Rajendra Mane College of Engineering and Technology, Ambav

Department of Mechanical Engineering

Course Outcomes (CO)

FIRST YEAR ENGINEERING ODD SEMESTER

Name Course Coordinator :	Mr. D. M. Satpute	Academic Year :	2021-22
Course Name :	Engineering Mathematics-I	Subject Code :	FEC101
At the end of Course Students are			
FEC101.1	State and express the Euler's theorem, types of Matrices, Taylor's series, Demoivre's theorem, Partial derivative of given function. Also solve, find the problems on roots of equation, Rank of matrix, nth order derivative, simultaneous equation and extreme values of the function.		
FEC101.2	Prove, show and test the properties of matrices, separation of real & imaginary parts, statement on Euler's theorem & partial derivative as well as complex number.		
FEC101.3	Verify, evaluate the Euler's theorem, consistency of simultaneous equations, numerical methods for simultaneous equations and transcendental equations.		

Name Course Coordinator :	Ms.Padhye G.B.	Academic Year :	2021-22
Course Name :	Engineering Physics I	Subject Code :	FEC101
At the end of Course Students are			
FEC102.1	Able to understand ,define and state wave packets, wave velocity group velocity, phase velocity, properties of matter waves semiconductor and their types , crystal physics, concepts of superconductor and super capacitors Engineering materials .		
FEC102.2	Able to classify types of semiconductors, direct indirect band gap semiconductors, interference , diffraction ,Type I and Type II superconductors, nematic, smectic and cholesteric phases and type I and type II multiferoics.		
FEC102.3	Able to calculate ,evaluate uncertainty ,energy levels interplanar spacing , fermi levels in different situations,probability of distribution , hall voltage .		
FEC102.4	Able to derive thickness of wedge shaped film , newton's ring, probability distribution function,interplanar spacing .		
FEC102.5	Able to Answer and write answer Working of GMR, CMR,Meissner effect applications of interference, superconductors and supercapacitors. LED, Zener diod ,Photovoltaic cell, basics of crystal structure,dual nature of wave, properties of matter waves		

Name Course Coordinator :	Mr. V. S. Joshi	Academic Year :	2021-22
Course Name :	Engineering Chemistry I	Subject Code :	FEC301
At the end of Course Students are			
FEC103.1	Able to Define and explain Hardness of water its types, BOD & COD, reverse osmosis, polymer, polymerization, plastics and its types, GT, phase rule, Aufbau principle, Hund's rule, Aromaticity, Huckel's rule		
FEC103.2	Able to discuss estimation of hardness and methods of softening & purification of water, compounding and fabrication of plastics, preparation, properties and uses of plastic, reduced phase rule, limitations of phase rule, Quantum numbers, shapes of atomic orbitals, LCAO method, Structure and bonding in benzene & pyrrole, Effect of I.M.F. on properties of compounds.		
FEC103.3	Able to differentiate or compare Temp & Perm Hardness, BOD & COD, bonding & antibonding MO, Ideal Gas & Real Gas, various types of plastics and apply the phase rule to water system and Pb-Ag system, Draw MOT of O2, BE2, CO & NO using LCAO method, write electronic configuration, State whether the given compound is aromatic or not, Derive Nernst Equation.		
FEC103.4	Able to solve numerical based on calculating hardness of water, and softening of water, BOD & COD of water, Calculate Molecular weight of the polymer, Calculate the amount of Eutectic mixture in a given alloy.		

Name Course Coordinator :	Mr.S S Surve	Academic Year :	2021-22
Course Name :	Engineering Mechanics	Subject Code :	FEC104
At the end of Course Students are			
FEC104.1	Illustrate the concept of force, moment and apply the same along with the concept of equilibrium in two and three dimensional systems with the help of FBD.		
FEC104.2	Demonstrate the understanding of Centroid and its significance and locate the same		
FEC104.3	Correlate real life application to specific type of friction and estimate required force to overcome friction		
FEC104.4	Establish relation between velocity and acceleration of a particle and analyze the motion by plotting the relation		
FEC104.5	Illustrate different types of motions and establish Kinematic relations for a rigid body		

Name Course Coordinator :	Mr. P. D. Waikar	Academic Year :	2021-22
Course Name :	Basic Electrical Engineering	Subject Code :	FEC105
At the end of Course Students are			
FEC105.1	Apply various network theorems to determine the circuit response / behaviour.		
FEC105.2	Evaluate and analyze 1-Φ circuits		
FEC105.3	Evaluate and analyze 3-Φ AC circuits.		
FEC105.4	Understand the constructional features and operation of 1-Φ transformer.		
FEC105.5	Illustrate the working principle of 3-Φ machine.		
FEC105.6	Illustrate the working principle of 1-Φ machines.		

Name Course Coordinator :	Ms. Padhye G.B.	Academic Year :	2021-22
Course Name :	Engineering Physics I	Subject Code :	FEL101
At the end of Course Students are			
FEL101.1	Able to perform the experiments based on interference in thin film and analyze the results.		
FEL101.2	Able to verify the theory learned in the module crystallography.		
FEL101.3	Able to perform the experiments on various semiconductor devices and analyze their characteristics.		
FEL101.4	Able to perform simulation study on engineering materials		

Name Course Coordinator :	Mr. V. S. Joshi	Academic Year :	2021-22
Course Name :	Engineering Chemistry I	Subject Code :	FEL102
At the end of Course Students are			
FEL102.1	Learners will be able to determine hardness of water by EDTA Method		
FEL102.2	Learners will be able to determine Chloride content of water by Mohr's method		
FEL102.3	Learners will be able to determine Acid No. of given lubricating oil.		
FEL102.4	Learners will be able to determine Chemical oxygen Demand of waste water sample		
FEL102.5	Learners will be able to prepare Urea formaldehyde polymer		

Name Course Coordinator :	Mr. P.R.Kshirsagar	Academic Year :	2020-21
Course Name :	Engineering Mechanics	Subject Code :	FEL103
At the end of Course Students are			
FEL103.1	Verify equations of equilibrium of coplanar force system		
FEL103.2	Verify law of Moments.		
FEL103.3	Determine the centroid of plane lamina.		
FEL103.4	4. Evaluate co-efficient of friction between the different surfaces in contact.		
FEL103.5	Differentiate the Kinematics and Kinetics of a Particle		
FEL103.6	Able to Answer the Oral Questions.		

