VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI
CHOICE BASED CREDIT SYSTEM (CBCS)
SCHEME OF TEACHING AND EXAMINATION 2015-2016
B.E. Computer Science & Engineering/ B.E. Information Science & Engineering

IV SEMESTER

Sl. No	Subject Code	Title	Teaching Hours /Week - Theory	Teaching Hours /Week - Practical/ Drawing	Examination - Duration	Examination - Theory/ Practical Marks	Examination - I.A. Marks	Examination - Total Marks	Credits
1	15MAT41	**Engineering Mathematics - IV**	04	--	03	80	20	100	4
2	15CS 42	**Software Engineering**	04	--	03	80	20	100	4
3	15CS43	**Design and Analysis of Algorithms**	04	--	03	80	20	100	4
4	15CS 44	**Microprocessors and Microcontrollers**	04	--	03	80	20	100	4
5	15CS45	**Object Oriented Concepts**	04	--	03	80	20	100	4
6	15CS46	**Data Communication**	04	--	03	80	20	100	4
7	15CSL47	**Design and Analysis of Algorithm Laboratory**	--	1I+2P	03	80	20	100	2
8	15CSL48	**Microprocessors Laboratory**	--	1I+2P	03	80	20	100	2
		TOTAL	**24**	**06**	**24**	**640**	**160**	**800**	**28**

Note: 'I' Stands for Instruction Hours and 'P' for practical Hours

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IV SEMESTER

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2	15CS 42	**Software Engineering**	04	--	03	80	20	100	4
3	15CS43	**Design and Analysis of Algorithms**	04	--	03	80	20	100	4
4	15CS 44	**Microprocessors and Microcontrollers**	04	--	03	80	20	100	4
5	15CS45	**Object Oriented Concepts**	04	--	03	80	20	100	4
6	15CS46	**Data Communication**	04	--	03	80	20	100	4
7	15CSL47	**Design and Analysis of Algorithm Laboratory**	--	1I+2P	03	80	20	100	2
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B.E. Computer Science & Engineering

V SEMESTER

Sl. No	Subject Code	Title	Teaching Hours /Week		Examination				Credits
			Theory	Practical/ Drawing	Duration	Theory/ Practical Marks	I.A. Marks	Total Marks	
1	**15CS51**	Management and Entrepreneurship for IT Industry	04	--	03	80	20	100	4
2	**15CS52**	Computer Networks	04	--	03	80	20	100	4
3	**15CS53**	Database Management System	04	--	03	80	20	100	4
4	**15CS54**	Automata theory and Computability	04	--	03	80	20	100	4
5	**15CS55x**	Professional Elective 1	03	--	03	80	20	100	3
6	**15CS56x**	Open Elective 1	03	--	03	80	20	100	3
7	**15CSL57**	Computer Network Laboratory	--	1I+2P	03	80	20	100	2
8	**15CSL58**	DBMS Laboratory with mini project	--	1I+2P	03	80	20	100	2
		TOTAL	22	6	24	640	160	800	26

Professional Elective 1	
15CS551	Object Oriented Modeling and Design
15CS552	Introduction to Software Testing
15CS553	Advanced JAVA and J2EE
15CS554	Advanced Algorithms

1. **Professional Elective: Electives relevant to chosen specialization / branch**
2. **Open Elective: Electives from other technical and/or emerging subject areas (Announced separately)**

VI SEMESTER

Sl. No	Subject Code	Title	Teaching Hours /Week Theory	Teaching Hours /Week Practical/ Drawing	Examination Duration	Examination Theory/ Practical Marks	Examination I.A. Marks	Examination Total Marks	Credits
1	**15CS61**	Cryptography, Network Security and Cyber Law	04	--	03	80	20	100	4
2	**15CS62**	Computer Graphics and Visualization	04	--	03	80	20	100	4
3	**15CS63**	System Software and Compiler Design	04	--	03	80	20	100	4
4	**15CS64**	Operating Systems	04	--	03	80	20	100	4
5	**15CS65x**	Professional Elective 2	03	--	03	80	20	100	3
6	**15CS66x**	Open Elective 2	03	--	03	80	20	100	3
7	**15CSL67**	System Software and Operating System Laboratory	--	1I+2P	03	80	20	100	2
8	**15CSL68**	Computer Graphics Laboratory with mini project	--	1I+2P	03	80	20	100	2
		TOTAL	**22**	**6**	**24**	**640**	**160**	**800**	**26**

Professional Elective 2	
15CS651	Data Mining and Data Warehousing
15CS652	Software Architecture and Design Patterns
15CS653	Operations research
15CS654	Distributed Computing system

1. **Professional Elective: Electives relevant to choosen specialization / branch**
2. **Open Elective: Electives from other technical and/or emerging subject areas (Announced separately)**

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VII SEMESTER

Sl. No	Subject Code	Title	Teaching Hours /Week		Examination				Credits
			Theory	Practical/ Drawing	Duration	I.A. Marks	Theory/ Practical Marks	Total Marks	
1	15CS71	Web Technology and its applications	04	--	03	20	80	100	4
2	15CS72	Advanced Computer Architectures	04	--	03	20	80	100	4
3	15CS73	Machine Learning	04	--	03	20	80	100	4
4	15CS74x	Professional Elective 3	03	--	03	20	80	100	3
5	15CS75x	Professional Elective 4	03	--	03	20	80	100	3
6	15CSL76	Machine Learning Laboratory	--	1I+2P	03	20	80	100	2
7	15CSL77	Web Technology Laboratory with mini project	--	1I+2P	03	20	80	100	2
8	15CSP78	Project Phase 1 + Seminar	--	--	--	100	--	100	2
		TOTAL	18	6	21	240	560	800	24

Professional Elective 3			Professional Elective 4	
15CS741	Natural Language Processing		15CS751	Soft and Evolutionary Computing
15CS742	Cloud Computing and its Applications		15CS752	Computer Vision and Robotics
15CS743	Information and Network Security		15CS753	Digital Image Processing
15CS744	Unix System Programming		15CS754	Storage Area Networks

1. Professional Elective: Electives relevant to choosen specialization / branch
2. Project Phase 1 + Seminar : Literature Survey, Problem Identification, Objectives and Methodology, Submission of Synopsis and Seminar

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VIII SEMESTER

Sl. No	Subject Code	Title	Teaching Hours /Week		Examination				Credits
			Theory	Practical/ Drawing	Duration	I.A. Marks	Theory/ Practical Marks	Total Marks	
1	15CS81	Internet of Things and Applications	4	--	3	20	80	100	4
2	15CS82	Big Data Analytics	4	--	3	20	80	100	4
3	15CS83x	Professional Elective 5	3	--	3	20	80	100	3
4	15CS84	Internship / Professional Practice	Industry Oriented		3	50	50	100	2
5	15CSP85	Project work phase II	--	6	3	100	100	200	5
6	15CSS86	Seminar	--	4	--	100	--	100	2
		TOTAL	11	10	15	310	390	700	20

Professional Elective 5	
15CS831	High Performance Computing
15CS832	User Interface Design
15CS833	Network management
15CS834	System Modeling and Simulation

1. Professional Elective: Electives relevant to chosen specialization / branch
2. Internship / Professional Practice: To be carried out between 6th and 7th semester vacation or 7th and 8th semester vacation period