PROGRAM STRUCTURE

I SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
1	172CO1T01	Advanced Data Structures & Algorithm Analysis	✓			Students are able to gain knowledge on advanced data structures enabling them to become efficient coders in software development
2	172CO1T02	Database Management System	✓			Students are able to acquire skills related to SQL commands, constraints, views, models, transactions, storage and indexing enabling them to be employed for backend developer
3	172CO1T03	Computer Organization & Architecture	✓			Students are able to acquire knowledge on Computer working and its architecture and low level operations of processors and other internal parts of a computer
4	172CO1T04	Mathematical Foundations of Computer Science		✓		Students are able to demonstrate problem solving skills by implementing mathematical logic, number theory and graph theory.
5	172CO1T05	Computer Networks				
6	172CO1E01	Software Engineering	✓			Students are able to acquire skills relates to software engineering, project estimation and management enabling them to acquire employed as software developer.
7	172CO1E02	Advanced Operating Systems	✓			Students are able to understand and acquire skills related to features and functionalities of operating System and understand the utilization of Input &output and memory operations which enables them to be employed for Hardware core side job opportunities
8	172CO1E03	Compiler Design	✓			Students can get knowledge on designing compilers and assemblers to enable them work with different integrated environments

| 9 | 172CO1E04 | Human Computer Interaction | | ✓ | | Students are able to demonstrate GUI components such as Menus, Forms, Dialog boxes and gain knowledge on various design paradigms, online documentation concepts, information retrieval and its presentation. |
| 10 | 172CO1L01 | Advanced Data Structures & Database Management Systems Lab | | ✓ | | Students are able to demonstrate knowledge on advanced data structures and database management. |

II SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
11	172CO2T06	Cyber Security		✓		Students can be able to protect systems, networks, devices and data from cyber attacks by knowing about different security approaches and methods
12	172CO2T07	Data Ware Housing & Data Mining		✓		Students are able to organize, understand and use the data in effective way and gain knowledge about warehouses which helps in integration of application systems
13	172CO2T08	Big Data Analytics	✓			Students are able to gain skills related to Big data analytics and related tool enabling them to be employed for data analytics role.
14	172CO2T09	Advanced Unix Programming	✓			Students are able to gain deep knowledge of UNIX environment, advanced commands, kernel and shell programming
15	172CO2E05	Machine Learning	✓			Students are able to acquire skills related to data science algorithms, enabling them to be employed as data scientists.
16	172CO2E06	Digital Image Processing		✓		Students are able to acquire technical skills related to image processing by using various tools related to computer vision.
17	172CO2E07	Mobile Computing				.
18	172CO2E08	Cloud Computing	✓			Students are able to acquire skills related to Cloud computing and distributed computing enabling them to be employed for cloud services sector
19	172CO2E09	Internet of Things	✓			Students are able to acquire skills related to Internet of Things and enabling them to be employed for IoT sector.
20	172CO2E10	Bio Informatics		✓		Students are able to gain knowledge on forensic analysis, gene therapy and molecular medicine
21	172CO2L02	Advanced Unix Programming and Hadoop & Bigdata Lab	✓			Students are able to gain hands on experience of UNIX environment, advanced commands, kernel and shell along with big data and usage of Hadoop software

III SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
22	K5801	Comprehensive Viva-Voce	✓			Students will be able to demonstrate problem identification, analysis, design solutions or applications in computer science and engineering domain through the acquired technical, cognitive, communication and creative skills to address societal needs.
23	K5802	Seminar – I				
24	K5803	Project Work Part - I				

IV SEMESTER

S. No	Course Code	Name of the Course	Employability	Skill Development	Entrepreneurship	Remarks
25	L5801	Seminar – II	✓			Students will be able to demonstrate problem identification, analysis, design solutions or applications in computer science and engineering domain through the acquired technical, cognitive, communication and creative skills to address societal needs.
26	L5802	Project Work Part - II	✓			Students will be able to demonstrate problem identification, analysis, design solutions or applications in computer science and engineering domain through the acquired technical, cognitive, communication and creative skills to address societal needs.
	TOTAL	26	15	7	0	

Program Coordinator

Head of the Department
Head of the Department
Department of CSE
NITYA ENGINEERING COLLEGE (A9'