Name Course Coordinator :	Ms. P.S. Ghubdepatil	Academic Year :	2021-22
Course Name :	Basic Electrical Engineering (Lab)	Subject Code :	FEL104
At the end of Course Students are			
FEL104.1	Interpret and analyse the behaviour of DC circuits using network theorems.		
FEL104.2	Perform and infer experiment on single phase AC circuits.		
FEL104.3	Demonstrate experiment on three phase AC circuits.		
FEL104.4	Illustrate the performance of single phase transformer and machines.		

Name Course Coordinator :	Mr. Sawant S.P.	Academic Year :	21-22
Course Name :	Basic Workshop Practice-I	Subject Code :	FEL105
At the end of Course Students are			
FEL105.1	able to develop the necessary skill required to handle/use different fitting tools and skill required for hardware maintenance.		
FEL105.2	able to install an operating system and system drives and to identify the network components and perform basic networking and crimping.		
FEL105.3	able to prepare the edges of jobs and do simple arc welding.		
FEL105.4	able to develop the necessary skill required to handle/use different plumping tools Demonstrate the turning operation with the help of a simple job.		

FIRST YEAR ENGINEERING EVEN SEMESTER

Name Course Coordinator :	Mr. D. M. Satpute	Academic Year :	2021-22
Course Name :	Engineering Mathematics-II	Subject Code :	FEC201
At the end of Course Students are			
FEC201.1	Solve the differential equation, Compute definite integral by using numerical integration, Find Area and mass bounded by curves, Apply numerical methods for solving first order differential equation, Change the order of integration.		
FEC201.2	Prove, mathematical statement on beta and gamma function, DUIS.		
FEC201.3	Evaluate Definite integral, Double and triple integral by Cartesian to polar coordinates, Volume bounded by curves.		

Name Course Coordinator :	Ms.Padhye G.B.	Academic Year :	2021-22
Course Name :	Engineering Physics II	Subject Code :	FEC202
At the end of Course Students are			
FEC202.1	Able to understand, define and state diffraction, quantum processes, N.A., Time dilation, length contraction, energy mass relation, properties of nanoparticles.		
FEC202.2	Able to classify types of diffraction, laser-ordinary rays, step index -gradded index.		
FEC202.3	Able to calculate N.A. ,acceptance angle,dot product,cross product		
FEC202.4	Able to derive Maxwell's equations, fraunhoffer diffraction due to single slit, gratting, Galliean transformation , Lorentnz transformation		
FEC202.5	Able to Answer and write answer SEM,AFM,STM, different sensors, He-Ne laser, NdYAG laser, semiconductor laser, energy mass trelation.		

Name Course Coordinator :	Mr. V. S. Joshi	Academic Year :	2021-22
Course Name :	Engineering Chemistry II	Subject Code :	FEC302
At the end of Course Students are			
FEC203.1	Able to Define and explain Corrosion, Chemical and Electrochemical corrosion, Metallic coating, Fuel, Characteristics of good fuel, Calorific value, Knocking, Octane number and cetane number, Green Chemistry, 12 Principles of green chemistry, Atomic & Molecular spectroscopy, Fluorescence and Phosphorescence		
FEC203.2	Able to discuss Types of corrosion, mechanism. Factors affecting the rate of corrosion, Classification of fuel, HCV & LCV, Analysis of coal, Knocking, Catalytic converter, Selection Rule, Flame photometry, Advantages & Disadvantages, Biodiesel		

FEC203.3	Able to differentiate between electrolytic Cell & Voltaic Cell, galvanizing and tinning, Anodic and Cathodic coating, GCV & NCV. Methods of controlling corrosion, Anti knock agents, Applications of Flame photometry, Jablonski Diagram & its application, Conventional & Green synthesis of various chemical products
FEC203.4	Able to solve numerical based on calculating GCV & NCV of fuel, the constituents of coal. Also the amount of O2 and air by weight & volume required for complete combustion of given fuel, atom economy in green chemistry, emf of the cell.

Name Course Coordinator :	Mr. S.S.Surve	Academic Year :	2021-22
Course Name :	Engineering Graphics	Subject Code :	FEC204
At the end of Course Students are			
FEC204.1	Apply the basic principles of projections in Projection of Lines and Planes		
FEC204.2	Apply the basic principles of projections in Projection of Solids		
FEC204.3	Apply the basic principles of sectional views in Section of solids.		
FEC204.4	Apply the basic principles of projections in converting 3D view to 2D drawing.		
FEC204.5	Read a given drawing.		

Name Course Coordinator :	Ms. R.S.More	Academic Year :	2021-22
Course Name :	C Programming	Subject Code :	FEC205
At the end of Course Students are			
FEC205.1	Able to formulate simple algorithms for arithmetics, logical problems and translate them to programs in C language		
FEC205.2	Able to implement, test and execute program comprising of control strctures.		
FEC205.3	Able to decompose a problem into functions and synthesize a complete program.		
FEC205.4	Able to demonstrate the use of arrays, strings and structures in C language.		
FEC205.5	Able to understand the concept of pointers.		

Name Course Coordinator :	Mr. S. D. Dethe	Academic Year :	2021-22
Course Name :	Professional Communication & Ethics -I	Subject Code :	FEC206
At the end of Course Students are			
FEC206.1	Eliminate barriers and use verbal/non-verbal cues at social and workplace situations.		
FEC206.2	Employ listening strategies to comprehend wide-ranging vocabulary, grammatical structures, tone and pronunciation.		
FEC206.3	Prepare effectively for speaking at social, academic and business situations.		
FEC206.4	Use reading strategies for faster comprehension, summarization and evaluation of texts.		
FEC206.5	Acquire effective writing skills for drafting academic, business and technical documents.		
FEC206.6	Successfully interact in all kinds of settings, displaying refined grooming and social skills.		

Name Course Coordinator :	Ms. Padhye G.B.	Academic Year :	2021-22
Course Name :	Engineering Physics II	Subject Code :	FEL201
At the end of Course Students are			
FEL201.1	Able to perform the experiments based on diffraction through slits using laser source and analyze the result		
FEL201.2	Able to perform the experiments using optical fibre to measure numerical aperture of a given fibre.		
FEL201.3	able to perform the experiments on various sensors and analyze the result		

Name Course Coordinator :	Mr. V. S. Joshi	Academic Year :	2021-22
Course Name :	Engineering Chemistry II	Subject Code :	FEL202
At the end of Course Students are			
FEL202.1	Learners will be able to determine moisture content of the coal sample		
FEL202.2	Learners will be able to construct an electrochemical cell and determine its EMF		

FEL202.3	Learners will be able to determine Saponification value of the oil.
FEL202.4	Learners will be able to determine Viscosity of the lubricating oil.
FEL202.5	Learners will be able to determine Flash Point of an oil.

