
- The Dean Faculty of Engineering, VTU Belagavi
- The Director ITI, SMU VTU Belagavi for information and request to upload the circular on VTU web portal.
- The Office copy

**Ability Enhancement Course / Skill Enhancement Course**

**CIVIL ENGINEERING**

S.NO.	Subject Code	Subject Title	SEE Options	SEE Duration	REMARKS
1	BCV358A	Data analytics with Excel - IBM	Practical	2 Hours	
2	BCV358B	Smart Urban Infrastructure	MCQ	1 Hour	
3	BCV358C	<b>Problem Solving with PYTHON</b>	<b>Practical</b>	2 Hours	<b>Practical as per Bos Ch.</b>
4	BCV358D	Personality Development for Civil Engineers	MCQ	1 Hour	
		<b>Mining Engineering</b>			
1	BMNL358A	Mastering Office	Practical	2 Hours	
2	BMNL358B	Personality Development and Soft Skills	MCQ	1 Hour	
3	BMNL358C	Programming in C++	MCQ	1 Hour	
		<b>Computer Science &amp; Engineering</b>			
1	BCS358A	Data analytics with Excel	Practical	2 Hours	
2	BCS358B	R Programming	Practical	2 Hours	
3	BCS358C	Project Management with Git	Practical	2 Hours	
4	BCS358D	Data Visualization with Python	Practical	2 Hours	
		<b>Computer Engineering</b>			
1	BCE358A / BCS358A	Data analytics with Excel	Practical	2 Hours	
2	BCE358B / BCS358B	R Programming	Practical	2 Hours	
3	BCE358C / BCS358C	Project Management with Git	Practical	2 Hours	
4	BCE358D / BCS358D	Data Visualization with Python	Practical	2 Hours	
		<b>Artificial Intelligence &amp; Data Science</b>			
1	BAD358A	Data Analytics with Excel	Practical	2 Hours	
2	BAD358B	<b>Ethics and Public Policy for AI</b>	<b>Theory</b>	2 Hours	
3	BAD358C	Project Management with Git	Practical	2 Hours	
4	BAD358D	PHP Programming	Practical	2 Hours	
		<b>Artificial Intelligence and Machine Learning</b>			
1	BAI358A	Data Analytics with Excel	Practical	2 Hours	
2	BAI358B	<b>Ethics and Public Policy for AI</b>	<b>Theory</b>	2 Hours	
3	BAI358C	Project Management with Git	Practical	2 Hours	
4	BAI358D	PHP Programming	Practical	2 Hours	
		<b>Biotechnology</b>			
1	BBT358A	Bio-Lab Management and Risk Assessment	MCQ	1 Hour	
2	BBT358B	Data presentation, Error Analysis and Inferences	MCQ	1 Hour	
3	BBTL358C	Analysis Of Dairy Products Lab	Practical	2 Hours	
4	BBT358D	Biodiversity and Conservation Law	MCQ	1 Hour	

