

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI  
**B.E. in Computer Science and Engineering(IoT)**  
**Scheme of Teaching and Examinations2022**  
 Outcome Based Education (OBE) and Choice Based Credit System (CBCS)  
 (Effective from the academic year 2023-24)

**VII SEMESTER (Swappable VII and VIII 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	SDA	Duration in hours	CIE Marks	SEE Marks	Total Marks	
1	IPCC	BCO701	IOT communication Protocols	TD:CO PSB:CO	3	0	2		03	50	50	100	4
2	IPCC	BCO702	Machine Learning	TD:CO PSB:CO	3	0	2		03	50	50	100	4
3	PCC	BCS703	Cryptography & Network Security	TD:CO PSB:CO	4	0	0		03	50	50	100	4
4	PEC	BCO714x	<b>Professional Elective Course</b>	TD:CO PSB:CO	3	0	0		03	50	50	100	3
5	OEC	BCO755x	<b>Open Elective Course</b>	TD:CO PSB:CO	3	0	0		01	50	50	100	3
6	PROJ	BCO786	<b>Major Project Phase-II</b>	TD:CO PSB:CO	0	0	12		03	100	100	200	6
										<b>400</b>	<b>300</b>	<b>700</b>	<b>24</b>

**Professional Elective Course**

BCO714A	Smart sensor technologies	BCO714C	IOT Automation
BCO714B	IOT platforms and System Design	BCS714A	Deep Learning

**Open Elective Course**

BCO755A	Introduction to DBMS	BCO755C	Software Engineering
BCO755B	Introduction to Algorithms	BCO755D	Introduction to Embedded Systems

**PCC:** Professional Core Course, **PCCL:** Professional Core Course laboratory, **PEC:** Professional Elective Course, **OEC:** Open Elective Course **PR:** Project Work, **L:** Lecture, **T:** Tutorial, **P:** Practical **S= SDA:** Skill Development Activity, **CIE:** Continuous Internal Evaluation, **SEE:** Semester End Evaluation. **TD-** Teaching Department, **PSB:** Paper Setting department, **OEC:** Open Elective Course, **PEC:** Professional Elective Course. **PROJ:** Project work

**Note: VII and VIII semesters of IV years of the program**

**(1)** Institutions can swap the VII and VIII Semester Schemes of Teaching and Examinations to accommodate research internships/ industry internships after the VI semester.

**(2)** Credits earned for the courses of VII and VIII Semester Scheme of Teaching and Examinations shall be counted against the corresponding semesters whether the VII or VIII semesters is completed during the beginning of the IV year or the later part of IV years of the program.

**Professional Elective Courses (PEC):** A professional elective (PEC) course is intended to enhance the depth and breadth of educational experience in the Engineering and Technology curriculum. Multidisciplinary courses that are added supplement the latest trend and advanced technology in the selected stream of engineering. Each group will provide an option to select one course. The minimum number of students' strengths for offering professional electives is 10. However, this conditional shall not be applicable to cases where the admission to the program is less than 10.

**Open Elective Courses:**

Students belonging to a particular stream of Engineering and Technology are not entitled to the open electives offered by their parent Department. However, they can opt for an elective offered by other Departments, provided they satisfy the prerequisite condition if any. Registration to open electives shall be documented under the guidance of the Program Coordinator/ Advisor/Mentor. The minimum numbers of students' strength for offering Open Elective Course is 10. However, this condition shall not be applicable to class where the admission to the program is less than 10.

**PROJECT WORK (21XXP75):** The objective of the Project work is

- (i)** To encourage independent learning and the innovative attitude of the students.
- (ii)** To develop interactive attitude, communication skills, organization, time management, and presentation skills.
- (iii)** To impart flexibility and adaptability.
- (iv)** To inspire team working.
- (v)** To expand intellectual capacity, credibility, judgment and intuition.
- (vi)** To adhere to punctuality, setting and meeting deadlines.
- (vii)** To install responsibilities to oneself and others.
- (viii)** To train students to present the topic of project work in a seminar without any fear, face the audience confidently, enhance communication skills, involve in group discussion to present and exchange ideas.

**CIE procedure for Project Work:**

**(1) 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, shall be based on the evaluation of the project work 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.