

B.E. COMPUTER SCIENCE AND ENGINEERING
Regulations 2019 (R)

Semester I

Sl. No.	Course Code	Course Title	Category	Contact Periods	L	T	P	C
THEORY								
		Induction Program	-	-	-	-	-	-
1	R19MA101	Matrix Algebra and Calculus	BS	4	3	1	0	4
2	R19CY101	Engineering Chemistry	BS	3	3	0	0	3
3	R19CS101	Problem Solving using C	ES	3	3	0	0	3
4	R19CS104	Application Design and Development	ES	4	2	2	0	4
THEORY CUM PRACTICAL								
5	R19HS151	Technical English	HS	4	2	0	2	3
PRACTICALS								
6	R19CY111	Chemistry Laboratory	BS	2	0	0	2	1
7	R19GE111	Engineering Practices Laboratory	ES	4	0	0	4	2
8	R19CS111	Problem Solving using C Laboratory	ES	4	0	0	4	2
PROFESSIONAL DEVELOPMENT								
9	R19EM101	Soft Skills	EM	2	0	0	2	1
TOTAL				30	13	3	14	23

Semester II

Sl. No.	Course Code	Course Title	Category	Contact Periods	L	T	P	C
THEORY								
1	R19HS11X	Language Elective	HS	3	3	0	0	3
2	R19MA102	Advanced Calculus and Complex Variables	BS	4	3	1	0	4
3	R19PH201	Physics for Information Science	BS	3	3	0	0	3
4	R19CS201	Data Structures	PC	3	3	0	0	3
5	R19EC102	Electronics and Microprocessors	ES	3	3	0	0	3
THEORY CUM PRACTICAL								
6	R19CS151	Python Programming	ES	5	3	0	2	4
PRACTICALS								
7	R19PH111	Physics Laboratory	BS	2	0	0	2	1
8	R19CS211	Data Structures Laboratory	PC	4	0	0	4	2
MANDATORY COURSE								
9	R19MC101	தமிழர் மரபு / Heritage of Tamils	HSMC	2	2	0	0	1
TOTAL				29	20	1	8	24

Semester III

Sl. No.	Course Code	Course Title	Category	Contact Periods	L	T	P	C
THEORY								
1	R19MA203	Discrete Mathematics	BS	4	3	1	0	4
2	R19CS202	Database Management Systems	PC	3	3	0	0	3
3	R19CS203	Object Oriented Programming using Java	PC	3	3	0	0	3
4	R19CS205	Design and Analysis of Algorithms	PC	3	3	0	0	3
THEORY CUM PRACTICAL								
5	R19IT251	Software Engineering	PC	4	2	0	2	3
6	R19EC252	Digital Principles and Computer Organization	ES	5	2	0	2	4
PRACTICALS								
7	R19CS212	Database Management Systems Laboratory	PC	2	0	0	2	1
8	R19CS213	Object Oriented Programming using Java Laboratory	PC	2	0	0	2	1
9	R19CS215	Design and Analysis of Algorithms Laboratory	PC	4	0	0	4	2
PROFESSIONAL DEVELOPMENT								
10	R19EM201	Logical Thinking	EM	2	0	0	2	1
MANDATORY COURSE								
11	R19MC102	தமிழரும் தொழில்நுட்பமும் / Tamil and Technology	HSMC	1	1	0	0	1
TOTAL				33	17	1	14	26

Semester IV

Sl. No.	Course Code	Course Title	Category	Contact Periods	L	T	P	C
THEORY								
1	R19MA206	Probability and Statistics	BS	4	3	1	0	4
2	R19CS204	Operating Systems	PC	3	3	0	0	3
3	R19CS521	Full Stack Development	PC	3	3	0	0	3
4	R19XXXXX	Open Elective I*	OE	3	3	0	0	3
THEORY CUM PRACTICAL								
5	R19AD251	Data Science	PC	5	3	0	2	4
6	R19EC352	Embedded Systems and IoT	ES	5	3	0	2	4
PRACTICALS								
7	R19CS214	Operating Systems Laboratory	PC	2	0	0	2	1
8	R19CS216	Full Stack Development Laboratory	PC	2	0	0	2	1
PROJECT WORK								
9	R19CS281	Project with Design Thinking (Product/Software Development Life Cycle)	PW	2	0	0	2	1

