



Mahavir Education Trust's

# 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 Engineering Program Accredited by N.B.A., New Delhi for 2 years w.e.f. 6<sup>th</sup> Aug., 2014 | Computer Engineering Program Re-Accredited by N.B.A., New Delhi for 3 years w.e.f. 1<sup>st</sup> July 2019 | Information Technology Program Accredited by N.B.A., New Delhi for 3 years w.e.f. 1<sup>st</sup> July 2019

**DEPARTMENT OF COMPUTER ENGINEERING**



ISO 9001 Certified

## Semester - V

**Unique Course Number: CSC501 Course Name: Microprocessor**

Unique CO Number	Course Outcome (CO) Statement
CSC5011	Describe Architecture and Working of x86 processor.
CSC5012	Design the program in Assembly and Higher-Level Languages for intel x86.
CSC5013	Elaborate Execution of Interrupts.
CSC5014	Apply the concepts for interfacing 8086 processor with peripherals.
CSC5015	Analyze the architecture of intel 80386 processor
CSC5016	Apply basics of microprocessor to infer Pentium

**Unique Course Number: CSC502 Course Name: Database Management System**

Unique CO Number	Course Outcome (CO) Statement
CSC5021	Describe the fundamentals of a database systems
CSC5022	Describe the concept of transaction, concurrency and recovery.
CSC5023	Explain different database Models and Apply different rules for conversion of conceptual model to relational model
CSC5024	Solve database queries using relational algebra and SQL.
CSC5025	Construct ER and EER diagram for the real life problems.
CSC5026	Explain and apply different constraints on Database Design.

**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.

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

Unique CO Number	Course Outcome (CO) Statement
CSC5041	Describe fundamentals of grammars, languages and Machines.
CSC5042	Express the understanding of decidability and undecidability.
CSC5043	Develop Regular grammar, Context free grammars while recognizing the strings and tokens.
CSC5044	Develop Regular Expression for a given language and show the equivalence of languages described by finite automata and regular expressions.
CSC5045	Construct different machines like Finite Automata, Pushdown Automata and Turing Machines to recognize the given language and prove the equivalence between them.



CSC5046	Identify applications and limitations of some computational models and possible methods of proving them.
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**Unique Course Number: CSDLO5012****Course Name: Advance Operating System**

Unique CO Number	Course Outcome (CO) Statement
CSDLO50121	Explain and compare different types of Advanced Operating System
CSDLO50122	Describe system structure and data structure used for file management in UNIX OS
CSDLO50123	Describe data structure used in Memory management and Process Management in UNIX OS
CSDLO50124	Explain the architecture of different Advanced Operating Systems
CSDLO50125	Compare different Scheduling algorithms and solve various scheduling problems
CSDLO50126	Demonstrate the design issues of different Advanced Operating Systems.

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

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

**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.



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

Unique CO Number	Course Outcome (CO) Statement
CSL5031	Construct ER and EER diagram for the real life problem with software tool.
CSL5032	Apply different rules for Creating and updating database and tables with different DDL and DML statements.
CSL5033	Apply integrity constraints and provide security to data.
CSL5034	Construct simple and Complex SQL queries.
CSL5035	Apply triggers and procedures for specific module/task
CSL5036	Illustrate Handling of concurrent transactions and 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.

**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.