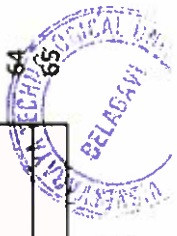


		<b>Computer &amp; Communication Engineering</b>			
1	BCM358A	Data analytics with Excel	Practical	2 Hours	19
2	BCM358B	R-Programming	Practical	2 Hours	20
3	BCM358C	Project management with Git	Practical	2 Hours	21
4	BCM358D	Data Visualization with Python	Practical	2 Hours	22
<b>Computer Science &amp; Business System</b>					
1	BCB358A	Data analytics with Excel	Practical	2 Hours	23
2	BCB358B	R-Programming	Practical	2 Hours	24
3	BCB358C	Project management with Git	Practical	2 Hours	25
4	BCB358D	Data Visualization with Python	Practical	2 Hours	26
<b>Computer Science &amp; Design</b>					
1	BCG358A	Web Application Design with HTML and PHP	Practical	2 Hours	27
2	BCG358B	R-Programming	Practical	2 Hours	28
3	BCG358C	Project Management with Git	Practical	2 Hours	29
4	BCG358D	Data Visualization with Phyton	Practical	2 Hours	30
<b>Computer Science &amp; Engineering (IoT)</b>					
1	BCO358A	Embedded C	Practical	2 Hours	31
2	BCO358B	R-Programming	Practical	2 Hours	32
3	BCO358C	Project Management with Git	Practical	2 Hours	33
4	BCO358D	Data Visualization with Phyton	Practical	2 Hours	34
<b>CSE (Artificial Intelligence &amp; Machine Learning)</b>					
1	BCI358A	Data Analytics with Excel	Practical	2 Hours	35
2	BCI358B	Ethics and Public Policy for AI	Theory	2 Hours	36
3	BCI358C	Project Management with Git	Practical	2 Hours	37
4	BCI358D	PHP Programming	Practical	2 Hours	38
<b>CSE (Artificial Intelligence)</b>					
1	BCA358A	Data Analytics with Excel	Practical	2 Hours	39
2	BCA358B	Ethics and Public Policy for AI	Theory	2 Hours	40
3	BCA358C	Project Management with Git	Practical	2 Hours	41
<b>CSE (Cyber Security)</b>					
1	BCY358A	Cyber Crime & Cyber Laws	Theory	2 Hours	
2	BCY358B	Incident Management in Cyber Security	Theory	2 Hours	
3	BCY 358C /BCS358C	Project Management with Git	Practical	2 Hours	
4	BCY 358D /BCS358D	Data Visualization with Phyton	Practical	2 Hours	
<b>CSE (Data Science)</b>					
1	BCD358A /BCS358A	Data Analytics with Excel	Practical	2 Hours	
2	BCD358B /BCS358B	Ethics and Public Policy for AI	Theory	2 Hours	



3	BCD358C/BCS358C	Project Management with Git	Practical	2 Hours	43
4	BCD358D/BCS358D	PHP Programming	Practical	2 Hours	44
<b>CSE (IoT &amp; Cyber Security including Block Chain Technology)</b>					
1	BIC358A/BCY358A	Cyber Crime & Cyber Laws	Theory	2 Hours	45
2	BIC358B/BCY358B	Incident Management in Cyber Security	Theory	2 Hours	46
3	BIC358C/BCY358C	Project Management with Git	Practical	2 Hours	47
4	BIC358D/BCY358D	Data Visualization with Python	Practical	2 Hours	48
<b>Data Science</b>					
1	BDS358A	Data Analytics with Excel	Practical	2 Hours	49
2	BDS358B	Ethics and Public Policy for AI	Theory	2 Hours	50
3	BDS358C	Project Management with Git	Practical	2 Hours	51
4	BDS358D	Data Visualization with Python	Practical	2 Hours	52
<b>Information Science &amp; Engineering</b>					
1	BIS358A/BCS358A	Data analytics with Excel	Practical	2 Hours	53
2	BIS358B/BCS358B	R programming	Practical	2 Hours	54
3	BIS358C/BCS358C	Project Management with Git	Practical	2 Hours	55
4	BIS358D/BCS358D	Data Visualization with Python	Practical	2 Hours	56
<b>Computer Science</b>					
1	BCS358A	Data analytics with Excel	Practical	2 Hours	57
2	BCS358B	R programming	Practical	2 Hours	58
3	BCS358C	Project Management with Git	Practical	2 Hours	59
4	BCS358D	Data Visualization with Python	Practical	2 Hours	60
<b>Electronics &amp; Communication Engg</b>					
1	BEC358A	LABVIEW programming	Practical	2 Hours	61
2	BEC358B	MATLAB Programming	Theory	2 Hours	62
3	BEC358C	C++ Basics	Practical	2 Hours	63
4	BEC358D	IOT for Smart Infrastructure	MCQ	1 Hour	64
<b>Biomedical Engineering</b>					
1	BBM358A	Human Anatomy and Physiology	MCQ	1 Hour	65
2	BBM358B	Network Analysis	MCQ	1 Hour	66
3	BBML358C	Digital Design Lab using Pspice / MultiSIM	Practical	2 Hours	67
4	BBML358D	AEC Lab using Pspice / MultiSIM	Practical	2 Hours	68
<b>Electrical &amp; Electronics Engineering</b>					
1	BEEL358A	SCI LAB/MATLAB for Transformers and Generators	Practical	2 Hours	69
2	BEEL358B	555 IC Laboratory	Practical	2 Hours	70
3	BEEL358C	Circuit Laboratory using P Spice	Practical	2 Hours	71
4	BEEL358D	Electrical Hardware Laboratory	Practical	2 Hours	72

