

LAB COs	
FEL101	Engineering Physics-I
FEL101.1	Determine the value of Planck's constant (h) and understand its application in quantum mechanics.
FEL101.2	Identify different crystal structures and draw miller indices to verify the theory learned in crystallography.
FEL101.3	Plot the I-V characteristics of various semiconductor devices.
FEL101.4	Calculate the various parameters based on the experiments of interference in thin films.
FEL101.5	Compare the charging and discharging characteristics of supercapacitors.
FEL101.6	Apply the knowledge and concept of physics in designing and developing mini-projects.
FEC102	Engineering Chemistry-I
FEL102.1	Estimate hardness of water by EDTA method & Ion Exchange Method.
FEL102.2	Determine viscosity of lubricant using Redwood viscometer.
FEL102.3	Determine COD & chloride content of water using Mohr's method.
FEL102.4	Determine pH of solutions using the pH meter.
FEL102.5	Demonstrate Phenol-formaldehyde & Biodegradable plastic synthesis using corn starch.
FEL103	Engineering Mechanics
FEL103.1	Verify the law of polygon, varignon's theorem and find the resultant of given force system
FEL103.2	Verify the conditions of equilibrium and find the beam reactions
FEL103.3	Analyse the friction between two different surfaces.
FEL103.4	Demonstrate the understanding of Centroid and its significance and locate the same
FEL103.5	Illustrate different types of motions and establish Kinematic relations for particles and rigid body.
FEL103.6	Verify the law of conservation of momentum and find the coefficient of restitution.
FEL104	Basic Electrical Engineering
FEL104.1	Implement and verify behavior of DC circuits using network theorems
FEL104.2	Observe frequency response of RLC circuit for the given resonance frequency.
FEL104.3	Demonstrate relationship between voltage/current/power in three phase star/delta circuits.
FEL104.4	Determine efficiency of the transformer for OC/SC test
FEL104.5	Demonstrate the working of Single Phase/ Three Phase Induction Motor
FEL105	Basic Workshop-I
FEL105.1	Acquire the skill to identify and use of the various hand tools and measuring instruments.

FEL105.2	Model Various basic prototypes in the trade of fitting such as square, hexagonal and V Male Female joint
FEL105.3	Break a part Personal Computer, perform Basic troubleshooting and maintenance, identify network components and perform Basic networking.
FEL105.4	Perform various basic domestic plumbing operations such as pipe cutting, threading, fitting etc.
FEL201	Engineering Physics-II
FEL201.1	Determine the wavelength of light and number of lines/cm of grating by using various light sources.
FEL201.2	Measure the numerical aperture of a given optical fibre.
FEL201.3	Calculate the divergence of the laser beam.
FEL201.4	Model the different carbon nanostructures using open-source simulation software like Avogadro.
FEL201.5	Examine the I-V characteristics of a photodiode and measure the distance using an ultrasonic distance meter.
FEL201.6	Execute the working models of the mini-projects related to physics.
FEL202	Engineering Chemistry-II
FEL202.1	Determine moisture & ash content of coal.
FEL202.2	Determine saponification value & acid value of oil.
FEL202.3	Determine flash point of a lubricating oil
FEL202.4	Determine Na,K & Cu, Zn system
FEL202.5	Demonstrate synthesis of biodiesel from edible oil.
FEL 203	Engineering Graphics
FEL203.1	Apply the basic principles of projections in Projection of Lines and Planes and Curves
FEL203.2	Apply the basic principles of projections in Projection of Solids & Section of solids
FEL203.3	Apply basic AutoCAD skills to draw different views of a 3D object
FEL203.4	Apply basic AutoCAD skills to draw the isometric view from the given two views
FEL 204	Computer Programming
FEL 204.1	Translate given algorithms to a program.
FEL 204.2	Use variables, derived data types and control structures to write c program
FEL 204.3	Write iterative as well as recursive programs.
FEL 204.4	Represent data in arrays, and strings manipulate them through a program
FEL 204.5	Use Structure-Union for solving complex computational problem
FEL 204.6	Declare pointers and demonstrate call by reference concept.

FEL205	PCE-1 LAB
FEL205.1	Interpret spoken discourse through various listening activities.
FEL205.2	Construct spoken script for public speech and deliver it effectively
FEL205.3	Select correct and appropriate vocabulary in different context.
FEL205.4	Plan well-structured business letters and technical guidelines and draft it.
FEL205.5	Demonstrate impressive and ethical attributes in professional as well as social situations to communicate effectively.
FEL205.6	Analyse text meant for reading and comprehend accurately
FEL206	Basic Workshop-II
FEL206.1	Use different carpentry tools and perform the basic operations like joints and wood turning practice.
FEL206.2	Demonstrate the use of furnace and produce the simple forging job.
FEL206.3	Demonstrate the safe wiring practices for the connection of simple electrical load/equipment.
FEL206.4	Demonstrate the skill to fabricate and assemble PCB.