Name Course Coordinator :	Mr. S.S.Surve	Academic Year :	2021-22
Course Name :	Engineering Graphics	Subject Code :	FEL203
At the end of Course Students are			
FEL203.1	Apply the basic principles of projections in 2D drawings using a CAD software		
FEL203.2	Create, Annotate, Edit and Plot drawings using basic AutoCAD commands and features.		
FEL203.3	Apply the concepts of layers to create drawing.		
FEL203.4	Apply basic AutoCAD skills to draw different views of a 3D object.		
FEL203.5	Able to Answer the Oral Questions.		

Name Course Coordinator :	Ms. R.S.More	Academic Year :	2021-22
Course Name :	C Programming	Subject Code :	FEL204
At the end of Course Students are			
FEL204.1	Able to transfer given algorithm to a program		
FEL204.2	Able to correct syntax and logical errors		
FEL204.3	Able to write iterative as well as recursive programs		
FEL204.4	Able to represent data in arrays, strings and structure and manipulate them through a program		
FEL204.5	Able to declare pointers and demonstrate call by reference concept		

Name Course Coordinator :	Mr. S. D. Dethe	Academic Year :	2021-22
Course Name :	Professional Communication & Ethics -I	Subject Code :	FEL205
At the end of Course Students are			

FEL205.1	Listen and comprehend all types of spoken discourse successfully.
FEL205.2	Speak fluently and make effective professional presentations.
FEL205.3	Read large quantities of text in a short time to comprehend, summarise and evaluate content.
FEL205.4	Draft precise business letters, academic essays and technical guidelines.
FEL205.5	Dress finely and conduct themselves with panache in social, academic and professional situations.

Name Course Coordinator :	Mr Sawant S. P.	Academic Year :	21-22
Course Name :	Basic Workshop Practice-II	Subject Code :	FEL206
At the end of Course Students are			
FEL206.1	able to develop the necessary skill required to handle/use different carpentry tools, the necessary skill required to handle/use different masons tools and the necessary skill required to use different sheet metal and brazing tools.		
FEL206.2	able to identify and understand the safe practices to adopt in electrical environment.		
FEL206.3	able to demonstrate the wiring practices for the connection of simple electrical load/ equipment and design, fabricate and assemble pcb.		
FEL206.4	able to demonstrate the operation, forging with the help of a simple job.		

SECOND YEAR ENGINEERING ODD SEMESTER

Name Course Coordinator :	Ms. K. M. Bagayatkar	Academic Year :	2021-22
Course Name :	Engineering Mathematics-III	Subject Code :	MEC301
At the end of Course Students are			
MEC301.1	Able to find Eigen values and Eigen vectors of matrix, Laplace and inverse Laplace transform of the given function, analytic function, orthogonal trajectories for the given family of curves, image of the given region under given transformation, bilinear transformation, solution of wave & heat equation, Use Cayley Hamilton theorem, Test analyticity of the given function.		
MEC301.2	Able to Show the matrix is diagonalizable, Prove statement on function of square matrix		
MEC301.3	Able to evaluate definite integral by Laplace transform and inverse Laplace transform of the given function. Verify Cayley Hamilton theorem		

Name Course Coordinator :	Dr. S. N. Waghmare	Academic Year :	2021-22
Course Name :	Strength of Materials	Subject Code :	MEC302
At the end of Course Students are			
MEC302.1	Able to define the basic concepts of the stresses, strains, elastic constants and their relationships.		
MEC302.2	Able to explain the parameters of structural members under different loadings		
MEC302.3	Able to derive relationship stresses, strains and different elastic constants.		
MEC302.4	Able to calculate the parameters of structural members under different loadings.		
MEC302.5	Able to draw SFD, BMD, Mohr's Circle, Bending & Shear stress distribution diagram.		

Name Course Coordinator :	Mr. G. S. Jagushte	Academic Year :	2021-22
Course Name :	Production Processes	Subject Code :	MEC303
At the end of Course Students are			
MEC303.1	able to State, select, define and describe the concepts, functions of Production processes, machine tools, tool engineering, and intelligent manufacturing.		
MEC303.2	able to classify, discuss and explain principles, construction and working of production processes, machine tools, tool engineering, and intelligent manufacturing.		
MEC303.3	able to sketch, draw, and demonstrate different types of production processes, machine tools, tool engineering.		
MEC303.4	able to select & differentiate machine tools, processes and calculate tool life of cutting tool & solidification time for casting.		

Name Course Coordinator :	Mr. A. S. Raut	Academic Year :	2021-22
Course Name :	Materials and Metallurgy	Subject Code :	MEC304
At the end of Course Students are			
MEC304.1	Able to Identify the various classes of materials and comprehend their properties.		
MEC304.2	Able to APPLY phase diagram concepts to engineering applications.		
MEC304.3	Able to Apply particular heat treatment for required property development.		
MEC304.4	Able to Identify the probable mode of failure in materials and suggest measures to prevent them.		
MEC304.5	Able to choose or develop new materials and suggest measures to prevent them.		
MEC304.6	Able to decide an appropriate method to evaluate different component in service.		

Name Course Coordinator :	Mr. P. R. Kshirsagar	Academic Year :	2021-22(Odd)
Course Name :	Thermodynamics	Subject Code :	MEC305
At the end of Course Students are			
MEC305.1	Demonstrate application of the laws of thermodynamics to a wide range of systems.		
MEC305.2	Compute heat and work interactions in thermodynamic systems		
MEC305.3	Demonstrate the interrelations between thermodynamic functions to solve practical problems.		
MEC305.4	Compute thermodynamic interactions using the steam table and Mollier chart		
MEC305.5	Compute efficiencies of heat engines, power cycles & Apply the fundamentals of compressible fluid flow to the relevant system		
MEC305.6	Able to answer the oral questions/queries by examiner/evaluators and write assignments and answers in English		

Name Course Coordinator :	Dr. S. N. Waghmare	Academic Year :	2021-22
Course Name :	Material Testing	Subject Code :	MEL301
At the end of Course Students are			
MEL301.1	You are able to Prepare metallic samples for studying its microstructure following the appropriate procedure.		
MEL301.2	You are able to Identify effects of heat treatment on microstructure of medium carbon steel and hardenability of steel using Jominy end Quench test		
MEL301.3	You are able to Perform Tension test to Analyze the stress - strain behaviour of materials		
MEL301.4	You are able to Measure torsional strength, hardness and impact resistance of the material		
MEL301.5	You are able to Perform flexural test with central and three point loading conditions		
MEL301.6	You are able to Perform Fatigue Test and draw S-N curve		

Name Course Coordinator :	Mr. M S Prabhavalkar	Academic Year :	2020-21
Course Name :	CADM Lab	Subject Code :	MESBL301
At the end of Course Students are			
MESBL301.1	Able to Understand Understanding and explaining basic types of CAD model creation.		
MESBL301.2	Able to Visualize and prepare 2D modeling of a given object using modelling software.		
MESBL301.3	Able to Create solid model of a given object and develop the surface model of a given object using modelling software and Perform product data exchange among CAD systems.		