Theory Examination Ch BoS Not MCQ



		<b>Electronics &amp; Instrumentation Engineering</b>			
1	BEI358A	Static & Dynamic Characteristics and Error Analysis in Instrumentation Systems	MCQ	1 Hour	
2	BEI358B	Network Analysis	MCQ	1 Hour	
3	BEI358C	Digital Design Lab using Pspice / Multisim	Practical	2 Hours	67
4	BEI358D	AEC LAB USING PSPICE / MULTISIM / COMSOL	Practical	2 Hours	68
<b>Electronics &amp; Telecommunication Engg</b>					
1	BEC358A	LABVIEW programming	Practical	2 Hours	69
2	<b>BEC358B</b>	<b>MATLAB Programming</b>	<b>Theory</b>	<b>2 Hours</b>	<b>Theory Examination Ch BoS Not MCQ</b>
3	BEC358C	C++ Basics	Practical	2 Hours	70
4	BEC358D	IOT for Smart Infrastructure	MCQ	1 Hour	
<b>Industrial IoT</b>					
1	BIO358A	Robotics and Industrial Automation Lab-Design Robots-Level1			
2	BIO358B	Lab VIEW -Graphical Programming -Level1			
3	BIO358C	IOT-Connecting the World - Level1			
<b>Electronics Engg (VLSI Design and Technology)</b>					
1	BEC358A	UNIX Programming	Practical	2 Hours	71
2	BEC358B	Circuit Laboratory using P-spice	Practical	2 Hours	72
3	BEC358C	Digital Engineering Course (NASSCOM)			
4	BEC358D	IoT (Internet of Things) Lab	Practical	2 Hours	73
<b>Electronics and Computer Engineering</b>					
1	BUEL358A	Applications of 8051 Microcontroller	Practical	2 Hours	
2	BUEL358B	Risk Management in IoT Implementation	MCQ	1 Hour	
3	BUEL358C	PCB Design using EDA Tool	MCQ	1 Hour	
<b>Aeronautical Engineering</b>					
1	BAE358A/ BAS358A	Development of Soft Skills for Engineers	MCQ	1 Hour	
2	BAE358B/ BAS358B	Ethics, Technology and Engineering	MCQ	1 Hour	
3	BAE358C	Digitalization in Aeronautics	MCQ	1 Hour	
4	BAE358D/ BAS358D	Coding literacy	MCQ	1 Hour	
<b>Aerospace Engineering</b>					
1	BAS358A/ BAE358A	Development of Soft Skills for Engineers	MCQ	1 Hour	
2	BAS358B/ BAE358B	Ethics, Technology and Engineering	MCQ	1 Hour	
3	BAS358C	Digitalization in Aerospace Engineering	MCQ	1 Hour	
4	BAS358D/ BAE358D	Coding Literacy	MCQ	1 Hour	
<b>Agricultural Engineering</b>					
1	BAGL358A	Advanced Python Programming [0-0-2]	MCQ	1 Hour	
2	BAG358B	Fundamentals of Virtual Reality [0-2-0]	MCQ	1 Hour	



3	BAGL358C	Spreadsheet for Engineers [0-0-2]	Practical	2 Hours	75
4	BAGL358D	Tools in Scientific Computing [0-0-2]	Practical	2 Hours	76
		<b>Automation and Robotics</b>			
1	BRA358A	Introduction to Python	Practical	2 Hours	78
2	BRA358B	Applications of MATLAB	Practical	2 Hours	79
3	BRA358C	Fundamentals of Virtual Reality APP Development	MCQ	1 Hour	
4	BRA358D	Introduction to C ++	MCQ	1 Hour	
		<b>Automobile Engineering</b>			
1	BAU358A	Rural Development	MCQ	1 Hour	
2	BAU358B	BHARAT STAGES (BS) OF EMISSION STANDARDS	MCQ	1 Hour	
3	BAU358C	EXCEL SHEET FOR ENGINEERS	Practical	2 Hours	80
4	BAU358D	Clay modelling	MCQ	1 Hour	
		<b>Chemical Engineering</b>			
1	BCHL358A	Advanced MS Excel for Chemical Engineers	Practical	2 Hours	81
2	BCH358B	Personality Development Skills	MCQ	1 Hour	
3	BCH358C	Understanding equipment Data Sheet	Theory	2 Hours	
4	BCH358D	Career Options after Engineering	Theory	2 Hours	
		<b>Industrial &amp; Production Engineering</b>			
1	BIP358A	(1:0:0) An Overview of Emerging Technologies	MCQ	1 Hour	
2	BIP358B	(1:0:0) Basics of Industrial Safety	MCQ	1 Hour	
3	BIP358C	(1:0:0) Introduction to Risk Management	MCQ	1 Hour	82
4	BIPL358D	(0:0:2) Spreadsheet for Engineers (Laboratory)	Practical	2 Hours	
		<b>Industrial Engineering &amp; Management</b>			
1	BIM358A	An Overview of Emerging Technologies	MCQ	1 Hour	
2	BIM358B	Basics of Industrial Safety	MCQ	1 Hour	
3	BIM358C	Introduction to Risk Management	MCQ	1 Hour	
4	BIML358D	Spreadsheet for Engineers	Practical	2 Hours	83
		<b>Marine Engineering</b>			
1	BMRL358A	Spreadsheet for Engineers ( 0-0-2-0)	Practical	2 Hours	84
2	BMRL358B	Microcontrollers ( 0-0-2-0)	Practical	2 Hours	85
3	BMIR358C	Chartering ( 1-0-0-0)	MCQ	1 Hour	
4	BMRL358D	Tools in Scientific Computing [0-0-2-0]	Practical	2 Hours	86
		<b>Mechanical &amp; Smart Manufacturing</b>			
1	BMM358A	Introduction to Virtual Reality	MCQ	1 Hour	
2	BMM358B	Data Base Management Systems	MCQ	1 Hour	
3	BMM358C	Introduction to Block Chain	MCQ	1 Hour	
		<b>Mechanical Engineering</b>			



