

## COMPUTER SCIENCE & ENGINEERING

B.TECH.				Template No. CSE-1				
C  O  U  R  S  E  S	SEMESTER							
	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>	8 <sup>th</sup>
	MTH101A [11]	MTH102A [11]	CS201A [09]	ESO207A [12]*	CS330A [12]	CS335A [13]	DE-4 [09]	DE-5 [09]
	PHY103A [11]	PHY102A [11]	CS202A + CS203B [10]	CS220A [12]	CS340A [09]	UGP-2/DE-1/OE-1 (CS396A) [09]	UGP-3/DE-1/OE-1 (CS498A) [09]	OE-4 [09]
	CHM101A [03]	PHY101A [03]	SO/ESO [~10]*	CS251A [06]	CS345A [09]	DE-2 [09]	OE-2 [09]	OE-5 [09]
	ESC101A [14]	LIF101A [06]	ESC201A [14]	SO [11]* (MSO201A)	CS300A [02]	DE-3 [09]	OE-3 [09]	OE-6 [09]
	ENG112A/HSS-1 (Level-1) [11]	CHM102A [08]	COM200A [05]	HSS-2 (Level-1) [11]	CS252A [06]	HSS-3 (Level-2) [09]	HSS-4 (Level-2) [09]	HSS-5 (Level-2) [09]
	PE101A [03]	PE102A [03]	TA201A [06]	TA202A [06]	SO/ESO [~10]*	-	-	UGP-4 [09] (CS499) (extra credits)
	-	TA101A [09]	-	-	UGP-1 [04] (CS395A) (extra credits)	-	-	-
53		51	54*	58	48/52*	49	45	45/54

### MINIMUM CREDIT REQUIREMENT FOR GRADUATION:

Institute Core (IC)	:	124	Credits
Department Compulsory (DC)	:	88	Credits
Department Elective (DE)	:	45	Credits
Open Elective (OE)	:	54	Credits
*SO/ ESO	:	40	Credits
HSS (Level-I)	:	22	Credits
HSS (Level-II)	:	27	Credits
<b>Total</b>	:	<b>400</b>	<b>Credits</b>

### BASKET – A

CS315A [09]
CS350A [09]
CS360A [09]
CS771A [09]
CS422A [09]
CS425A [09]
CS433A [09]
CS455A [09]

### REMARKS:

- \* The 10 credits shown against each ESO/SO in the template are only indicative. ESO/SO courses are available in 6-14 credits each. Students need to ensure that their total ESO/SO credits total up to AT LEAST 40. ESO207A is compulsory for CSE students in the 4th semester.
- UGP-2 (CS396A) & UGP-3 (CS498A) are optional but if taken, one may be counted as DE and the other as OE.
- At least 2 DEs must be selected from Basket – A.
- UGP-1 and UGP-4 (CS395A & CS499A) are optional and do not count towards DE/OE credits.
- Upto 36 OE credits may be waived from the minimum requirements for students opting for either Dual Degree or Double Major programme.

BT-MT (PG Part – Category – A) (from the same department)				Template No. CSE-2		
C O U R S E S		SEMESTER				
	1 <sup>st</sup> to 6 <sup>th</sup>	7 <sup>th</sup>	8 <sup>th</sup>	SUMMER	9 <sup>th</sup>	10 <sup>th</sup>
	COURSES SAME AS B.TECH. TEMPLATE	DE PG-1 [09]	DE PG-3 [09]	M.Tech. Thesis [09]	DE PG-6 [09]	M.Tech. Thesis [36]
		DE PG-2 [09]	DE PG-4 [09]	-	M.Tech. Thesis [27]	-
		-	DE PG-5 [09]		-	
		M.Tech. Thesis [09]				
	18	36	09	36	36	

**MINIMUM CREDIT REQUIREMENT IN M.TECH PART FOR GRADUATION:**

PG Component : 54 Credits

Thesis Component : 81 Credits

**REMARKS:**

- 1) Upto 36 OE credits may be used from the BT minimum requirements to fulfil requirements for the BT-MT dual degree programme. These will be waived from the BT programme and counted towards PG requirements. All other minimum BT credit requirements need to be fulfilled, including those that are slotted in the 7<sup>th</sup> and 8<sup>th</sup> semester of the BT template.

DOUBLE MAJOR		Template No. CSE-3
C		
	Odd Semester	Even Semester
O		
	CS202A + CS203A [10]	CS220A [12]
U	CS330A [12]	CS335A [13]
	CS340A [09]	CS251A [06]
R	CS345A [09]	CS DE-1 [09]
	CS252A [06]	CS DE-4 [09]
S	CS DE-2 [09]	-
	CS DE-3 [09]	
E	-	
S	64	49*

**TOTAL MANDATORY CREDITS FOR SECOND MAJOR IN COMPUTER SCIENCE:** 113\* CREDITS

**REMARKS:**

- 1) Two DEs should be selected from Basket-A (Details of Basket-A are available in CSE B.Tech. template).
- 2) Total CSE-DE credits should be at least 36.
- 3) Upto 36 OE credits may be waived from the parent department BT/BS graduation requirements when they are used to fulfill requirements for the double major.
- 4) \*ESO207 is a compulsory course to be done, but its credits will be counted against the ESO requirement of the first major.

MINOR			Template No. CSE-4	
Title	ALGORITHMS	COMPUTER SYSTEMS	THEORY OF COMPUTING	MACHINE LEARNING & APPLICATION
C O U R S E S	ESO207A [12] *	ESO207A [12] *	ESO207A [12] *	ESO207A [12] *
	CS345A [09]		CS340A [09]	CS771A [09]
	Any ONE from:	Any TWO from:	Any ONE from:	Any ONE from:
	CS645A [09]	CS220A [12]	CS640A [09]	CS671A [09]
	CS646A [09]	CS330A [12]	CS641A [09]	CS672A [09]
	CS647A [09]	CS315A [09]	CS642A [09]	CS674A [09]
	CS648A [09]	CS335A [12]	CS643A [09]	CS675A [09]
	CS663A [09]	CS422A [09]	CS644A [09]	CS676A [09]
	CS664A [09]	CS425A [09]	CS649A [09]	CS678A [09]
	CS719A [09]	CS433A [09]	CS680A [09]	CS679A [09]
	CS743A [09]	CS455A [09]	CS681A [09]	CS685A [09]
			CS687A [09]	CS686A [09]
			CS740A [09]	CS772A [09]
			CS741A [09]	CS773A [09]
			CS742A [09]	CS774A [09]
				CS782A [09]

REMARKS:

- 1) For each Minor stream, the minimum total credit requirement is 30.
- 2) In each minor stream any related course(s), even if not mentioned in the list of optional courses, may be taken as optional with the permission of the CSE DUGC.
- 3) \*CS210 and ESO207 may be considered equivalent when used as course prerequisite for another course.