



Cambridge Institute of Technology, Bengaluru

(An Autonomous Institution affiliated to VTU)

Approved by UGC & AICTE, New Delhi, Approved with 2(f) status by UGC,

Affiliated to VTU, Accredited by NAAC with A+ Grade, UG programs, ECE, EEE, ISE and CSE Accredited by NBA, Certified by ISO 9001:2015



Department of Computer Science & Engineering Stream (CSE, CSE-IOT&CS, ISE)

B.E. 3rd & 4th Semester

Scheme for the

Department of Computer Science & Engineering Stream (CSE, CSE-IOT&CS, ISE)

Academic year 2023-24



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3rd Semester

Sl.No.	Course Type	Course Title	Course Code	Teaching Dept.	L	T	P	Credits	CIE	SEE	Total
1	BSC	Applied Mathematics -III	MC201	BS	3	2	0	4	50	50	100
2	PCC	Digital Design and Computer Organization	CS202	CSE/ISE	2	2	0	3	50	50	100
3	PCCL	Digital Design and Computer Organization Lab	CS203	CSE/ISE	0	0	2	1	50	50	100
4	PCC	Data Structures and Applications	CS204	CSE/ISE	3	2	0	4	50	50	100
5	PCCL	Data Structures and Applications Lab	CS205	CSE/ISE	0	0	2	1	50	50	100
6	IPCC	Object Oriented Programming with Java	CS206	CSE/ISE	2	0	2	3	50	50	100
7	ESC	Engineering Science Course	CS22X	CSE/ISE	2	1	1	3	50	50	100
8	BSC	Biology for Engineers	BG207	Dept/BS	2	0	0	2	50	50	100
9	NCMC	NSS – Phase 1	NS208	NSS	0	2	0	0	50	0	50
		Physical Education (PE) (Sports and Athletics) – Phase 1	PE208	PED							
		Yoga for a Better Life - Phase 1	YG208	Yoga							
10	NCMC	Additional Mathematics/Unix Shell Programming and GIT	DM209 /CS209	BS/CSE/ISE	2	0	0	0	50	50	100
					16	9	7	21	500	450	950

IBSC: Integrated Basic Science Course, **PCC:** Professional Core Course, **PCCL:** Professional Core Course laboratory, **IPCC :** Integrated Professional Core Course, **ESC:** Engineering Science Course, **IESC:** Integrated Engineering Science Course, **IPEC,** **HSMC:** Humanity and Social Science & Management Course, **AEC:** Ability Enhancement Course, **UHV:** Universal Human Value Course, **IPEC:** Integrated Professional Elective Course, **IOEC:** Integrated Open Elective Course, **CER :** Certification Course, **PROJ:**Project, **INT:** Internship, **NCMC:** Non-Credit Mandatory Course

L: Lecture, **T:** Tutorial, **P:** Practical,

CIE: Continuous Internal Evaluation, **SEE:** Semester End Evaluation,

In **IPCC** courses, practical components shall be included, but not limited to the few experiments. IPCC courses shall have list few practice experiments and open ended experiment based on the concepts covered in the course. The expected outcome is students have to do the guided project related to the course.

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 (YG)** with the concerned coordinator of the course during the III semester. Activities shall be carried out between III semesters to the IV semester (for 2 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.

ESC

Sl.No	Course Title	Course Code
1	Operating System	CS221
2	UNIX Programming	CS222



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4th Semester											
Sl.No.	Course Type	Course Title	Course Code	Teaching Dept.	L	T	P	Credits	CIE	SEE	Total
1	BSC	Applied Mathematics -IV	MC251	BS	2	2	0	3	50	50	100
2	PCC	Design and Analysis of Algorithms	CS252	CSE/ISE	3	0	0	3	50	50	100
3	PCCL	Design and Analysis of Algorithms Lab	CS253	CSE/ISE	0	0	2	1	50	50	100
4	PCC	Microprocessor & Microcontrollers	CS254	CSE/ISE	3	0	0	3	50	50	100
5	PCCL	Microprocessor & Microcontrollers Lab	CS255	CSE/ISE	0	0	2	1	50	50	100
6	IPCC	Web Programming	CS256	CSE/ISE	2	0	2	3	50	50	100
7	ESC	Engineering Science Course	CS26X	CSE/ISE	3	0	0	3	50	50	100
8	AEC	Ability Enhancement Course	CS27X	CSE/ISE	2	0	0	2	50	50	100
9	UHV	Universal Human Values and Life Skills	HV257	Dept/BS	2	0	0	2	50	50	100
10	NCMC	NSS – Phase 2	NS258	NSS	0	2	0	0	50		50
		Physical Education (PE) (Sports and Athletics) – Phase 2	PE258	PED							
		Yoga for a Better Life - Phase 2	YG258	Yoga							
					17	4	6	21	500	450	950

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ESC

Sl. No	Course Title	Course Code
1	Finite Automata and Formal Languages	CS261
2	Optimization Techniques	CS262

AEC

Sl.NO	Course Title	Course Code
1	Special Topic	CS271
2	Unix Shell Programming with GIT	CS272
3	Indian Knowledge System	CS273
4	Arduino - Programming and Interfacing	CS274