1	BMEL358A	Advanced Python Programming [0-0-2]	Practical	2 Hours		87
2	BME358B	INTRODUCTION TO VIRTUAL REALITY	MCQ	1 Hour		
3	BMEL358C	Spreadsheet for Engineers [0-0-2]	Practical	2 Hours		88
4	BMEL358D	Tools in Scientific Computing [0-0-2]	Practical	2 Hours		89
		<b>Mechatronics</b>				
1	BMTL358A	Programming in Python (002)	Practical	2 Hours		90
2	BMT358B	Trends in Digital Manufacturing	MCQ	1 Hour		
3	BMTL358C	PCB Design Technology (002)	Practical	2 Hours		91
4	BMT358D	Robotics Ecosystem	MCQ	1 Hour		
		<b>Robotics &amp; Automation</b>				
1	BRA358A	Introduction to Python	Practical	2 Hours		92
2	BRA358B	Applications of MATLAB	Practical	2 Hours		93
3	BRA358C	Fundamentals of Virtual Reality APP Development	MCQ	1 Hour		
4	BRA358D	Introduction to C ++	MCQ	1 Hour		
		<b>Robotics and Artificial Intelligence</b>				
1	BRI358A	Data Structures and Algorithms Lab	Practical	2 Hours		94
2	BRI358B	Applications of MAT LAB	Practical	2 Hours		95
3	BRIL358C	Fundamentals of Virtual Reality and App Development	MCQ	1 Hour		
4	BRIL358D	Introduction to C++ Programming	<b>PRACTICAL</b>	2 Hours	Ch BoS email 22.12.2023	96
		<b>Silk Technology</b>				
1	BTX358A	Introduction to Polymers	MCQ	1 Hour		
2	BTXL358B	Identification of Fibres-lab	Practical	2 Hours		997
3	BTXL358C	Engineering with Microsoft Office-lab	Practical	2 Hours		98
4	BTX358D	Medical Textiles	Theory	2 Hours		
		<b>Textile Technology</b>				
1	BTX358A	Introduction to Polymers	MCQ	1 Hour		
2	BTXL358B	Identification of Fibres-lab	Practical	2 Hours		
3	BTXL358C	Engineering with Microsoft Office-lab	Practical	2 Hours		99
4	BTX358D	Medical Textiles	Theory	2 Hours		100
		<b>Electronics Communication Engg (Advance Communication Technology)</b>				
1	BEA358A	LICs Lab using PSPICE				
2	BEA358B	Simulink Programming Basics				
3	BEA358C	Digital Engineering Course (NASSCOM)				
4	BEA358D	IOT for Smart Infrastructure				
		<b>Smart Agritech</b>				
1	BSAL358A	Advanced Python Programming	Practical	2 Hours		



2	BSA358E	Personality Development & Soft Skills	MCQ	1 Hour
3	BSAL358C	Spreadsheet for Engineers	Practical	2 Hours
4	BSA358D	Importance of Solar Energy in Agriculture	MCQ	1 Hour

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