

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI
B.E. in Chemical Engineering
Scheme of Teaching and Examinations 2022
 Outcome Based Education (OBE) and Choice Based Credit System (CBCS)
 (Effective from the academic year 2023-24)

III SEMESTER

Sl. No	Course	Course Code	Course Title	Teaching Department (TD) and Question Paper Setting Board (PSB)	Teaching Hours /Week				Examination			Credits	
					Theory Lecture	Tutorial	Practical/ Drawing	SDA	Duration in hours	CIE Marks	SEE Marks		Total Marks
					L	T	P	S					
1	PCC	BCH301	Probability and Statistics	TD- CH/Maths PSB - CH	3	0	0		03	50	50	100	3
2	IPCC	BCH302	Momentum Transfer	TD: CH PSB: CH	3	0	2		03	50	50	100	4
3	IPCC	BCH303	Unit Process in Organic Synthesis	TD: CH/CHE PSB: CH	3	0	2		03	50	50	100	4
4	PCC	BCH304	Chemical Process Calculations	TD: CH PSB CH	3	0	0		03	50	50	100	3
5	PCCL	BCHL305	Computer Aided Drawing Lab	TD: CH PSB CH	0	0	2		03	50	50	100	1
6	ESC	BCH306x	ESC/ETC/PLC	TD:CH PSB:CH	3	0	0		03	50	50	100	3
7	UHV	BSCK307	Social Connect and Responsibility	Any Department	0	0	2		01	100	---	100	1
8	AEC/ SEC	BCH358x/BCHL358x	Ability Enhancement Course/Skill Enhancement Course - III	TD and PSB: Concerned department	If the course is a Theory				01/02	50	50	100	1
					1	0	0						
					If a course is a laboratory				03				
9	MC	BNSK359	National Service Scheme (NSS)	NSS coordinator	0	0	2			100	---	100	0
		BPEK359	Physical Education (PE) (Sports and Athletics)	Physical Education Director									
		BYOK359	Yoga	Yoga Teacher									
Total									550	350	900	20	

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:** This letter in the course code indicates common to all the stream of engineering. **ESC:** Engineering Science Course, **ETC:** Emerging Technology

Course, PLC: Programming Language Course			
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Engineering Science Course (ESC/ETC/PLC)			
BCH306A	Industrial Biotechnology	BCH306C	Carbon Sequestration Technology
BCH306B	MATLAB for Chemical Engineers	BCH306D	Nanotechnology and Nano sensors
Ability Enhancement Course – III			
BCHL358A	Advanced MS Excel for Chemical Engineers	BCH358C	Understanding Equipment Data Sheet
BCH358B	Personality Development Skills	BCH358D	Career Options after Engineering
<p>Professional Core Course (IPCC): Refers to Professional Core Course Theory Integrated with practical 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 both by CIE and SEE. The practical part 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 may please be referred.</p>			
<p>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 semesters 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.</p>			

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IV 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	BCH401	Chemical Engineering Thermodynamics	CH	3	0	0		03	50	50	100	3
2	IPCC	BCH402	Process Heat Transfer	CH	3	0	2		03	50	50	100	4
3	IPCC	BCH403	Mechanical Operations	CH	3	0	2		03	50	50	100	4
4	PCCL	BCHL404	Pollution Control and Instrumental Analysis Lab	CH	0	0	2		03	50	50	100	1
5	ESC	BCH405x	ESC/ETC/PLC	CH	3	0	0		03	50	50	100	3
6	AEC/ SEC	BCH456x/BCHL456x	Ability Enhancement Course/Skill Enhancement Course- IV	TD and PSB: Concerned department	If the course is Theory				01/02	50	50	100	1
					1	0	0						
					If the course is a lab				03				
					0	0	2						
7	BSC	BBOK407	Biology for Engineers	TD / PSB: BT, CHE,	3	0	0		03	50	50	100	3
8	UHV	BUHK408	Universal human values course	Any Department	1	0	0		01	50	50	100	1
9	MC	BNSK459	National Service Scheme (NSS)	NSS coordinator	0	0	2			100	---	100	0
		BPEK459	Physical Education (PE) (Sports and Athletics)	Physical Education Director									
		BYOK459	Yoga	Yoga Teacher									
Total									500	400	900	20	

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: This letter in the course code indicates common to all the stream of engineering.

Ability Enhancement Course / Skill Enhancement Course - IV			
BCH456A	Data Analytics	BCH456C	Basics of Accounting and Taxation
BCH456B	Entrepreneurship Development	BCH456D	Energy and Environmental Auditing
Engineering Science Course (ESC/ETC/PLC)			
BCH405A	Statistical Thermodynamics	BCH405C	Introduction to R Language
BCH405B	ANSYS for Chemical Engineers	BCH405D	Computational Fluid Dynamics
BCH405E	Upstream oil and gas engineering with AI applications		
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