

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI
Scheme of Teaching and Examination 2018 – 19
Outcome Based Education (OBE) and Choice Based Credit System (CBCS)
(Effective from the academic year 2018 – 19)

III SEMESTER

Sl. No	Course and Course Code		Course Title	Teaching Department	Teaching Hours /Week			Examination			Credits	
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks		Total Marks
					L	T	P					
1	BSC	18MAT31	Transform Calculus, Fourier Series And Numerical Techniques	Mathematics	2	2	--	03	40	60	100	3
2	PCC	18CS32	Data Structures and Applications	CS / IS	3	2	--	03	40	60	100	4
3	PCC	18CS33	Analog and Digital Electronics	CS / IS	3	0	--	03	40	60	100	3
4	PCC	18CS34	Computer Organization	CS / IS	3	0	--	03	40	60	100	3
5	PCC	18CS35	Software Engineering	CS / IS	3	0	--	03	40	60	100	3
6	PCC	18CS36	Discrete Mathematical Structures	CS / IS	3	0	--	03	40	60	100	3
7	PCC	18CSL37	Analog and Digital Electronics Laboratory	CS / IS	--	2	2	03	40	60	100	2
8	PCC	18CSL38	Data Structures Laboratory	CS / IS	--	2	2	03	40	60	100	2
9	HSMC	18KVK39	Vyavaharika Kannada (Kannada for communication)/	HSMC	--	2	--	--	100	--	100	1
		18KAK39	Aadalitha Kannada (Kannada for Administration)									
		OR										
		18CPC39	Constitution of India, Professional Ethics and Cyber Law									
TOTAL					17	08	04	24	420	480	900	24
					OR	OR	OR	OR	OR			
					18	10	04	26	360	540		

Note: BSC: Basic Science, PCC: Professional Core, HSMC: Humanity and Social Science, NCMC: Non-credit mandatory course

18KVK39 Vyavaharika Kannada (Kannada for communication) is for non-Kannada speaking, reading and writing students and **18KAK39** Aadalitha Kannada (Kannada for Administration) is for students who speak, read and write Kannada.

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IV SEMESTER

Sl. No	Course and Course Code		Course Title	Teaching Department	Teaching Hours /Week			Examination			Credits	
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks		Total Marks
					L	T	P					
1	BSC	18MAT41	Complex Analysis, Probability And Statistical Methods	Mathematics	2	2	--	03	40	60	100	3
2	PCC	18CS42	Design and Analysis of Algorithms	CS / IS	3	2	--	03	40	60	100	4
3	PCC	18CS43	Operating Systems	CS / IS	3	0	--	03	40	60	100	3
4	PCC	18SC44	Microcontroller and Embedded Systems	CS / IS	3	0	--	03	40	60	100	3
5	PCC	18CS45	Object Oriented Concepts	CS / IS	3	0	--	03	40	60	100	3
6	PCC	18CS46	Data Communication	CS / IS	3	0	--	03	40	60	100	3
7	PCC	18CSL47	Design and Analysis of Algorithm Laboratory	CS / IS	--	2	2	03	40	60	100	2
8	PCC	18CSL48	Microcontroller and Embedded Systems Laboratory	CS / IS	--	2	2	03	40	60	100	2
9	HSMC	18KVK49	Vyavaharika Kannada (Kannada for communication)/	HSMC	--	2	--	--	100	--	100	1
		18KAK49	Aadalitha Kannada (Kannada for Administration)									
		OR	OR									
		18CPC39	Constitution of India, Professional Ethics and Cyber Law		1	--	--	02	40	60		
					Examination is by objective type questions							
TOTAL					17	08	04	24	420	480	900	24
					OR	OR		OR	OR	OR		
					18	10		26	360	540		

Note: BSC: Basic Science, PCC: Professional Core, HSMC: Humanity and Social Science, NCMC: Non-credit mandatory course

18KVK49 Vyavaharika Kannada (Kannada for communication) is for non-Kannada speaking, reading and writing students and **18KAK49** Aadalitha Kannada (Kannada for Administration) is for students who speak, read and write Kannada.

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V SEMESTER

Sl. No	Course and Course code		Course Title	Teaching Department	Teaching Hours /Week			Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P					
1	HSMC	18CS51	Management, Entrepreneurship for IT Industry	HSMC	2	2	--	03	40	60	100	3
2	PCC	18CS52	Computer Networks and Security	CS / IS	3	2	--	03	40	60	100	4
3	PCC	18CS53	Database Management System	CS / IS	3	2	--	03	40	60	100	4
4	PCC	18CS54	Automata theory and Computability	CS / IS	3	--	--	03	40	60	100	3
5	PCC	18CS55	Application Development using Python	CS / IS	3	--	--	03	40	60	100	3
6	PCC	18CS56	Unix Programming	CS / IS	3	--	--	03	40	60	100	3
7	PCC	18CSL57	Computer Network Laboratory	CS / IS	--	2	2	03	40	60	100	2
8	PCC	18CSL58	DBMS Laboratory with mini project	CS / IS	--	2	2	03	40	60	100	2
9	HSMC	18CIV59	Environmental Studies	Civil/ Environmental	1	--	--	02	40	60	100	1
				[Paper setting: Civil Engineering Board]								
TOTAL					18	10	04	26	360	540	900	25