PROFESSIONAL DEVELOPMENT								
10	R19EM202	Advanced Logical Thinking	EM	2	0	0	2	1
11	R19EM203	Summer Internship	EM	-	-	-	-	1
MANDATORY COURSE								
	R19MC202	Indian Constitution and Tradition	MC	1	1	0	0	NC
TOTAL				32	19	1	12	26

* PE/OE- L T P C for can either be 3 0 0 3 or 2 0 2 3

Semester V

Sl. No.	Course Code	Course Title	Category	Contact Periods	L	T	P	C
THEORY								
1	R19CS303	Automata Theory and Compiler Design	PC	4	3	1	0	4
2	R19IT302	Cloud Computing	PC	3	3	0	0	3
3	R19AD201	Artificial Intelligence	PC	3	3	0	0	3
4	R19XXXXX	Professional Elective I*	PE	3	3	0	0	3
THEORY CUM PRACTICAL								
5	R19EC253	Computer Networks	PC	5	3	0	2	4
PRACTICALS								
6	R19IT311	Cloud Computing Laboratory	PC	2	0	0	2	1
7	R19AD212	Artificial Intelligence Laboratory	PC	2	0	0	2	1
MANDATORY COURSE								
	R19MC201	Environmental Science	MC	1	1	0	0	NC
TOTAL				23	16	1	6	19

* PE/OE- L T P C for can either be 3 0 0 3 or 2 0 2 3

Semester VI

Sl. No.	Course Code	Course Title	Category	Contact Periods	L	T	P	C
THEORY								
1	R19AM301	Machine Learning	PC	3	3	0	0	3
2	R19CS304	Cryptography and Cyber Security	PC	3	3	0	0	3
3	R19CSXXX	Professional Elective II*	PE	3	3	0	0	3
THEORY CUM PRACTICAL								
4	R19CS351	Software Testing	PC	4	2	0	2	3
5	R19AD351	Big Data Analytics	PC	5	3	0	2	4
PRACTICALS								
6	R19AM311	Machine Learning Laboratory	PC	2	0	0	2	1
7	R19CS312	Cybersecurity Laboratory	PC	2	0	0	2	1

PROJECT WORK								
8	R19CS381	Innovative / Multi-Disciplinary Project	PW	2	0	0	2	1
TOTAL				24	14	0	10	19

* PE/OE- L T P C for can either be 3 0 0 3 or 2 0 2 3

Semester VII

Sl. No.	Course Code	Course Title	Category	Contact Periods	L	T	P	C
THEORY								
1	R19HS401	Principles of Management and Professional Ethics	HS	3	3	0	0	3
2	R19CSXXX	Professional Elective III*	PE	3	3	0	0	3
3	R19CSXXX	Professional Elective IV*	PE	3	3	0	0	3
THEORY CUM PRACTICAL								
4	R19CS451	Blockchain Technologies	PC	5	3	0	2	4
PROJECT WORK								
5	R19CS481	Project Work- Phase I	PW	6	0	0	6	3
TOTAL				20	12	0	8	16

* PE/OE- L T P C for can either be 3 0 0 3 or 2 0 2 3

Semester VIII

Sl. No.	Course Code	Course Title	Category	Contact Periods	L	T	P	C
THEORY								
1	R19XXXXX	Open Elective II*	OE	3	3	0	0	3
PROJECT WORK								
2	R19CS482	Project Work-Phase II	PW	16	0	0	16	8
TOTAL				19	3	0	16	11

* PE/OE- L T P C for can either be 3 0 0 3 or 2 0 2 3

Total Number of Credits:164

SUMMARY												AICTE	
Sl. No.	Course Category	Credits per Semester								Credits	Credit %	Credits	Credit %
		I	II	III	IV	V	VI	VII	VIII				
1	HS	3	3	-	-	-	-	3	-	9	5.5	16	9.8
2	BS	8	8	4	4	-	-	-	-	24	14.5	23	14.2
3	ES	11	7	4	4	-	-	-	-	26	15.8	29	17.8
4	PC	-	5	16	12	16	15	4	-	68	41.4	59	36.1
5	PE	-	-	-	-	3	3	6	-	12	7.3	12	7.4
6	OE	-	-	-	3	-	-	-	3	6	3.6	9	5.5
7	PW	-	-	-	1		1	3	8	13	7.9	15	9.2
8	EM	1	-	1	2	-	-	-	-	4	2.4	-	-
9	NC	-	-	-	-	-	-	-	-	-	-	-	-
10	MC	-	1	1	✓	✓	-	-	-	2	1.2	-	-
Total		23	24	26	26	19	20	16	11	164	100%	163	100%