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SHAH & ANCHOR KUTCHHI ENGINEERING COLLEGE
Affiliated to University of Mumbai, Approved by D.T.E. & A.I.C.T.E.| Awarded 'A' Grade by D.T.E., M.S. | Electronics Enginering Program Accredited by N.B.A.,
New Delhi for 2 years w.e.f. 6th Aug.,2014 | Computer Engineering Program Re-Accredited by N.B.A.,New Delhi for 3 yeas w.e.f. 1st July 2019 | Information Technology
Program Accredited by N.B.A.,New Delhi for 3 years w.e.f. 1st July 2019

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DEPARTMENT OF COMPUTER ENGINEERING

Semester – V

Unique Course Number: CSC501   Course Name: Microprocessor

Unique CO Number	Course Outcome (CO) Statement
CS5011	Describe Architecture and Working of x86 processor.
CS5012	Design the program in Assembly and Higher-Level Languages for intel x86.
CS5013	Elaborate Execution of Interrupts.
CS5014	Apply the concepts for interfacing 8086 processor with peripherals.
CS5015	Analyze the architecture of intel 80386 processor
CS5016	Apply basics of microprocessor to infer Pentium.

Unique Course Number: CSC502   Course Name: Database Management System

Unique CO Number	Course Outcome (CO) Statement
CSC5021	Understand the fundamentals of a database systems
CSC5022	Design and draw ER and EER diagram for the real-life problem.
CSC5023	Convert conceptual model to relational model and formulate relational algebra queries.
CSC5024	Design and querying database using SQL.
CSC5025	Analyze and apply concepts of normalization to relational database design.
CSC5026	Understand the concept of transaction, concurrency and recovery.

Unique Course Number: CSC503   Course Name: Computer Network

Unique CO Number	Course Outcome (CO) Statement
CSC5031	Explain basic concepts of Computer Networks and compare OSI model with TCP/IP model.
CSC5032	Illustrate various types of transmission medias and demonstrate the communication at physical layer.
CSC5033	Understand various protocols used in Data link layer and Concepts of error detection and correction.
CSC5034	Design a network using IP addressing and Analyze various routing algorithms and protocols at the Network Layer.
CSC5035	Analyze transport layer protocols and congestion control algorithms.
CSC5036	Explain the purpose of various protocols at Application layer.

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Unique Course Number: CSC504   **Course Name: Theory of Computer Science**

Unique CO Number	Course Outcome (CO) Statement
CSC5041	Identify the central concepts in theory of computation and differentiate between deterministic and nondeterministic automata, also obtain equivalence of NFA and DFA.
CSC5042	Infer the equivalence of languages described by finite automata and regular expressions.
CSC5043	Devise regular, context free grammars while recognizing the strings and tokens.
CSC5044	Design pushdown automata to recognize the language.
CSC5045	Develop an understanding of computation through Turing Machine
CSC5046	Acquire fundamental understanding of decidability and undecidability.

Unique Course Number: CSDLO5012   **Course Name: Advance Operating System**

Unique CO Number	Course Outcome (CO) Statement
CSDLO50121	Demonstrate the various design aspects of Advanced Operating systems.
CSDLO50122	Identify system structure and data structures used for file management, memory management and process context in UNIX operating systems.
CSDLO50123	Understand the concepts and design issues of distributed operating systems.
CSDLO50124	Recognize the concepts of threads and process synchronization for Multiprocessor operating systems.
CSDLO50125	Describe Real Time Operating Systems and various RTOS scheduling Algorithms.
CSDLO50126	Discuss architecture and design issues of Mobile OS, Virtual OS and Cloud OS.

Unique Course Number: CSDLO5013   **Course Name: Advance Algorithm**

Unique CO Number	Course Outcome (CO) Statement
CSDLO50131	Describe analysis techniques for algorithms.
CSDLO50132	Identify appropriate data structure and design techniques for different problems.
CSDLO50133	Identify appropriate algorithm to be applied for the various application like geometric modeling, robotics, networking, etc.
CSDLO50134	Solve the problems using randomization algorithms.
CSDLO50135	Analyze various algorithms.
CSDLO50136	Differentiate polynomial and non-deterministic polynomial algorithms.

Unique Course Number: CSL501   **Course Name: Microprocessor Lab**

Unique CO Number	Course Outcome (CO) Statement
CSL5011	Implement interactive program using interrupts
CSL5012	Use machine control group of instructions in an assembly language program
CSL5013	Use string and arithmetic instructions for assembly language programming
CSL5014	Write mixed language program for arithmetic operations
CSL5015	Apply architectural knowledge to interface different peripherals with 8086
CSL5016	Use basic concepts of 8086 in learning advance peripherals

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Unique Course Number: **CSL502**   **Course Name: Computer Network Lab**

Unique CO Number	Course Outcome (CO) Statement
CSL5021	Implement Error detection and correction and Data link protocol using core programming API.
CSL5022	Setup networking environment in Linux to understand Network commands and use of various tools such as Wireshark, iptables
CSL5023	Perform various server configurations in Linux
CSL5024	Design client server model using socket programming
CSL5025	Setup a Network in GNS3 and implement static routing.
CSL5026	Use Network Simulator such as NS2 to explore networking algorithms.

Unique Course Number: **CSL503**   **Course Name: Database & Info. System Lab**

Unique CO Number	Course Outcome (CO) Statement
CSL5031	Design and draw ER and EER diagram for the real-life problem with software tool.
CSL5032	Create and update database and tables with different DDL and DML statements.
CSL5033	Apply /Add integrity constraints and able to provide security to data.
CSL5034	Implement and execute Complex queries.
CSL5035	Apply triggers and procedures for specific module/task
CSL5036	Handle concurrent transactions and able to access data through front end (using JDBC ODBC connectivity.)

Unique Course Number: **CSL504**   **Course Name: Web Design Lab**

Unique CO Number	Course Outcome (CO) Statement
CSL5041	Explain the core concepts and features of Web Technology.
CSL5042	Design static web pages using HTML5 and CSS3.
CSL5043	Implement the client side validation and design dynamic web pages using JavaScript and JQuery.
CSL5044	Create Interactive web pages using PHP , AJAX with database connectivity using MySQL.
CSL5045	Understand the basics of XML, DTD and XSL and develop web pages using XML / XSLT
CSL5046	Analyze end user requirements and Create web application using appropriate web technologies and web development framework

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Unique Course Number: **CSL505**   **Course Name: Business Comm. & Ethics**

Unique CO Number	Course Outcome (CO) Statement
CS8011	Design a technical document using precise language, suitable vocabulary, and apt style.
CS8012	Develop the life skills/ interpersonal skills to progress professionally by building stronger relationships
CS8013	Demonstrate awareness of contemporary issues, knowledge of professional and ethical responsibilities.
CS8014	Apply the traits of a suitable candidate for a job/higher education, upon being trained in the techniques of holding a group discussion, facing interviews and writing resume/SOP.
CS8015	Deliver formal presentations effectively, implementing the verbal and non- verbal skills.
CS8016	Demonstrate skills for participating in meetings and prepare its documentation.