MESBL301.4	Able to Build assembly models of given objects using assembly tools of a modelling software.
MESBL301.5	Able to Answer the Oral Questions/queries by examiner/evaluators and write assignments and answers in English.

Name Course Coordinator :	Mr. G. S. Jagushte	Academic Year :	2021-22
Course Name :	Mini-Project 1A	Subject Code :	MEPBL301
At the end of Course Students are			
MEPBL301.1	Able to identify problems based on societal /research needs.		
MEPBL301.2	Able to apply Knowledge and skill to solve societal problems in a group and develop interpersonal skills to work as member of a group or leader, apply the principles of economics to work and demonstrate capabilities of self-learning in a group, which leads to lifelong learning.		
MEPBL301.3	Able to prepare plan, design and make components and prepare and test prototype/ working model of project		
MEPBL301.4	Able to analyze the impact of solutions in societal and environmental context for sustainable development, use standard norms of engineering practices and to draw the proper inferences from available results through theoretical/ experimental/simulations.		
MEPBL301.5	Able to answer oral questions/queries by examiner/evaluators and write assignments and answers in English and demonstrate project management principles during project work.		

SECOND YEAR ENGINEERING EVEN SEMESTER

Name Course Coordinator :	Ms. K. M. Bagayatkar	Academic Year :	2021-22
Course Name :	Engineering Mathematics IV	Subject Code :	MEC401
At the end of Course Students are			
MEC401.1	Able to State Cauchy's Integral theorem, Cauchy's Residue theorem, uses of Chi-square test, Explain Type I and Type II error, one tailed and two tailed test, find poles, residues & singularities of the given function, correlation coefficient, lines of regression, equation of curve by using least square method, obtain Laurent's & Taylors series, mean, variance and probability, directional derivative, unit vector, work done, angle between surfaces.		
MEC401.2	Able to Prove solenoidal, irrotational vector field, Verify green's theorem		
MEC401.3	Able to Evaluate integral by Cauchy's integral formula & Cauchy's residue theorem, surface integral using Stoke's, Gauss divergence theorem.		

MEC401.4	Able to Test hypothesis for large, small samples, non-parametric test, equality of variance.

Name Course Coordinator :	Mr. P. R. Kshirsagar	Academic Year :	2021-22
Course Name :	Fluid Mechanics	Subject Code :	MEC402
At the end of Course Students are			
MEC402.1	Able to state and define different fluid properties, types of flows.		
MEC402.2	Able to distinguish, explain different types of fluids, flow and pressure measuring devices.		
MEC402.3	Able to derive the mass, energy, momentum equation, Navier-Stokes equation		
MEC402.4	Able to calculate the problems on fluid statics, kinematics of flow, fluid dynamics.		

Name Course Coordinator :	Mr. P. R. Kshirsagar	Academic Year :	2021-22
Course Name :	Kinematics of Machinery	Subject Code :	MEC403
At the end of Course Students are			
MEC403.1	Able to define and describe the basic concepts kinematics of machinery, links, pairs, cam, straight line generating mechanisms, radius of gyration		
MEC403.2	Able to classify exact and approximate straight line generating mechanisms, cam and followers, belts, chains , brakes, gear & gear trains		
MEC403.3	Able to compute velocity and acceleration of mechanisms by relative & ICR method		
MEC403.4	Able to analyze motion and plotting of x-t, v-t, a-t & j-t diagram for uniform, UARM, Cycloidal motion		
MEC403.5	Predict condition for maximum power transmission in the case of a belt drive		
MEC403.6	Able to answer the oral questions/queries by examiner/evaluators and write assignments and answers in English		

Name Course Coordinator :	Mr. A. V. Javir	Academic Year :	2021-22
Course Name :	CC	Subject Code :	MEC404
At the end of Course Students are			
MEC404.1	Identify suitable computer graphics techniques for 3D modeling.		
MEC404.2	Transform, manipulate objects & store and manage data.		
MEC404.3	Develop 3D model using various types of available biomedical data.		
MEC404.4	Create the CAM Tool path for specific given operations.		
MEC404.5	Build and create data for 3D printing of any given object using rapid prototyping and tooling processes.		

MEC404.6	Illustrate understanding of various cost effective alternatives for manufacturing products.

Name Course Coordinator :	Ms.S.B.Kamble	Academic Year :	2021-22
Course Name :	Industrial Electronics	Subject Code :	MEC405
At the end of Course Students are			
MEC405.1	Able to illustrate construction, working principles and applications of power electronic switches.		
MEC405.2	Able to identify digital circuits for industrial applications, rectifiers and inverters for dc and ac motor speed control.		
MEC405.3	Able to analyze circuits using OPAMP and Timer IC 555.		
MEC405.4	Able to design circuits using op-amp, timer555, and microcontroller		

Name Course Coordinator :	Ms.S.B.Kamble	Academic Year :	2021-22
Course Name :	Industrial Electronics	Subject Code :	MEL401
At the end of Course Students are			
MEL401.1	Able to demonstrate characteristics of various electrical and electronics component.		
MEL401.2	Able to develop simple applications built around these components.		
MEL401.3	Able to identify use of different logic gates and their industrial applications.		
MEL401.4	Able to built and demonstrate parameter measurement using microcontroller.		
MEL401.5	Able to anlyze and test speed torque characteristics of electrical machines for speed control.		

Name Course Coordinator :	Mr. P. R. Kshirsagar	Academic Year :	2021-22
Course Name :	Kinematics of Machinery	Subject Code :	MEL402
At the end of Course Students are			
MEL402.1	Draw velocity diagram using Instantaneous Centre method		
MEL402.2	Find velocity and acceleration of a point on a four-bar mechanism by using Relative method.		
MEL402.3	Analyze velocity and acceleration of a specific link of a slider crank mechanism using graphical approach by Relative method.		

