



**Mahavir Education Trust's
SHAH & ANCHOR KUTCHHI ENGINEERING COLLEGE
Chembur, Mumbai - 400 088
UG Program in Electronics and Computer Science
Academic Year: 2023-2024**

Unique Course Code: ECC701 Course Name: VLSI Design

ECC7011	Recall different technologies related to VLSI Design and differentiate BJT & MOS Technologies
ECC7012	Analyze different MOS based circuits based on static & dynamic analysis to select most appropriate technologies for circuits
ECC7013	Evaluate different design styles for given logic circuits
ECC7014	Design & Analysis combinational circuits and Data path design models
ECC7015	Design & Analysis sequential circuits and different types of memories
ECC7016	Create physical design of different circuits based on DRC & fabrication process of VLSI Design



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Unique Course Code: ECC702 Course Name: IOT

ECC7021	Understand concepts, functional blocks and communication methodology relevant to IoT.
ECC7022	Illustrate various components of IoT
ECC7023	Identify various methods for data handling in IoT-based systems.
ECC7024	Compare various communication protocols for IoT
ECC7025	Design basic applications based on IoT using specific components.
ECC7026	Explain various security issues in IoT



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Unique Course Code: ECCDLO7014 Course Name: Big Data Analytics

Unique Course Outcome Number	Course Outcome Statement
ECCDLO70141	Describe the needs, characteristics, types and availability of modern technologies to handle big data
ECCDLO70142	Understand the key issues in big data management and its associated applications in intelligent business and scientific computing.
ECCDLO70143	Apply fundamental enabling techniques and scalable algorithms like Hadoop, MapReduce and NoSQL in big data analytics.
ECCDLO70144	Analyze business models and scientific paradigms and select software tools for big data analytics.
ECCDLO70145	Assess adequate perspectives of big data analytics in various applications like recommender systems, social media applications etc.
ECCDLO70146	Develop applications for big data analysis using Hadoop, NoSQL, MapReduce, MongoDB etc.



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Unique Course Code: ECCDO701 Course Name: Deep Learning

ECCDO7011	Explain the basics of Neural Networks.
ECCDO7012	Explain the process of training, optimization and Regularization of Deep Neural Networks.
ECCDO7013	Design models for CNN.
ECCDO7014	Design models for RNN.
ECCDO7015	Explain principle of operation of auto encoders.
ECCDO7016	Select suitable neural network model for a given application. .



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Unique Course Code: ECCDO701 Course Name: Advanced Database

Management

ECCDO7011	To impart knowledge related to query processing and query optimizer phases of a database management system
ECCDO7012	To introduce concepts of advanced access control techniques like role based and discretionary methods
ECCDO7013	To impart knowledge related to indexing in database management system .
ECCDO7014	To introduce advanced database models like parallel and distributed databases
ECCDO7015	To impart an overview of emerging data models like temporal, mobile and spatial databases.
ECCDO7016	To introduce concepts of Big data .



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Unique Course Code: ECCDO702 Course Name: Cloud Computing

ECCD07021	Describe cloud computing, different cloud services and deployment models.
ECCD07022	Implement different types of virtualization.
ECCD07023	Use several cloud computing services
ECCD07024	Design of open source cloud.
ECCD07025	Identification of threats and cloud-based risks for cloud security.
ECCD07026	Understand cloud applications and recent trends.

Unique Course Code: ECCDLO702 Course Name: Cyber Security

ECCD07021	Understand the need of Cyber Security and its aspects.
ECCD07022	Illustrate the various tools and techniques used by attackers to launch their attacks.
ECCD07023	Identify cyber attacks and its countermeasures.
ECCD07024	Identify various web application and Network vulnerability scanning techniques and defence methodologies.
ECCD07025	Describe the various Privacy and standard compliances with the help of real world application.



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Unique Course Code: ILO70131 Course Name: Management Information
Systems

Unique Course Outcome Number	Course Outcome Statement
ILO70131	Explain the importance of information systems and the impact of information technology on an organization to transform business.
ILO70132	Identify the principal tools and technologies for storing and accessing information in an organization to improve business performance and decision making.
ILO70133	Describe ethical issues related to information technology, potential threat to the privacy of the data and control measures that organizations can use to protect their information resources.
ILO70134	Identify current and emerging technologies and apply them to today's businesses.
ILO70135	Describe use of the Internet and World Wide Web to provide a global platform for e-business, business mobility and communications, collaboration, and cloud computing.
ILO70136	Explain the types of support that information systems can provide for each functional area of the organization.



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Unique Course Code: ILO7016 Course Name: Cyber Security and Laws

Unique Course Outcome Number	Course Outcome Statement
ILO70161	Understand the types of cybercrimes and its effect on outside world.
ILO70162	Illustrate security challenges posed by Mobile devices and its implications on organizations.
ILO70163	Illustrate different tools and methods used for the range of cybercrimes
ILO70164	Assess different aspects in cyber law, global trends and the need for an Indian Cyber Law
ILO70165	Interpret relevant IT Laws for specific legal issues and derive limitations
ILO70166	Appraise information security standards compliance during software design and development.