

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI
B.E. in SMART AGRITECH
Scheme of Teaching and Examinations2022
Outcome Based Education (OBE) and Choice Based Credit System (CBCS)
(Effective from the academic year 2023-24)

V Sem													
Sl. No	Course and Course Code		Course Title	Teaching Department (TD) and Question Paper Setting Board (PSB)	Teaching Hours /Week				Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	Self -Study	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P	S					
1	HSMS	BSA501	Industrial Management & Entrepreneurship	TD- AG / SA PSB- AG / SA	3	0	0		03	50	50	100	3
2	IPCC	BSA502	Farm Machinery & Equipment-II	TD- AG / SA PSB- AG / SA	3	0	2		03	50	50	100	4
3	PCC	BSA503	Precision Agriculture	TD- AG / SA PSB- AG / SA	4	0	0		03	50	50	100	4
4	PCCL	BSAL504	Manufacturing process lab	TD- AG / SA PSB- AG / SA	0	0	2		03	50	50	100	1
5	PEC	BSA515x	Professional Elective Course	TD- AG / SA PSB- AG / SA	3	0	0		03	50	50	100	3
6	PROJ	BSA586	Mini Project	Any Dept.	0	0	4		03	100		100	2
7	AEC	BRMK557	Research Methodology and IPR	Any Dept.	2	2	0		02	50	50	100	3
8	MC	BESK508	Environmental Studies	Civil Dept.	2	0	0		02	50	50	100	2
9	MC	BNSK559	National Service Scheme (NSS)	NSS coordinator	0	0	2			100		100	0
		BPEK559	Physical Education (PE) (Sports and Athletics)	Physical Education Director									
		BYOK559	Yoga	Yoga Teacher									
Total									500	300	800	22	
Professional Elective Course													
BSA515A		Water Harvesting and Soil Conservation Structures				BSA515C		Storage and Packaging Technology					
BSA515B		Pests of Crops and Stored Grains & their Management				BSA515D		Landscape Irrigation Design and Management					
HSMS: Humanity and Social Science and management course, PCC: Professional Core Course, PCCL: Professional Core Course laboratory, UHV: Universal Human Value Course, MC: Mandatory Course (Non-credit), AEC: Ability Enhancement Course, SEC: Skill Enhancement Course, L: Lecture, T: Tutorial, P: Practical S= SDA: Skill Development Activity, CIE: Continuous Internal Evaluation, SEE: Semester End Evaluation. K : The letter in the course code indicates common to all the stream of engineering. PROJ: Project /Mini Project. PEC: Professional Elective Course													

Professional Core Course (IPCC): Refers to Professional Core Course Theory Integrated with practicals of the same course. Credit for IPCC can be 04 and its Teaching– Learning hours (L : T : P) can be considered as (3 : 0 : 2) or (2 : 2 : 2). The theory part of the IPCC shall be evaluated by only CIE (no SEE). However, questions from the practical part of IPCC shall be included in the SEE question paper. For more details, the regulation governing the Degree of Bachelor of Engineering /Technology (B.E./B.Tech.) 2022-23.

National Service Scheme /Physical Education/Yoga: All students have to register for any one of the courses namely National Service Scheme (NSS), Physical Education (PE)(Sports and Athletics), and Yoga(YOG) with the concerned coordinator of the course during the first week of III semesters. Activities shall be carried out between III semester to the VI semester (for 4 semesters). Successful completion of the registered course and requisite CIE score is mandatory for the award of the degree. The events shall be appropriately scheduled by the colleges and the same shall be reflected in the calendar prepared for the NSS, PE, and Yoga activities. These courses shall not be considered for vertical progression as well as for the calculation of SGPA and CGPA, but completion of the course is mandatory for the award of degree.

Mini-project work: Mini Project is a laboratory-oriented/hands on course that will provide a platform to students to enhance their practical knowledge and skills by the development of small systems/applications etc. Based on the ability/abilities of the student/s and recommendations of the mentor, a single discipline or a multidisciplinary Mini- project can be assigned to an individual student or to a group having not more than 4 students.

CIE procedure for Mini-project:

(i) Single discipline: The CIE marks shall be awarded by a committee consisting of the Head of the concerned Department and two faculty members of the Department, one of them being the Guide. The CIE marks awarded for the Mini-project work shall be based on the evaluation of the project report, project presentation skill, and question and answer session in the ratio of 50:25:25. The marks awarded for the project report shall be the same for all the batches mates.

