

Visvesvaraya Technological University, Belagavi
Bachelor of Science (B.Sc.)
Scheme of Teaching and Examinations 2021 – 2025
Outcome Based Education(OBE) and Choice Based Credit System (CBCS)
(Effective from the academic year 2021 – 22)

I SEMESTER (Common to all Specialisations)

Sl. No	Course and Course Code		Course Title	Teaching Department	Teaching Hours /Week				Examination				Credits
					Theory Lecture	Tutorial	Practical	Self-Study Component	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P	S					
1	DC	21MAT11	Differential Calculus and Linear Algebra	Maths	3	2	--		03	50	50	100	4
2	DC	21PHY12	Mechanics and Properties of Matter	Physics	2	2	--		03	50	50	100	3
3	DC	21CHE13	Chemistry -1	Chemistry	3	--	--		03	50	50	100	3
4	SEC	21PSP14	Problem Solving through Programming	Computer	3	--	--		03	50	50	100	3
5	DC	21 PHY15	Mechanics Laboratory	Physics	1	--	2		03	50	50	100	2
6	DC	21CHE16	Chemistry Laboratory - 1	Chemistry	1	--	2		03	50	50	100	2
7	SEC	21CPL17	Computer Programming Laboratory	Computer	1	--	2		03	50	50	100	2
8	AEC	21KSK18	Samskruthika Kannada	HSMC	3	--	--		03	50	50	100	3
		21KBK18	Balake Kannada										
9	AEC	21ENG19	Communicative English - 1	HSMC	1	1	1		03	50	50	100	2
Total					19	05	07		27	450	450	900	24

Note:
(i) DC: Discipline Course, SEC: Skill Enhancement Course, AEC: Ability Enhancement Course, HSMC: Humanity, Social Science and Management.
(ii) 21KSK18 Samskruthika Kannada is for students who speak, read and write Kannada and 21KBK18 Balake Kannada is for non-Kannada speaking, reading and writing students.

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II SEMESTER (Common to all Specialisations)

Sl. No	Course and Course Code		Course Title	Teaching Department	Teaching Hours /Week				Examination			Credits	
					Theory Lecture	Tutorial	Practical	Self-Study Component	Duration in hours	CIE Marks	SEE Marks		Total Marks
					L	T	P	S					
1	DC	21MAT21	Integral Calculus and Ordinary Differential Equations	Maths	3	2	--		03	50	50	100	4
2	DC	21PHY22	Thermal Physics	Physics	2	2	--		03	50	50	100	3
3	DC	21CHE23	Chemistry - 2	Chemistry	3	--	--		03	50	50	100	3
4	DC	21MATL24	Mathematics Laboratory using Python	Maths	1	--	2		03	50	50	100	2
5	DC	21 PHYL25	Thermal Physics Laboratory	Physics	1	--	2		03	50	50	100	2
6	DC	21CHEL26	Chemistry Laboratory -2	Chemistry	1	--	2		03	50	50	100	2
7	AEC	21KSS27	Sahithya Sinchana	HSMC	3	--	--		03	50	50	100	3
		21KKD27	Karnataka Darshana										
8	AEC	21ENG28	Communicative English - 2	HSMC	1	1	1		03	50	50	100	2
9	AEC	21AEC291	Environmental Studies	Interdisciplinary	2	--	--		03	50	50	100	2
10	SEC	21UHV292	Universal Human Values		2	--	--		03	50	50	100	2
Total					20	05	07		27	500	500	900	25

- Note:**
- (1) (i) DC: Discipline Course, SEC: Skill Enhancement Course, AEC: Ability Enhancement Course, HSMC: Humanity and Social Science.
(ii) 21KSS27 Sahithya Sinchana is for students who have studied 21KSK18 Samskruthika Kannada and 21KKD27 Karnataka Darshana is for for students who have studied 21KBK18 Balake Kannada.
- (2) **Summer Internship – 1**
All students admitted shall have to undergo a mandatory summer internship of 03 weeks duration during the intervening vacation of II and III semesters. Summer internship shall include inter and intra institutional activities.
A university viva voce examination shall be conducted during III semester and the prescribed credit shall be included in the III semester.
The summer internship -1 shall be considered as a head of passing and shall be considered for vertical progression and for the award of the degree. Those who do not take up/complete the internship shall be declared fail and shall have complete the subsequent examination after satisfying the internship requirements.

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III SEMESTER (Common to all Specialisations)

Sl. No	Course and Course Code		Course Title	Teaching Department	Teaching Hours /Week				Examination				Credits
					Theory Lecture	Tutorial	Practical	Self-Study Component	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P	S					
1	DC	21BS31	Partial Differential Equations & Vector Calculus.	Maths	2	2	--		03	50	50	100	3
2	DC	21BS32	Waves & Optics	Physics	2	2	--		03	50	50	100	3
3	DC	21BS33	Thermodynamics & Thermochemistry	Chemistry	2	2	--		03	50	50	100	3
4	DC	21BSL34	Mathematics Laboratory using C++	Maths	1	--	2		03	50	50	100	2
5	DC	21BSL35	Optics Lab	Physics	1	--	2		03	50	50	100	2
6	DC	21BSL36	Physical Chemistry Lab	Chemistry	1	--	2		03	50	50	100	2
7	ESC	21BSO37x	Open Elective (Eng. Stream)	Eng. stream	2	--	--		03	50	50	100	2
8	SEC	21IDT38	Innovation & Design thinking	Any department	2	-	-		03	50	50	100	2
9	SEC	21BS39	Social Connect through Field Visit		-	-	3		03	50	50	100	1
Total					13	06	09		27	450	450	900	20

a	(1)	DC: Discipline Course, ESC: Engineering Science Course, SEC: Skill Enhancement Course.
	(2)	Social Connect through Field Visit – students will be exposed to gain a first-hand understanding about the implementation structure and status of the policies, regulations, organizational structures, processes, and programmes that guide the development process. Students would have opportunity to gain an understanding of the complex socio-economic problems in the community, and innovative practices required to generate solutions to the identified problems. Students shall have a group of four students and define the problem statement after discussing with the mentors. As per the teaching hours/week, students shall visit an area and interact with the concerned community. Every month, mentors shall examine the progress through report submission/seminar/viva-voce and assign the CIE. Presentation/seminar shall be conducted for SEE.
	(3)	Open Electives:(a)21BOE371- Basics of Artificial Intelligence and Machine Learning (b) 21BOE372-Renewa-ble Energy Sources (c)21BOE373-Constrction Materials (Any One)

b	Scheduled activities for III to VIII semesters	NCMC 21NS83	National Service Scheme (NSS)/any NGO and Physical Education (Sports and Athletics and Yoga)	NSS/NGO and Physical Education	All students have to register for any one of the courses namely National Service Scheme (NSS)/NGO and Physical Education (PE)(Sports and Athletics and Yoga) or NSS/NGO and Fine Arts with the concerned coordinator of the course during the first week of III semester. The activities shall be carried out between III semesters to VIII semester (for 5 semesters).
		NCMC 21FA83	National Service Scheme (NSS)/ any NGO and Fine Arts (Any one from the - Painting, Sculpture, Literature, Architecture, Film Making, Music, Theatre)	NSS/NGO and Fine Arts	SEE in the above courses shall be conducted during VIII semester examinations and the accumulated CIE marks shall be added to the SEE marks. Successful completion of the registered course 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, Yoga and Fine Arts activities.