MEL402.4	Plot displacement-time, velocity-time, and acceleration-time diagrams of follower motion.
MEL402.5	Draw cam profile for the specific follower motion.
MEL402.6	Develop and build mechanisms to provide specific motion

Name Course Coordinator :	Mrs. P.P.Kshirsagar	Academic Year :	2021-22
Course Name :	Python Programming	Subject Code :	MEL403
At the end of Course Students are			
MEL403.1	Able to Demonstrate understand of basic concepts of python programming.		
MEL403.2	Able to Identify, install and utilize python packages		
MEL403.3	Able to Develop and execute python programs for specific applications.		
MEL403.4	Able to Develop and build python program to solve real-world engineering problems		
MEL403.5	Able to Prepare a report on case studies selected.		

Name Course Coordinator :	Mr. M S Prabhavalkar	Academic Year :	2021-22
Course Name :	CNC & 3DP Lab	Subject Code :	MESBL401
At the end of Course Students are			
MESBL401.1	Able to Define and describe theoretical terms related to CNC and 3D printing machine.		
MESBL401.2	Able to Classify and compare subtractive manufacturing process in particular CNC systems and additive manufacturing process in particularly 3D printing.		
MESBL401.3	Able to Prepare and Demonstrate CAM Tool path and prepare NC- G code and can Convert 2D images into 3D model		
MESBL401.4	Able to Develop and execute part programing for any given specific operation, 3D model using available biomedical data		
MESBL401.5	Able to Build any given object using various CNC operations and any given real life object using 3D printing process.		
MESBL401.6	Able to Answer the Oral Questions/queries by examiner/evaluators and write assignments and answers in English.		

Name Course Coordinator :	Mr. G. S. Jagushte	Academic Year :	2021-22
Course Name :	Mini-Project 1B	Subject Code :	MEPBL401
At the end of Course Students are			
MEPBL401.1	Able to identify problems based on societal /research needs.		
MEPBL401.2	Able to apply Knowledge and skill to solve societal problems in a group and develop interpersonal skills to work as member of a group or leader, apply the principles of economics to work and demonstrate capabilities of self-learning in a group, which leads to lifelong learning.		
MEPBL401.3	Able to prepare plan, design and make components and prepare and test prototype/ working model of project		
MEPBL401.4	Able to analyze the impact of solutions in societal and environmental context for sustainable development, use standard norms of engineering practices and to draw the proper inferences from available results through theoretical/ experimental/simulations.		
MEPBL401.5	Able to answer oral questions/queries by examiner/evaluators and write assignments and answers in English and demonstrate project management principles during project work.		

THIRD YEAR ENGINEERING ODD SEMESTER

Name Course Coordinator :	Mr. G. S. Jagushte	Academic Year :	2021-22
Course Name :	Mechanical Measurements & Control	Subject Code :	MEC501
At the end of Course Students are			
MEC501.1	able to state, describe, select, define, identify principles of the precision measuring instruments / equipment's and to study control system under different time domain.		
MEC501.2	able to describe, discuss, classify and explain various types of measuring instruments/ equipment's and concept of various types of control systems and time domain specifications.		
MEC501.3	able to sketch, classify, draw, apply and demonstrate knowledge of architecture of the measurement system and mathematical modelling of the control system.		
MEC501.4	able to design mathematical model of system/process for standard input responses and analyze error and examine the stability by plotting Root locus and Bode plot.		

Name Course Coordinator :	Mr. V. K. Dongare	Academic Year :	2021-22
Course Name :	Thermal Engineering	Subject Code :	MEC502
At the end of Course Students are			
MEL502.1	Able to define three modes of heat transfer in an engineering application.		
MEL502.2	Able to explain construction and working of different components of internal combustion engines.		
MEL502.3	Able to derive and develop mathematical models for different modes of heat transfer.		
MEL502.4	Able to evaluate engine performance and emission characteristics.		
MEL502.5	Able to draw boiling curve of water & physical configuration for various heat transfer situations.		

Name Course Coordinator :	Mr. P. R. Kshirsagar	Academic Year :	2021-22(Odd)
Course Name :	Dynamics of Machinery	Subject Code :	MEC503
At the end of Course Students are able to			
MEC503.1	Demonstrate working Principles of different types of governors and Gyroscopic effects on the mechanical systems		
MEC503.2	Illustrate basic of static and dynamic forces		
MEC503.3	Determine natural frequency of element/system		
MEC503.4	Determine vibration response of mechanical elements / systems		
MEC503.5	Design vibration isolation system for a specific application. & Demonstrate basic concepts of balancing of forces and couples		
MEC503.6	Able to Answer the Oral Questions. Explain Working of governors, Gyroscope, natural frequency, vibration isolation etc		

Name Course Coordinator :	Mr. A. V. Javir	Academic Year :	2021-22
Course Name :	Finite Element Analysis	Subject Code :	MEC504
At the end of Course Students are			
MEC504.1	Able to Solve ordinary and partial differential equations using the Galerkin method.		

MEC504.2	Able to Develop the finite element equations to model engineering problems governed by 2nd order partial differential equations.
MEC504.3	Able to Apply the basic finite element formulation techniques to solve engineering problems.
MEC504.4	Able to Use commercial FEA software, to solve problems related to mechanical engineering.
MEC504.5	Able to Answer the Oral Questions.

Name Course Coordinator :	Mr. M S Prabhavalkar	Academic Year :	2021-22
Course Name :	DOE	Subject Code :	MEDLO5012
At the end of Course Students are			
MEDLO5012.1	Able to Define terms related statistics in experimentation and understand strategy in planning and conducting experiments.		
MEDLO5012.2	Able to Choose an appropriate experimentation scheme to evaluate a new product design or process improvement through experimentation strategy, data analysis, and interpretation of experimental results.		
MEDLO5012.3	Able to Analyze results from experimental investigations to obtain conclusions		
MEDLO5012.4	Able to Plan, design, and conduct experimental investigations efficiently and effectively;		

Name Course Coordinator :	Mr. V. K. Dongare	Academic Year :	2021-22
Course Name :	Thermal Engineering	Subject Code :	MEL501
At the end of Course Students are			
MEL501.1	Estimate thermal conductivity of engineering materials.		
MEL501.2	Evaluate performance parameters of extended surfaces.		
MEL501.3	Analyze heat transfer parameters in various engineering applications.		
MEL501.4	Analyze engine performance and emission parameters at different operating conditions.		