(ii) Interdisciplinary: Continuous Internal Evaluation shall be group-wise at the college level with the participation of all the guides of the project.

The CIE marks awarded for the Mini-project, shall be based on the evaluation of the project report, project presentation skill, and question and answer session in the ratio 50:25:25. The marks awarded for the project report shall be the same for all the batch mates.

No SEE component for Mini-Project.

Professional Elective Courses (PEC): A professional elective (PEC) course is intended to enhance the depth and breadth of educational experience in the Engineering and Technology curriculum. Multidisciplinary courses that are added supplement the latest trend and advanced technology in the selected stream of engineering. Each group will provide an option to select one course. The minimum number of students' strengths for offering a professional elective is 10. However, this conditional shall not be applicable to cases where the admission to the program is less than 10.

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VI SEMESTER

Sl. No	Course and Course Code		Course Title	Teaching Department (TD) and Question Paper Setting Board (PSB)	Teaching Hours /Week					Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	Self - Study	Duration in hours	CIE Marks	SEE Marks	Total Marks		
					L	T	P	S						
1	PCC	BSA601	Basics Concepts and Applications of Agrochemicals	TD: AG /SA PSB: AG / SA	4	0	0		03	50	50	100	4	
2	IPCC	BSA602	Soil & Water Conservation Engineering	TD: AG /SA PSB: AG / SA	3	0	2		03	50	50	100	4	
3	PEC	BSA613x	Professional Elective Course	TD: AG /SA PSB: AG / SA	3	0	0		03	50	50	100	3	
4	OEC	BSA654x	Open Elective Course	TD: AG /SA PSB: AG / SA	3	0	0		03	50	50	100	3	
5	PROJ	BSA685	Project Phase I	TD: AG /SA PSB: AG / SA	0	0	4		03	100	--	100	2	
6	PCCL	BSAL606	AI and Image Processing Lab	TD: AG /SA PSB: AG / SA	0	0	2		03	50	50	100	1	
7	AEC/S DC	BSA657x	Ability Enhancement Course/Skill Development Course V	TD: AG /SA PSB: AG / SA	If the course is offered as a Theory				01	50	50	100	1	
					1	0	0							
					If course is offered as a practical									
		BNSK658	National Service Scheme (NSS)	NSS coordinator										

8	MC	BPESK658	Physical Education (PE) (Sports and Athletics)	Physical Education Director	0	0	2			100	---	100	0
		BYOK658	Yoga	Yoga Teacher									
9	MC	BIKS609	Indian Knowledge System							100	0	100	PP
PP										500	300	800	18
Professional Elective Course													
BSA613A	IOT in Architecture and Protocols			BSA613C	Emerging Agricultural technology								
BSA613B	Agriculture Structures and Environmental Control			BSA613D	Principles of Organic Farming								
Open Elective Course													
BSA654A	Micro Irrigation Engineering			BSA654C	Agricultural Marketing Trade & Prices								
BSA654B	Hydrology, Ground Water and Well Engineering			BSA654D	Watershed Development								
Ability Enhancement Course / Skill Enhancement Course													
BSA657A	Digital Marketing			BSA657C	Fundamentals of Virtual Reality ARP Development								
BSA657B	Agri-Innovations and Start-Ups			BSA657D	Introduction Augmented Reality								
<p>PCC: Professional Core Course, PCCL: Professional Core Course laboratory, UHV: Universal Human Value Course, MC: Mandatory Course (Non-credit), AEC: Ability Enhancement Course, SEC: Skill Enhancement Course, L: Lecture, T: Tutorial, P: Practical S= SDA: Skill Development Activity, CIE: Continuous Internal Evaluation, SEE: Semester End Evaluation. K: The letter in the course code indicates common to all the stream of engineering. PROJ: Project /Mini Project. PEC: Professional Elective Course. PROJ: Project Phase -I, OEC: Open Elective Course</p>													
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Open Elective Courses:

Students belonging to a particular stream of Engineering and Technology are not entitled to the open electives offered by their parent Department. However, they can opt for an elective offered by other Departments, provided they satisfy the prerequisite condition if any. Registration to open electives shall be documented under the guidance of the Program Coordinator/ Advisor/Mentor. The minimum numbers of students' strength for offering Open Elective Course is 10. However, this condition shall not be applicable to class where the admission to the program is less than 10.

Project Phase-I : Students have to discuss with the mentor /guide and with their helphe/she has to complete the literature survey and prepare the report and finally define the problem statement for the project work.