
 <p><b>SAPTHAGIRI</b> College of Engineering Creating Tomorrow</p>	<p align="center"><b>SRI SRINIVASA EDUCATIONAL AND CHARITABLE TRUST®</b>  <b>SAPTHAGIRI COLLEGE OF ENGINEERING</b>          (Affiliated to Visvesvaraya Technological University, Belagavi and Approved by          AICTE, New Delhi)          (Accredited by NAAC with "A" grade) (NBA Accredited-CSE, ECE, EEE, ISE, ME)          (An ISO 9001:2015 &amp; ISO 14001:2015 Certified)  <b>DEPARTMENT OF ISE</b></p>	 <p><b>SCE</b> <b>IQAC</b></p>
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**1.3.2 Number of courses that include experiential learning through project work/field work/internship during the year 2021-22**

**Program name :** Information Science& Engineering

**Program code :** IS

Sl. No.	Name of the Course that include experiential learning through project work/field work/internship	Course code	Title of the project work/field work/internship
1.	Data Structures and Applications	18CS32	Drowsiness Detection Using ML
2.	Analog and Digital Electronics	18CS33	Plant Disease Detection using Deep Learning Approach
3.	Computer Organization	18CS34	Detection of Pneumonia Due To COVID-19 Using Convolutional Neural Network
4.	Software Engineering	18CS35	Farmer Friendly Crop Price Prediction Model
5.	Discrete Mathematical Structures	18CS36	Gaze –Based Secured Authentication Using Morse code
6.	Analog and Digital Electronics Laboratory	18CSL37	Smart Traffic Sign Detection
7.	Data Structures Laboratory	18CSL38	Retinal Disease Classification Using Deep learning Frameworks
8.	Complex Analysis, Probability and Statistical Methods	18MAT41	Image captioning for blind people using ML and DL
9.	Design and Analysis of Algorithms	18CS42	Intelligent Packaging Solutions
10.	Operating Systems	18CS43	Predicting Unwanted User in Social Media
11.	Microcontroller and Embedded Systems	18SC44	CKD Using Machine Learning
12.	Object Oriented Concepts	18CS45	Diagnosis of Pneumonia from Chest X-Ray Image Using Deep Learning
13.	Data Communication	18CS46	Mouse and Keyboard Motion Sensing Using Hand Signs
14.	Design and Analysis of Algorithm Laboratory	18CSL47	Healthcare Assistant and Companion Using AI-ML and OpenCV
15.	Microcontroller and Embedded Systems Laboratory	18CSL48	Network Intrusion Detection System
16.	Management,	18CS51	Face Mask and Social Distance Detection- Using AI

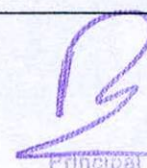
  
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	Entrepreneurship for IT idustry		and ML
17.	Computer Networks and Security	18CS52	Crop Yield Prediction Model
18.	Database Management System	18CS53	Crowd Counting Using Aritificial Intelligence and Machine Learning
19.	Automata theory and Computability	18CS54	Efficient Eye Blink Detection Method to Assist Paralyed Patients Using Artificial Intelligence
20.	Application Development using Python	18CS55	Fake Currency Detection using Image Processing
21.	Unix Programming	18CS56	Collaborative Compiler with Pair Programming
22.	Computer Network Laboratory	18CSL57	Leukemia Cancer Cells using Image Processing
23.	DBMS Laboratory with mini project	18CSL58	Soldier Tracking and Health Monitoring System
24.	File Structures	18IS61	Suicidal Ideation Detection using AI and ML
25.	Software Testing	18IS62	Crack Detection in Railway Tracks Using CNN Algorithm
26.	Web Technology and its applications	18CS63	IoT Based Real Time LPG Gas Detection
27.	Cloud Computing	18CS643	Prediction of Autism Spectrum Disorder Using Random Forst and Adaboost Algorithm
28.	Software Testing Laboratory	18ISL66	Credit Card Fraud Detections Using MI
29.	File Structures Laboratory with mini project	18ISL67	Gesture Control Car Using Arduino
30.	Mobile Application Development	18CSMP68	Availability of Car Parking Slot Using YOLOv2 Algorithm
31.	Artificial Intelligence and Machine Learning	18CS71	Online Test Cheat Monitoring Using AI and ML
32.	Big Data Analytics	18CS72	E-Bidding System Using Block Chain Technology
33.	Software Architecture and Design Patterns	18CS731	Visual Question Answering using Deep Learning
34.	Cryptography	18CS744	
35.	Open Elective –B	18CS75X	Bank details finder Portal
36.	Artificial Intelligence and Machine Learning Laboratory	18CSL76	Pharmacy Management System
37.	Project Work Phase – 1	18CSP77	Book My Show Management System
38.	Internet of Things	18CS81	Cyber Cafe Management System
39.	Storage Area Network	18CS822	Space research Database Management System
40.	Project Work Phase – 2	18CSP83	Online food order and Delivery System
41.	Technical Seminar	18CSS84	Online Survey Management System



