



Malad Kandivli Education Society's

NAGINDAS KHANDWALA COLLEGE (Autonomous)

Reaccredited by NAAC with 'A' Grade (3rd Cycle) | ISO 9001:2015 Certified

PROGRAMME NAME: Bachelor of Science in Computer Science (B. Sc. CS)

PROGRAMME CODE: USCS

PROGRAMME OUTCOME-

This program of B Sc CS is structured to provide graduates with practical skills required in software development, hardware development and testing field. The main objectives of B Sc CS are:

- To provide intensive theoretical & practical knowledge
- To provide an integrated perspective of IT functioning along with a good amount of exposure to real life cases / technical knowhow.
- To train students with knowledge in the field of logical thinking, problem solving, hardware designing, software engineering and programming.
- To develop students' programming skills to become employable or to start their own entrepreneurial journey.

SEMESTER: I

COURSE NAME: COMMUNICATION SKILLS.

COURSE OUTCOME-

To develop effective listening skills in students so as to enable them to comprehend instructions and become a critical listener, effective oral skills so as to enable students to speak confidently interpersonally as well as in large groups, effective writing skills so as to enable students to write in clear, concise, persuasive and audience centered manner and to demonstrate effective use of communication technology

COURSE NAME –DISCRETE MATHEMATICS I

COURSE OUTCOME-

This course is used to apply the rules of inference and methods of proof including direct and indirect proof forms, proof by contradiction, and mathematical induction. And Students will be able to work with sequences and recursion.

COURSE NAME -INTRODUCTION TO PROGRAMMING

COURSE OUTCOME-

To enhance the logical thinking, to develop problem solving skills, introduce the basic programming concepts

COURSE NAME – FUNDAMENTALS OF COMPUTERS AND ELECTRONICS

COURSE OUTCOME-

This course will initiate learners to deal with conversion between different number system. Learners will be able to minimize the given logical expression and create circuits. Learners will also be able to code using Assembly language.

COURSE NAME –OPERATING SYSTEMS

COURSE OUTCOME-

Analyse the structure of OS and basic architectural components involved in OS design , design the applications to run in parallel either using process or thread models of different OS

,the various device and resource management techniques for timesharing and distributed systems , Understand the Mutual exclusion, Deadlock detection and agreement protocols of Distributed operating system, Conceptualize the components involved in designing a contemporary OS

COURSE NAME – WEB PROGRAMMING-I

COURSE OUTCOME-

Apply a structured approach to identifying needs, interests, and functionality of a website, Design dynamic websites that meet specified needs and interests, select appropriate HTML, CSS, and JavaScript code from public repositories of open-source and free scripts that enhances the experience of site visitors, modify existing HTML, CSS, and JavaScript code to extend and alter its functionality, and to correct errors and cases of poor practice.

SEMESTER: II

COURSE NAME: PROGRAMMING AND APPLICATION DEVELOPMENT IN PYTHON

COURSE OUTCOME-

Understanding of UI Applications using Python Tkinter, to acquire knowledge of Database Connection with Python Application, Understanding File Operations and developing Web Applications and Network Connectivity Applications

COURSE NAME: OBJECT ORIENTED PROGRAMMING

COURSE OUTCOME-

The students will learn take a problem and develop the structures to represent objects and the algorithms to perform operations, apply standards and principles to write truly readable code, test a program and, if necessary, find mistakes in the program and correct them, learn the fundamentals of input and output using the java.io library, design a class that serves as a program module or package, understand and demonstrate the concepts of object-oriented design, polymorphism, information hiding, and inheritance

COURSE NAME: DATABASE MANAGEMENT SYSTEMS I

COURSE OUTCOME-

Understanding techniques for building robust business application

COURSE NAME: WEB PROGRAMMING II

COURSE OUTCOME-

At the end of this course the successful student will be able to apply a structured approach to identifying needs, interests, and functionality of a website, design dynamic websites that meet specified needs and interests,select appropriate HTML, CSS, and JavaScript code from public repositories of open-source and free scripts that enhances the experience of site visitors, modify existing HTML, CSS, and JavaScript code to extend and alter its functionality, and to correct errors and cases of poor practice.

COURSE NAME: DISCRETE MATHEMATICS II

COURSE OUTCOME-

Students completing this course will be able to find a mathematical solution to the problems and will be able to link the mathematical concepts with application in the computing domain.

COURSE NAME: IT platforms, Tools and Practices

COURSE OUTCOME-

Students completing this course will be able to follow the industry standards and practices in coding and their employability will be increased.

SEMESTER: III

COURSE NAME: THEORY OF COMPUTATION

COURSE OUTCOME-

Students will be able to develop small theoretic models to evaluate the syntactical aspects.