MEL501.5	Able to draw boiling curve, velocity & temperature profiles for hydrodynamic & thermal boundary layer

Name Course Coordinator :	Mr. P. R. Kshirsagar	Academic Year :	2021-22
Course Name :	Dynamics of Machinery	Subject Code :	MEL502
At the end of Course Students are			
MEL502.1	Able to Plot and analyze governor characteristics		
MEL502.2	Able to Analyze gyroscopic effect on laboratory model		
MEL502.3	Able to Estimate natural frequency of mechanical systems		
MEL502.4	Able to Analyze vibration response of mechanical systems		
MEL502.5	Able to Determine damping coefficient of a system and Balance rotating mass		
MEL502.6	Able to Answer the Oral Questions in English		

Name Course Coordinator :	Mr. A.V. Javir	Academic Year :	2021-22
Course Name :	Finite Element Analysis	Subject Code :	MEL503
At the end of Course Students are			
MEL503.1	Identify proper computer graphic techniques for geometric modeling		
MEL503.2	Able to transform, manipulate objects and store and manage data.		
MEL503.3	Able to prepare part programming applicable to CNC machine		
MEL503.4	Able to use rapid prototyping and tooling in any real life application		
MEL503.5	Able to identify the tools for analysis of a complex engg. Components.		

Name Course Coordinator :	Mr.S. D. Dethe	Academic Year :	2021-22
Course Name :	Professional Communication & Ethics -II	Subject Code :	MESBL501
At the end of Course Students are			
MESBL501.1	Plan and prepare effective business/ technical documents which will in turn provide solid foundation for their future managerial roles.		
MESBL501.2	Strategize their personal and professional skills to build a professional image and meet the demands of the industry.		
MESBL501.3	Demonstrate soft skills in interpersonal communication		
MESBL501.4	Deliver persuasive and professional presentations.		
MESBL501.5	Develop creative thinking and interpersonal skills required for effective professional communication &		
MESBL501.6	Apply codes of ethical conduct, personal integrity and norms of organizational behaviour		

Name Course Coordinator :	Mr. M S Prabhavalkar	Academic Year :	2021-22
Course Name :	Mini Project-2A	Subject Code :	MEPBL501
At the end of Course Students are			
MEPBL501.1	Able to identify problems based on societal /research needs.		
MEPBL501.2	Able to apply Knowledge and skill to solve societal problems in a group and develop interpersonal skills to work as member of a group or leader, apply the principles of economics to work and demonstrate capabilities of self-learning in a group, which leads to lifelong learning.		
MEPBL501.3	Able to prepare plan, design and make components and prepare and test prototype/ working model of project		
MEPBL501.4	Able to analyze the impact of solutions in societal and environmental context for sustainable development, use standard norms of engineering practices and to draw the proper inferences from available results through theoretical/ experimental/simulations.		
MEPBL501.5	Able to answer oral questions/queries by examiner/evaluators and write assignments and answers in English and demonstrate project management principles during project work.		

THIRD YEAR ENGINEERING EVEN SEMESTER

Name Course Coordinator :	Dr. S. N. Waghmare	Academic Year :	2021-22

Course Name :	Machine Design	Subject Code :	MEC601
At the end of Course Students are			
MEC601.1	Able to describe & define basic fundamentals and standards of Machine Design.		
MEC601.2	Able to explain basic concepts and procedures of Machine Design.		
MEC601.3	Able to select different types of joints and standard elements or components from design data book of Machine Design.		
MEC601.4	Able to calculate different dimensions and parameters of various joints and components of Machine Design.		
MEC601.5	Design & draw various joints and components of Machine Design.		

Name Course Coordinator :	Mr. G. S. Jagushte	Academic Year :	2021-22
Course Name :	Automation and Artificial Intelligence	Subject Code :	MEC604
At the end of Course Students are			
MEC601.1	able to state concepts, principles, functions and applications of Automation and Artificial Intelligence.		
MEC601.2	able to discuss, classify, describe and explain, advanced automation functions & algorithms in AI and ML systems.		
MEC601.3	able to sketch and draw Hydraulic and Pneumatic circuits, Ladder programming, Robots and AI & ML systems.		
MEC601.4	able to differentiate Automation systems, algorithms in AI and ML systems. and to design and calculate sequencing & electro pneumatic circuits.		

Name Course Coordinator :	Mr. A. R. Suware	Academic Year :	2021-22

Course Name :	Turbo Machinery	Subject Code :	MEC602
At the end of Course Students are			
MEC602.1	Able to Understand Thermodynamic Principles Applied to Turbo Machines.		
MEC602.2	Able to Discuss various Turbo machine Components and Accessories. Identify and Explain Performance Parameters and their effect. Distinguish between different Turbo Machines		
MEC602.3	Able to Apply Basic Concepts to Predict Capacity of Turbo Machines		
MEC602.4	Able to Analyse Working Parameters of Turbo Machines and Calculate Operational Effectiveness and Losses.		
MEC602.5	Able to Answer the Oral Questions. Explain Different Terms related to Turbo Machines.		

Name Course Coordinator :	Mr. V.K. Dongare	Academic Year :	2021-22
Course Name :	Heating, Ventilation, AC & Refrigeration	Subject Code :	MEC603
At the end of Course Students are			
MEC603.1	Able to identify various HVAC&R components.		
MEC603.2	Able to Illustrate the fundamental principles and applications of refrigeration and air conditioning systems.		
MEC603.3	Able to Evaluate performance of various refrigeration systems.		
MEC603.4	Able to Estimate cooling and heating loads for an air conditioning system.		
MEC603.5	Able to Select air handling unit & design air distribution system.		

Name Course Coordinator :	Mr. G. S. Jagushte	Academic Year :	2021-22
Course Name :	Measurement & Automation	Subject Code :	MESBL601
At the end of Course Students are			
MESBL601.1	Able to select, list, identify the measurement instruments and inspection gauges to check or measure surface parameters.		
MESBL601.2	Able to describe, discuss the working of mechanical measurement system and classify surface parameters using precision measurement tools and equipment.		
MESBL601.3	Able to apply sensors to measure different mechanical parameters and demonstrate use of automated controls using pneumatic and hydraulic systems.		
MESBL601.4	Able to analyse the response of a control systems and implement program on PLC system and demonstrate its application.		
MESBL601.5	Able to answer oral questions/queries by examiner/evaluators and write assignments and answers in English.		

Name Course Coordinator :	Mr. M S Prabhavalkar	Academic Year :	2021-22
Course Name :	Mini Project-2B	Subject Code :	MEPBL601
At the end of Course Students are			
MEPBL601.1	Able to identify problems based on societal /research needs.		
MEPBL601.2	Able to apply Knowledge and skill to solve societal problems in a group and develop interpersonal skills to work as member of a group or leader, apply the principles of economics to work and demonstrate capabilities of self-learning in a group, which leads to lifelong learning.		
MEPBL601.3	Able to prepare plan, design and make components and prepare and test prototype/ working model of project		
MEPBL601.4	Able to analyze the impact of solutions in societal and environmental context for sustainable development, use standard norms of engineering practices and to draw the proper inferences from available results through theoretical/ experimental/simulations.		
MEPBL601.5	Able to answer oral questions/queries by examiner/evaluators and write assignments and answers in English and demonstrate project management principles during project work.		