42.	Internship	18CSI85	Zoo Management System
43.			Online Alumni Management System
44.			Online DJ booking Management System
45.			Railway Reservation System
46.			Online Job Portal
47.			Recruitment Management System
48.			Life Insurance Management System
49.			Gym Management System
50.			Bank MICR Code Finder Portal
51.			Airline Reservation Management System
52.			Crime Management System
53.			Hospital Management System
54.			Online Book Store Management System
55.			Farmer Management System
56.			Dairy Farm Shop Management System
57.			Flight Management System
58.			Superstore Sales Management System
59.			Student Attendance Management System
60.			Online Result Management System
61.			Covid Bed Slot Management System
62.			Car Rental Management Portal
63.			Foodie Zone Management System
64.			Online Cake Shop Management System
65.			Bus Pass Management System
66.			Bike Rental Management System
67.			Online Feedback System
68.			Online Shopping Portal System
69.			Football Management System
70.			Wedding Reservation System
71.			Flight Reservation System
72.			Time Table Management System
73.			Hospital Patient Management System
74.			IFSC Code Finder Portal



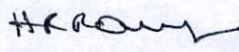


75.		Vehicle Booking Portal System
76.		Security Management System
77.		Apartment Visitors Management System
78.		Home Rental System
79.		Online House Rental Management System
80.		Online Medicine Guide
81.		Share Market Database Management System
82.		Laundry Management System
83.		Space Research Database Management System
84.		Inventory Management System
85.		Bus Pass Management System
86.		Restaurant Seat Booking Management System
87.		Covid Bed Slot Booking Management System
88.		Book My Show
89.		Beauty Parlor Management System
90.		Real Estate Management System
91.		Food Recipe Management System
92.		Farm Management System
93.		Covid -19 Testing Management System
94.		Online Gas Booking System
95.		Income and Expenses Management System
96.		Car Wash Management System
97.		Online Food Order Management System
98.		Book Store Management System
99.		Student Management System
100.		Online Feedback System
101.		
102.		Voting System
103.		The 2048 Game
104.		Login and Registration Page
105.		Library Management System
106.		Student Management System
107.		Railway Reservation System



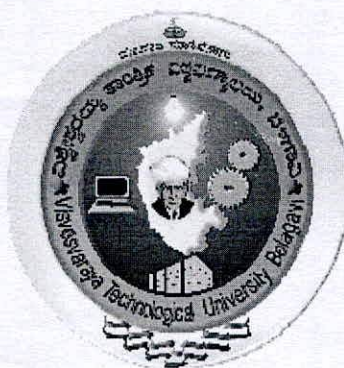
108.		Building & attractive website for a local business using HTML & CSS
109.		The Quiz Game
110.		Taj Mahal
111.		Bank Management System
112.		Weather App
113.		Speech to text converter
114.		Bitflix
115.		Encryption & Decryption on Circular Queue
116.		Restaurant Billing System
117.		Food Court Billing System
118.		Digital Voting System
119.		Tour & Travel Management
120.		Temperature Convertor
121.		Hotel Management system
122.		Bank Management system
123.		Aadhaar Card Registration
124.		Home Automation

  
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## VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI



3rd to 8th Semester BE – Information Science and Engineering

Scheme of Teaching and Examinations

Outcome Based Education (OBE) and Choice Based Credit System  
(CBCS)

(Effective from the academic year 2018 – 19)

  
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**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**

III SEMESTER FOR												
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	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			
					18	10		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.

**Course prescribed to lateral entry Diploma holders admitted to III semester of Engineering programs**

10	NCMC	18MATDIP31	Additional Mathematics - I	Mathematics	02	01	--	03	40	60	100	0
<p>(a) The mandatory non – credit courses Additional Mathematics I and II prescribed for III and IV semesters respectively, to the lateral entry Diploma holders admitted to III semester of BE/B.Tech. programs, shall attend the classes during the respective semesters to complete all the formalities of the course and appear for the University examination. In case, any student fails to register for the said course/ fails to secure the minimum 40 % of the prescribed CIE marks, he/she shall be deemed to have secured F grade. In such a case, the students have to fulfill the requirements during subsequent semester/s to appear for SEE.</p> <p>(b) These Courses shall not be considered for vertical progression, but completion of the courses shall be mandatory for the award of degree</p>												

**Courses prescribed to lateral entry B. Sc degree holders admitted to III semester of Engineering programs**

Lateral entrant students from B.Sc. Stream, shall clear the non-credit courses Engineering Graphics and Elements of Civil Engineering and Mechanics of the First Year Engineering Programme. These Courses shall not be considered for vertical progression, but completion of the courses shall be mandatory for the award of degree.