COURSE NAME: CORE JAVA

COURSE OUTCOME-

Understanding fundamentals of Java, acquiring knowledge about packages and Implementing Multithreading concept in Java, implementing networking and I/O using Java and GUI components with database connectivity

COURSE NAME: OPERATING SYSTEM

COURSE OUTCOME-

Students will be able to analyse the structure of OS and basic architectural components involved in OS design, design the applications to run in parallel either using process or thread models of different OS, understand the various device and resource management techniques for timesharing and distributed systems, understand the Mutual exclusion, Deadlock detection and agreement protocols of Distributed operating system conceptualize the components involved in designing a contemporary OS

COURSE NAME: DATABASE MANAGEMENT SYSTEM

COURSE OUTCOME-

Understanding techniques for building robust business application

COURSE NAME: COMBINATORICS AND GRAPH THEORY

COURSE OUTCOME-

After completion of the course, the student will be able to understand the basic concepts of graph theory and apply the basic concepts of mathematical logic describe and solve some real time problems using concepts of graph theory

COURSE NAME: PHYSICAL COMPUTING AND IoT

COURSE OUTCOME-

Students will be able to work on Hardware circuits and also to create a mini-project based on IoT

COURSE NAME: WEB PROGRAMMING

COURSE OUTCOME-

At the end of this course the successful student will be able to apply a structured approach to identifying needs, interests, and functionality of a website, design dynamic websites that meet specified needs and interests, select appropriate HTML, CSS, and JavaScript code from public repositories of open-source and free scripts that enhances the experience of site visitors, modify existing HTML, CSS, and JavaScript code to extend and alter its functionality, and to correct errors and cases of poor practice.

SEMESTER: IV

COURSE NAME: FUNDAMENTALS OF ALGORITHM

COURSE OUTCOME-

Students will be able to solve problems in an efficient manner

COURSE NAME: ADVANCED JAVA

COURSE OUTCOME-

Understanding of GUI components using Swing Components, acquiring knowledge of servlets, JSP, EJB and their implementation, to have a basic understanding of JavaBean, Web services

COURSE NAME: COMPUTER NETWORKS

COURSE OUTCOME-

Learner will be able to understand data communication and networking concepts thoroughly and will be acquainted with knowledge about common equipment, standard hardware and software requirements and communication protocols which are important for them to proceed with industrial requirements.

COURSE NAME: SOFTWARE ENGINEERING

COURSE OUTCOME-

Learner will have a ability to gather and specify requirements of the software projects, to analyse software requirements with existing tools, and to understand and apply the basic project management practices in real life projects.

COURSE NAME: LINEAR ALGEBRA USING PYTHON

COURSE OUTCOME-

Learners will be able to apply the mathematical concept in the diverse computing domains.

COURSE NAME: .NET TECHNOLOGIES

COURSE OUTCOME-

The students will be able to learn partial refreshes of web pages using ajax

COURSE NAME: ANDROID DEVELOPER FUNDAMENTALS

COURSE OUTCOME-

By the end of the course, student will be able to write simple GUI applications, use built-in widgets and components, work with the database to store data locally, and much more.

SEMESTER: V

COURSE NAME: ARTIFICIAL INTELLIGENCE

COURSE OUTCOME-

Learners will be able to demonstrate knowledge of the building blocks of AI as presented in terms of intelligent agents, analyse and formalize the problem as a state space, graph, design heuristics and select amongst different search or game-based techniques to solve them,

develop intelligent algorithms for constraint satisfaction problems and also design intelligent systems for Game Playing

COURSE NAME: LINUX SERVER ADMINISTRATION

COURSE OUTCOME-

After completing this course, students will be able carry the duties of a Linux system administer and will learn to do file processing, process management, IO management, queues management, networking, storage backup, account management, proper system start-up and shutting down, as well as other tasks

COURSE NAME: INFORMATION AND NETWORK SECURITY

COURSE OUTCOME-

After completion of this Course, students will be able to list and briefly describe security risks and mitigation strategies for an organization that is about to connect its network to the Internet and communicate with other companies via email, explain the differences between the three major goals of information security confidentiality, integrity and availability, and can list and explain one technique for ensuring each, explain how public key cryptography can be used to ensure the identity of the sender of an encrypted message.

COURSE NAME: WIRELESS SENSOR NETWORKS AND MOBILE COMMUNICATIONS

COURSE OUTCOME-

Students will be able to analyse modelling and simulation of various communication networks, to generate test and estimate parameters, apply this knowledge for detection estimation and simulation of various communication networks

COURSE NAME: GAME PROGRAMMING

COURSE OUTCOME-

Students will be able to develop games.

SEMESTER: VI

COURSE NAME: CLOUD COMPUTING

COURSE OUTCOME-

Understanding the key dimensions of the challenge of Cloud Computing. Assessment of the economics, financial, and technological implications for selecting cloud computing for own organization. Assessing the financial, technological, and organizational capacity of employer's for actively initiating and installing cloud-based applications. Assessment of own organizations' needs for capacity building and training in cloud computing-related IT areas.

COURSE NAME – CYBER FORENSICS

COURSE OUTCOME-

Understand the definition of computer forensics fundamentals. Describe the types of computer forensics technology. Analyse various computer forensics systems. Illustrate the methods for data recovery, evidence collection and da

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COURSE NAME - DIGITAL IMAGE PROCESSING

COURSE OUTCOME-

Review the fundamental concepts of a digital image processing system. Analyze images in the frequency domain using various transforms. Evaluate the techniques for image enhancement and image restoration. Categorize various compression techniques. Interpret Image compression standards. Interpret image segmentation and representation techniques.

COURSE NAME – DATA SCIENCE

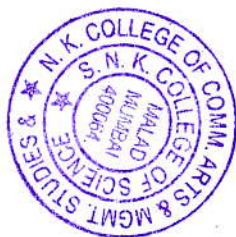
COURSE OUTCOME-

Learner will be able to model the data and apply it in different domains.

COURSE NAME – ETHICAL HACKING

COURSE OUTCOME-

Learner will be able to understand the security of the system, ethically try to find out the security issues in the system, propose the security measures to be adopted in the organization



PRINCIPAL.

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