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VI SEMESTER

Sl. No	Course and Course code		Course Title	Teaching Department	Teaching Hours /Week			Examination			Credits	
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks		Total Marks
					L	T	P					
1	PCC	18IS61	File Structures	CS / IS	3	2	--	03	40	60	100	4
2	PCC	18IS62	Software Testing	CS / IS	3	2	--	03	40	60	100	4
3	PCC	18CS63	Web Technology and its applications	CS / IS	3	2	--	03	40	60	100	4
4	PEC	18CS64X	Professional Elective -1	CS / IS	3	--	--	03	40	60	100	3
5	OEC	18CS65X	Open Elective –A	CS / IS	3	--	--	03	40	60	100	3
6	PCC	18ISL66	Software Testing Laboratory	CS / IS	--	2	2	03	40	60	100	2
7	PCC	18ISL67	File Structures Laboratory with mini project	CS / IS	--	2	2	03	40	60	100	2
8	MP	18CSMP68	Mobile Application Development	CS / IS	--	--	2	03	40	60	100	2
9	INT	--	Internship	(To be carried out during the intervening vacations of VI and VII semesters)				--	--	--	--	--
TOTAL					15	10	06	24	320	480	800	24

Note: PCC: Professional core, PEC: Professional Elective, OE: Open Elective, MP: Mini-project, INT: Internship.

Professional Elective -1

Course code under 18XX64X	Course Title
18CS641	Data Mining and Data Warehousing
18CS642	Object Oriented Modelling and Design
18CS643	Cloud Computing and its Applications
18CS644	Advanced JAVA and J2EE
18IS645	Information Management System
Open Elective –A (Not for CSE / ISE Programs)	
18CS651	Mobile Application Development
18CS652	Introduction to Data Structures and Algorithms
18CS653	Programming in JAVA
18CS654	Introduction to Operating System

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VII SEMESTER

Sl. No	Course and Course code		Course Title	Teaching Department	Teaching Hours /Week			Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P					
1	PCC	18CS71	Artificial Intelligence and Machine Learning	CS / IS	4	--	--	03	40	60	100	4
2	PCC	18CS72	Big Data Analytics	CS / IS	4	--	--	03	40	60	100	4
3	PEC	18CS73X	Professional Elective – 2	CS / IS	3	--	--	03	40	60	100	3
4	PEC	18CS74X	Professional Elective – 3	CS / IS	3	--	--	03	40	60	100	3
5	OEC	18CS75X	Open Elective –B	CS / IS	3	--	--	03	40	60	100	3
6	PCC	18CSL76	Artificial Intelligence and Machine Learning Laboratory	CS / IS	--	--	2	03	40	60	100	2
7	Project	18CSP77	Project Work Phase – 1	CS / IS	--	--	2	--	100	--	100	1
8	INT	--	Internship	(If not completed during the vacation of VI and VII semesters, it has to be carried out during the intervening vacations of VII and VIII semesters)								
TOTAL					17	--	04	18	340	360	700	20

Note: PCC: Professional core, PEC: Professional Elective, OEC: Open Elective, INT: Internship.

Professional Elective - 2

Course code under 18CS73X	Course Title
18CS731	Software Architecture and Design Patterns
18CS732	High Performance Computing
18CS733	Advanced Computer Architectures
18CS734	User Interface Design

Professional Electives – 3

Course code under 18CS74X	Course Title
18CS741	Digital Image Processing
18CS742	Network management
18CS743	Natural Language Processing
18CS744	Cryptography
18CS745	Robotic Process Automation Design & Development

Open Elective –B (Not for CSE / ISE Programs)

18CS751	Introduction to Big Data Analytics
18CS752	Python Application Programming
18CS753	Introduction to Artificial Intelligence
18CS754	Introduction to Dot Net framework for Application Development

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VIII SEMESTER

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					Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P					
1	PCC	18CS81	Internet of Things	CS / IS	3	--	--	03	40	60	100	3
2	PEC	18CS82X	Professional Elective – 4	CS / IS	3	--	--	03	40	60	100	3
3	Project	18CSP83	Project Work Phase – 2	CS / IS	--	--	2	03	40	60	100	8
4	Seminar	18CSS84	Technical Seminar	CS / IS	--	--	2	03	100	--	100	1
5	INT	18CSI85	Internship	(Completed during the intervening vacations of VI and VII semesters and /or VII and VIII semesters.)				03	40	60	100	3
TOTAL					06	--	04	15	260	240	500	18

Note: PCC: Professional Core, PEC: Professional Elective, OEC: Open Elective, INT: Internship.

Professional Electives – 4

Course code under 18CS82X	Course Title
18CS821	Mobile Computing
18CS822	Storage Area Networks
18CS823	NoSQL Database
18CS824	Multicore Architecture and Programming