**AICTE Activity Points to be earned by students admitted to BE/B.Tech./B. Plan. day college programme (For more details refer to Chapter 6, AICTE Activity Point Programme, Model Internship Guidelines):** Over and above the academic grades, every Day College regular student admitted to the 4 years Degree programme and every student entering 4 years Degree programme through lateral entry, shall earn 100 and 75 Activity Points respectively for the award of degree through AICTE Activity Point Programme. Students transferred from other Universities to fifth semester are required to earn 50 Activity Points from the year of entry to VTU. The Activity Points earned shall be reflected on the student's eighth semester Grade Card. The activities can be spread over the years, anytime during the semester weekends and holidays, as per the liking and convenience of the student from the year of entry to the programme. However, minimum hours' requirement should be fulfilled. Activity Points (non-credit) have no effect on SGPA/CGPA and shall not be considered for vertical progression. In case students fail to earn the prescribed activity Points, Eighth semester Grade Card shall be issued only after earning the required activity Points. Students shall be admitted for the award of degree only after the release of the Eighth semester Grade Card.

  
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**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)**

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									
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.

**Course prescribed to lateral entry Diploma holders admitted to III semester of Engineering programs**

10	NCMC	18MATDIP41	Additional Mathematics - II	Mathematics	02	01	--	03	40	60	100	0
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(a) The mandatory non – credit courses Additional Mathematics I and II prescribed for III and IV semesters respectively, to the lateral entry Diploma holders admitted to III semester of BE/B.Tech programs, shall attend the classes during the respective semesters to complete all the formalities of the course and appear for the University examination. In case, any student fails to register for the said course/ fails to secure the minimum 40 % of the prescribed CIE marks, he/she shall be deemed to have secured F grade. In such a case, the student have to fulfil the requirements during subsequent semester/s to appear for SEE.

(b) These Courses shall not be considered for vertical progression, but completion of the courses shall be mandatory for the award of degree

**Courses prescribed to lateral entry B. Sc degree holders admitted to III semester of Engineering programs**

**AICTE activity Points:** In case students fail to earn the prescribed activity Points, Eighth semester Grade Card shall be issued only after earning the required activity Points. Students shall be admitted for the award of degree only after the release of the Eighth semester Grade Card.

  
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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	
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

**Note: PCC: Professional Core, HSMC: Humanity and Social Science.**

**AICTE activity Points:** In case students fail to earn the prescribed activity Points, Eighth semester Grade Card shall be issued only after earning the required activity Points. Students shall be admitted for the award of degree only after the release of the Eighth semester Grade Card.

  
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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 -I	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 -I**

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
<b>Open Elective –A (Not for CSE / ISE Programs)</b>	
18CS651	Mobile Application Development
18CS652	Introduction to Data Structures and Algorithms
18CS653	Programming in JAVA
18CS654	Introduction to Operating System

Students can select any one of the open electives offered by any Department (Please refer to the list of open electives under 18CS65X).

Selection of an open elective is not allowed provided,

- The candidate has studied the same course during the previous semesters of the programme.
- The syllabus content of open elective is similar to that of Departmental core courses or professional electives.
- A similar course, under any category, is prescribed in the higher semesters of the programme.

Registration to electives shall be documented under the guidance of Programme Coordinator/ Adviser/Mentor.

**Mini-project work:** 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 senior faculty members of the Department, one of whom shall be the Guide. The CIE marks awarded for the Mini-project work, shall be based on the evaluation of 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.

(ii) **Interdisciplinary:** Continuous Internal Evaluation shall be group wise at the college level with the participation of all the guides of the college. The CIE marks awarded for the Mini-project, shall be based on the evaluation of 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.

**SEE for Mini-project:**

(i) **Single discipline:** Contribution to the Mini-project and the performance of each group member shall be assessed individually in the semester end examination (SEE) conducted at the department.

(ii) **Interdisciplinary:** Contribution to the Mini-project and the performance of each group member shall be assessed individually in semester end examination (SEE) conducted separately at the departments to which the student/s belong to.

