Course Structure

for

4-Years B. Tech. in Computer Science & Engineering

(Effective from 2017 Admitted Batch onwards)

Department of Computer Science and Engineering
National Institute of Technology Sikkim
South Sikkim - 737 139

Subject Code	Subject Name	L-T-P	Credit
3rd Semester			
MA 13101	Mathematics-III	3-1-0	4
CS 13101	Data Structure and Algorithm	3-1-0	4
CS 13102	JAVA Programming	3-0-0	3
CS 13103	Computer Graphics	3-0-0	3
CS 13104	Discrete Mathematics	3-0-0	3
CS 13201	Data Structure and Algorithm Laboratory	0-0-2	1
CS 13202	JAVA Programming Laboratory	0-0-2	1
CS 13203	Computer Graphic Laboratory	0-0-2	1
	Total Credits		**20**
4th Semester			
MA 14101	Mathematics-IV	3-1-0	4
CS 14101	Computer Organization and Architecture	3-0-0	3
CS 14102	Computer Networks	3-0-0	3
CS 14103	Graph Theory and Combinatories	3-0-0	3
EC 14101	Digital Electronics	3-1-0	4
CS 14201	Computer Organization and Architecture Laboratory	0-0-2	1
CS 14202	Computer Networks Laboratory	0-0-2	1
EC 14201	Digital Electronics Laboratory	0-0-2	1
CS 14401	Composite Viva-voce	-	1
	Total Credits		**21**
5th Semester			
CS 15101	Theory of Computation	3-1-0	4
CS 15102	Database Management System	3-0-0	3
CS 15103	Operating System	3-0-0	3
CS 15104	Design and Analysis of Algorithm	3-1-0	4
EC 15102	Microprocessors and Microcontroller	3-0-0	3
CS 15201	Database Management System Laboratory	0-0-2	1
CS 15202	Operating System Laboratory	0-0-2	1
EC 15202	Microprocessors and Microcontroller Laboratory	0-0-2	1
	Total Credits		**20**
6th Semester			
CS 16101	Compiler Design	3-0-0	3
CS 16102	Software Engineering	3-0-0	3
CS 16103	Artificial Intelligence	3-1-0	4
CS 16104	Image Processing	3-0-0	3
HS 16101	Professional Communication	2-0-0	2
CS 16201	Software Engineering Laboratory	0-0-2	1
CS 16202	Compiler Design Laboratory	0-0-2	1
CS 16203	Image Processing Laboratory	0-0-2	1
CS 16401	Composite Viva-voce	-	1
	Summer Training (to be evaluated in VII semester)	-	-
	Total Credits		**19**
7th Semester			
CS 17101	Cryptography and Network Security	3-0-0	3

HS 17101	Principle of Management & Entrepreneurship	2-0-0	2
CS 17201	Cryptography and Network Security Laboratory	0-0-2	1
CS 17401	Summer Training (carried out after VI semester)	-	2
CS 17402	Project (Literature survey & problem formulation)	-	4
	Elective-I		4
	Elective-II		4
		Total Credits	**20**
Elective Subjects* (any Two)			
CS 17301	Cloud Computing	3-1-0	4
CS 17302	Advance Computer Networks	3-1-0	4
CS 17303	Information and Coding Theory	3-1-0	4
CS 17304	Natural Language Processing	4-0-0	4
CS 17305	E-Commerce Technologies	4-0-0	4
CS 17306	Data Mining	3-1-0	4
CS 17307	Computer Vision	4-0-0	4
CS 17308	Quantum Computation	3-1-0	4
CS 17309	Web Programming	3-1-0	4
CS 17310	Pattern Recognition	4-0-0	4
8th Semester			
CS 18101	Parallel and Distributed Computing	3-1-0	4
HS 18101	Engineering Economics	2-0-0	2
CS 18401	Composite Viva-voce	0-0-0	1
CS 18402	Project	0-0-0	5
	Elective-III		4
	Elective-IV		4
		Total Credits	**20**
Elective Subjects* (any Two)			
CS 18301	Machine Learning	3-1-0	4
CS 18302	High Performance and Grid Computing	4-0-0	4
CS 18303	Information Retrieval Techniques and Evaluation	3-1-0	4
CS 18304	Bioinformatics	3-1-0	4
CS 18305	Public Key Infrastructure and Trust Management	3-1-0	4
CS 18306	Soft Computing	4-0-0	4
CS 18307	Computational Complexity	3-1-0	4
CS 18308	Wireless and Mobile Network Security	4-0-0	4
CS 18309	Advance Data Structure and Algorithm	3-1-0	4
EC 16301	VLSI Design	3-1-0	4

*Any one elective subject may be offered as global elective (for specific departments).

Formation of Subject Code

    Two characters – Dept. name (CS/EC/EE/ME/CE/BT/CH/PH/MA/HS/ZZ for others)
    1st digit – Course no run by the department

2nd digit – Semester no
3rd digit – 1 (for Theory) / 2 (for Laboratory) / 3 (for Elective) / 4(for others)
4th and 5th digit – Serial no of subject in a particular semester run by a particular department