



Mahavir Education Trust's
Shah & Anchor Kutchhi Engineering College,
 Chembur, Mumbai 400 088
UG Program in Information Technology

Academic Year 2018-19

Semester – I

Unique Course Outcome Number	Description
Unique Course Number: FEC101 Course Name: Applied Mathematics -I	
1.FEC101.1	Apply the concepts of complex numbers to the engineering problems
1.FEC101.2	Apply the knowledge of n^{th} order derivatives of standard functions to engineering problems.
1.FEC101.3	Apply the principles of basic operations of matrices to the engineering problems.
1.FEC101.4	Apply the basic principles of partial differentiation to engineering problems.
1.FEC101.5	Apply concepts of partial differentiation (maxima and minima, Jacobian), expansion of functions as an application of successive differentiation.
1.FEC101.6	Apply SCILAB programming techniques to model problems based on solution of simultaneous linear algebraic equations.
Unique Course Number: FEC102 Applied Physics -I	
1.FEC102.1	Identify and describe crystal structure.
1.FEC102.2	Explain the physics of semiconductors and the operation of semiconductor devices.
1.FEC102.3	Apply the concepts of crystal physics, semiconductors, superconductors, quantum mechanics, ultrasonic's and acoustics to solve problems.
1.FEC102.4	Explain the fundamentals of superconductors and quantum mechanics.
1.FEC102.5	Summaries the basics of ultrasonic's.
1.FEC102.6	Summaries the basics of acoustics.
Unique Course Number: FEC103 Applied Chemistry-1	
1.FEC103.1	Describe various aspects in order to understand the subject in a logical sequence for hardness of water
1.FEC103.2	To understand the importance of quality of water for industrial and domestic purpose.
1.FEC103.3	To have a concept of the application of polymer in today's industry.
1.FEC103.4	To predict qualitatively the effect of changing different factors on heterogeneous system
1.FEC103.5	To have an idea of how important is the lubricating technology
1.FEC103.6	Demonstrate knowledge of Portland cement and carbon nanomaterial
Unique Course Number: FEC105 Basic Electrical Engineering	
1.FEC105.1	To understand fundamentals of dc circuits and apply knowledge of analyzing network theorems in dc circuits
1.FEC105.2	To learn the fundamentals and analyze single phase ac circuits
1.FEC105.3	To understand the concept of resonance in electrical circuits
1.FEC105.4	To learn the fundamentals and analyze three phase ac circuits
1.FEC105.5	To learn the basic operation and analyze the performance of single phase transformer
1.FEC105.6	To understand the construction and basic operation of dc motors and generators
Unique Course Number: FEC106 Environmental Studies	
1.FEC106.1	Illustrate Depleting Nature of Environmental Resources, Global Environmental Crisis, and Ecosystem concept.
1.FEC106.2	Adapt to 3R (Reuse, Recovery, Recycle).
1.FEC106.3	Study different control measures related to Environmental Pollution.
1.FEC106.4	Illustrate and analyze various Case Studies related to Environmental Legislation.
1.FEC106.5	Demonstrate the working of Renewable energy sources & Equipment.
1.FEC106.6	Illustrate the Techniques of Disaster Management and Green Building.



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Unique Course Number: FEC104		Engineering Mechanics
1.FEC104.1	Determine resultant of coplanar and non-coplanar system	
1.FEC104.2	Determine centroid of plane lamina.	
1.FEC104.3	Construct free body diagram and calculate the reactions for static equilibrium	
1.FEC104.4	Apply laws of friction on bodies lying on horizontal and inclined plane.	
1.FEC104.5	Evaluate the velocity, acceleration, time, force and energy of the particle as well as rigid bodies	
1.FEC104.6	Locate instantaneous center of rotation of rigid bodies having plane motion.	
Unique Course Number: FEL101		Basic Workshop Practice - I
1.FEL101.1	Study and use of hand tools and power tools.	
1.FEL101.2	Study and demonstration of lathe machine operations.	
1.FEL101.3	Design and development of sheet metal.	
1.FEL101.4	Design and manufacturing of carpentry job.	