**Internship:** All the students admitted to III year of BE/B.Tech shall have to undergo mandatory internship of 4 weeks during the vacation of VI and VII semesters and /or VII and VIII semesters. A University examination shall be conducted during VIII semester and the prescribed credit shall be included in VIII semester. Internship shall be considered as a head of passing and shall be considered for the award of degree. Those, who do not takeup/complete the internship shall be declared fail and shall have to complete during subsequent University examination after satisfying the internship requirements

**AICTE activity Points:** In case students fail to earn the prescribed activity Points, Eighth semester Grade Card shall be issued only after earning the required activity Points. Students shall be admitted for the award of degree only after the release of the Eighth semester Grade Card.



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**(Effective from the academic year 2018 – 19)**

**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

Students can select any one of the open electives offered by any Department (Please refer to the list of open electives under 18CS75X).

Selection of an open elective is not allowed provided,

- The candidate has studied the same course during the previous semesters of the programme.
- The syllabus content of open elective is similar to that of Departmental core courses or professional electives.
- A similar course, under any category, is prescribed in the higher semesters of the programme.

Registration to electives shall be documented under the guidance of Programme Coordinator/ Adviser/Mentor.

**Project work:** Based on the ability/abilities of the student/s and recommendations of the mentor, a single discipline or a multidisciplinary project can be assigned to an individual student or to a group having not more than 4 students. In extraordinary cases, like the funded projects requiring students from different disciplines, the project student strength can be 5 or 6.

**CIE procedure for Project Work Phase - 1:**

(i) **Single discipline:** The CIE marks shall be awarded by a committee consisting of the Head of the concerned Department and two senior faculty members of the Department, one of whom shall be the Guide. The CIE marks awarded for the project work phase -1, shall be based on the evaluation of the project work phase -1 Report (covering Literature Survey, Problem identification, Objectives and Methodology), 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.

(ii) **Interdisciplinary:** Continuous Internal Evaluation shall be group wise at the college level with the participation of all guides of the college. Participation of external guide/s, if any, is desirable. The CIE marks awarded for the project work phase -1, shall be based on the evaluation of project work phase -1 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.

**Internship:** All the students admitted to III year of BE/B.Tech shall have to undergo mandatory internship of 4 weeks during the vacation of VI and VII semesters and /or VII and VIII semesters. A University examination shall be conducted during VIII semester and the prescribed credit shall be included in VIII semester. Internship shall be considered as a head of passing and shall be considered for the award of degree. Those, who do not takeup/complete the internship shall be declared fail and shall have to complete during subsequent University examination after satisfying the internship requirements

**AICTE activity Points:** In case students fail to earn the prescribed activity Points, Eighth semester Grade Card shall be issued only after earning the required activity Points. Students shall be admitted for the award of degree only after the release of the Eighth semester Grade Card.



**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)**

**VIII 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	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
<b>TOTAL</b>					<b>06</b>	<b>--</b>	<b>04</b>	<b>15</b>	<b>260</b>	<b>240</b>	<b>500</b>	<b>18</b>

**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

**Project Work CIE procedure for Project Work Phase - 2:**

(i) **Single discipline:** The CIE marks shall be awarded by a committee consisting of the Head of the concerned Department and two senior faculty members of the Department, one of whom shall be the Guide. The CIE marks awarded for the project work phase -2, shall be based on the evaluation of project work phase -2 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.

(ii) **Interdisciplinary:** Continuous Internal Evaluation shall be group wise at the college level with the participation of all guides of the college. Participation of external guide/s, if any, is desirable. The CIE marks awarded for the project work phase -2, shall be based on the evaluation of project work phase -2 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.

**SEE for Project Work Phase - 2:**

(i) **Single discipline:** Contribution to the project and the performance of each group member shall be assessed individually in semester end examination (SEE) conducted at the department.

(ii) **Interdisciplinary:** Contribution to the project and the performance of each group member shall be assessed individually in semester end examination (SEE) conducted separately at the departments to which the student/s belong to.

**Internship:** Those, who have not pursued /completed the internship shall be declared as fail and have to complete during subsequent University examination after satisfying the internship requirements

**AICTE activity Points:** In case students fail to earn the prescribed activity Points, Eighth semester Grade Card shall be issued only after earning the required activity Points. Students shall be admitted for the award of degree only after the release of the Eighth semester Grade Card. Activity points of the students who have earned the prescribed AICTE activity Points shall be sent the University along with the CIE marks of 8th semester. In case of students who have not satisfied the AICTE activity Points at the end of eighth semester, the column under activity Points shall be marked NSAP (Not Satisfied Activity Points).




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