FINAL YEAR ENGINEERING ODD SEMESTER

Name Course Coordinator :	Mr. A. S. Raut	Academic Year :	2021-22
Course Name :	Machine Design II	Subject Code :	MEC701
At the end of Course Students are			

MEC701.1	Able to state and define gears, static and dynamic load carrying capacity, bearing modulus, sommerfeld number, base and prime circle, pressure angle, fluction of speed, etc.,
MEC701.2	Able to classify and explain gears, bearings, cams, followers, belts, clutches, brakes, etc., Compare spur and helical gear, rolling and sliding contact bearing, flat and V belt, cone clutch and plate clutch, etc.,
MEC701.3	Able to select appropriate gears for power transmission on the basis of given load and speed. Select bearings for a given applications from the manufactures catalogue. Select belts and flywheel for given applications.
MEC701.4	Able to Calculate module for gears, required dynamic load carrying capacity for rolling contact bearing, prime circle radius for cam, coefficient of fluctuation of speed, axial load on clutch, etc.,
MEC701.5	Able to design gears, gearbox, belts, flywheel, cam and follower mechanism, clutches and brakes for given applications.

Name Course Coordinator :	Mr. A. V. Javir	Academic Year :	2021-22
Course Name :	CCC	Subject Code :	MEC702
At the end of Course Students are			
MEC702.1	Identify proper computer graphic techniques for geometric modeling		
MEC702.2	Able to transform, manipulate objects and store and manage data.		
MEC702.3	Able to prepare part programming applicable to CNC machine		
MEC702.4	Able to use rapid prototyping and tooling in any real life application		
MEC702.5	Able to identify the tools for analysis of a complex engg. Components.		

Name Course Coordinator :	Mr. N.S.Dhole	Academic Year :	2021-22
Course Name :	Production, Planning & Control	Subject Code :	MEC703
At the end of Course Students are			
MEC703.1	Able to apply the concepts of production planning & control		
MEC703.2	Able to develop competency in scheduling and sequencing of manufacturing operations		
MEC703.3	Able to forecast the demand of the product and prepare an aggregate plan.		
MEC703.4	Able to develop the skills of Inventory Management and cost effectiveness.		
MEC703.5	Able to project management problems using CPM & PERT & line balancing problems		
MEC703.6	Able to understand the manufacturing planning and control.		

Name Course Coordinator :	Mr. V.K. Dongare	Academic Year :	2021-22
Course Name :	Automobile Engineering	Subject Code :	MEDLO7032
At the end of Course Students are			

MEDLO7032.1	Able to define and list different automobile terms and components.
MEDLO7032.2	Able to explain working of final drives, braking systems, charging and starting systems
MEDLO7032.3	Able to illustrate the clutch and transmission system, wheels, tyres and suspension systems.
MEDLO7032.4	Able to differentiate between various types of components and materials.
MEDLO7032.5	Able to draw layouts and structures of different types of vehicles.

Name Course Coordinator :	Mr. N.S Dhole	Academic Year :	2021-22
Course Name :	Product Lifecycle Management	Subject Code :	ILO7011
At the end of Course Students are			
ILO7011.1	Gain knowledge about phases of PLM, PLM strategies and methodology for PLM feasibility study and PDM implementation.		
ILO7011.2	Illustrate various approaches and techniques for designing and developing products		
ILO7011.3	Apply product engineering guidelines / thumb rules in designing products for moulding, machining, sheet metal working.		
ILO7011.4	Acquire knowledge in applying virtual product development tools for components, machining and manufacturing plant		

Name Course Coordinator :	Mr. L. S. Naik	Academic Year :	2021-22
Course Name :	Cyber Security and Laws	Subject Code :	ILO7016
At the end of Course Students are			
ILO7016.1	Able to Understand the concept of Cybercrime.		
ILO7016.2	Able to Understand the effect of Cybercrime on the outside world.		
ILO7016.3	Able to Interpret and apply IT law in various legal issues.		
ILO7016.4	Able to Distinguish different aspects of Cyber law.		
ILO7016.5	Able to Apply Information Security Standards compliance during software design and development.		

Name Course Coordinator :	Mr. A. S. Raut	Academic Year :	2021-22
Course Name :	Machine Design II	Subject Code :	MEL701

At the end of Course Students are	
MEL701.1	Able to list various types of gears, gear boxes, rolling and sliding contact bearings, cams and followers, clutches and brakes, etc.,
MEL701.2	Able to Explain the functions of gears, bearings, cams, flywheel, clutch and brake, etc.,
MEL701.3	Able to select suitable number of teeth on pinion, face width, and pressure angle for gears, type of cam and follower, type of bearing, etc., for the given applications
MEL701.4	Able to calculate bending and contact stresses on profile of gears, required dynamic load carrying capacity and life of bearing, pitch and base circle radius for cam, etc.,
MEL701.5	Able to Design gears, gearbox, cam and followers, and brakes for a given applications.
MEL701.6	Able to Answer the Oral Questions. Explain Working of gearbox, cam and follower system, clutch, and brake, etc.,

Name Course Coordinator :	Mr. A.V. Javir	Academic Year :	2021-22
Course Name :	CCC	Subject Code :	MEL702
At the end of Course Students are			
MEL702.1	Identify proper computer graphic techniques for geometric modeling		
MEL702.2	Able to transform, manipulate objects and store and manage data.		
MEL702.3	Able to prepare part programming applicable to CNC machine		
MEL702.4	Able to use rapid prototyping and tooling in any real life application		
MEL702.5	Able to identify the tools for analysis of a complex engineering Components.		

Name Course Coordinator :	Mr. N.S.Dhole	Academic Year :	2021-22
Course Name :	Production, Planning & Control	Subject Code :	MEC703
At the end of Course Students are			
MEC703.1	Able to apply the concepts of production planning & control		
MEC703.2	Able to develop competency in scheduling and sequencing of manufacturing operations		
MEC703.3	Able to forecast the demand of the product and prepare an aggregate plan.		

MEC703.4	Able to develop the skills of Inventory Management and cost effectiveness.
MEC703.5	Able to project management problems using CPM & PERT & line balancing problems
MEC703.6	Able to understand the manufacturing planning and control.

Name Course Coordinator :	Mr. A. V. Javir	Academic Year :	2021-22
Course Name :	Final Year Project Stage I	Subject Code :	MEP701
At the end of Course Students are			
MEP701.1	Able to Do literature survey and apply basic Mechanical Engineering knowledge & practices to Identify Problem		
MEP701.2	Able to Distribute the work, schedule activity, involve in a team for project work		
MEP701.3	Able to Address Ethical / Social / Legal / Environmental / Health Aspects		
MEP701.4	Able to Answer the questions, give clarity of work, prepare report		

FINAL YEAR ENGINEERING EVEN SEMESTER

Name Course Coordinator :	Mr. A. S. Raut	Academic Year :	2021-22
Course Name :	Design of Mechanical Systems	Subject Code :	MEL801
At the end of Course Students are			
MEL801.1	Able to list various components and their functions of various systems such as snatch block, belt conveyors, engine system, pumps and machine tool gear box.		
MEL801.2	Able to explain and compare centrifugal pump and gear pump, petrol engine and diesel engine, etc.,		
MEL801.3	Able to Apply Concepts of system design.		
MEL801.4	Able to design of hoisting mechanism of EOT CRANE, belt conveyor systems, pumps for given applications, and engine components such as cylinder, piston, connecting rod and crank shaft.		
MEL801.5	Able to design and preparation of working drawing of any system (as a course project work) having minimum 5 to 6 components.		
MEL801.6	Able to Answer the Oral Questions. Explain Working of pumps, belt conveyors, EOT crane, engine and gear box.		

Name Course Coordinator :	Mr. M S Prabhavalkar	Academic Year :	2021-22
Course Name	IEM	Subject Code :	MEC802

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At the end of Course Students are	
MEC802.1	Able to Define various terms related to industrial engg and management, Describe different aspects of work system design and facilities design pertinent to manufacturing industries.
MEC802.2	Able to Explain, compare various terms related to industrial engg and management.
MEC802.3	Able to Illustrate the need for optimization of resources and its significance, concepts of Agile manufacturing, Lean manufacturing and Flexible manufacturing Demonstrate the concept of value analysis and its relevance, manage and implement different concepts involved in method study and understanding of work content in different situations.
MEC802.4	Able to Develop ability in integrating knowledge of design along with other aspects of value addition in the conceptualization and manufacturing stage of various products.

Name Course Coordinator :	Mr. A. R. Suware	Academic Year :	2021-22
Course Name :	Power Engineering	Subject Code :	MEC803

At the end of Course Students are	
MEC803.1	Able to Understand Thermodynamic Principles Applied to Turbo Machines.
MEC803.2	Able to Discuss various Turbo machine Components and Accessories. Identify and Explain Performance Parameters and their effect. Distinguish between different Turbo Machines
MEC803.3	Able to Apply Basic Concepts to Predict Capacity of Turbo Machines
MEC803.4	Able to Analyse Working Parameters of Turbo Machines and Calculate Operational Effectiveness and Losses.
MEC803.5	Able to Answer the Oral Questions. Explain Different Terms related to Turbo Machines.

Name Course Coordinator :	Mr. A. V. Javir	Academic Year :	2021-22
Course Name :	RP	Subject Code :	MEDLO8042

At the end of Course Students are	
MEDLO8042.1	Select the feasible RP process
MEDLO8042.2	Select the feasible RP material
MEDLO8042.3	Gauge and Hybridize the ever-evolving Prototyping Technologies
MEDLO8042.4	Contribute towards the Product Development at the respective domain in the industry

MEDLO8042.5	Apply RP to build working prototypes
MEDLO8042.6	Demonstrate basics of virtual reality

Name Course Coordinator :	Mr. V.K. Dongare	Academic Year :	2021-22
Course Name :	Renewable Energy Sources	Subject Code :	MEDLO8043

At the end of Course Students are	
MEDLO8043.1	Able to define Renewable and non-renewable energy sources, Solar radiation, solar constant, earth sun angles, local solar time, solar angles, sunrise, sunset and day length, solar driers, solar cooker, Fuel Cells & to list merits, demerits, applications of different energy sources.
MEDLO8043.2	Able to explain Strategy for meeting the future energy requirements, Hybrid Energy Systems, Flat plate collectors, concentrating collectors, Solar air heaters, solar water heaters, solar heating & cooling of buildings, Principle of wind energy conversion, wind mill components, Biomass conversion technologies, Biogas generation plants, Fuel properties of bio gas, geothermal sources and resources, prospects of geothermal energy in India, Ocean Thermal Electric Conversion (OTEC) systems, basic principle of tidal power, Methods of Hydrogen production & to identify different Renewable and non-renewable energy sources, various components of energy conversion systems.
MEDLO8043.3	Able to derive an equation for local solar time, derived solar angles, sunrise, sunset and day length, power output of wind mill & to solve problems on Solar radiation & it's measurement, forces acting on wind mill blades & power output, biogas digester design.
MEDLO8043.4	Able to calculate earth sun angles, local solar time, sunrise, sunset and day length, collector efficiency, wind mill power output, biogas digester volume, fluid volume, number of animals, heat content in hot dry rock & magma, OTEC plant efficiency & to analyse aerodynamic forces acting on wind mill blades, utilization of solar and wind energy.
MEDLO8043.5	Able to draw earth sun angles, wind mill components, OTEC plant Cycles, single basin and double basin tidal power plants, & to construct different types of solar energy collection devices, biogas plants.

Name Course Coordinator :	Dr. R. V. Dandage	Academic Year :	2021-22
Course Name :	Project Management	Subject Code :	ILO8021

At the end of Course Students are	
ILO8021.1	able to Apply selection criteria and select an appropriate project from different options.
ILO8021.2	able to Write work break down structure for a project and develop a schedule based on it.
ILO8021.3	able to Identify opportunities and threats to the project and decide an approach to deal with them strategically.
ILO8021.4	able to Use Earned value technique and determine & predict status of the project.

ILO8021.5	able to Capture lessons learned during project phases and document them for future reference

Name Course Coordinator :	Mrs. Manasi G.Gore	Academic Year :	2021-22
Course Name :	Digital Business Management	Subject Code :	ILO 8028
At the end of Course Students are			
ILO 8028.1	Able to Identify drivers of digital business.		
ILO 8028.2	Able to Illustrate various approaches and techniques for E-business and management		
ILO 8028.3	Able to Prepare E-business plan.		

Name Course Coordinator :	Mr. M S Prabhavalkar	Academic Year :	2021-22
Course Name :	EM	Subject Code :	ILO8029
At the end of Course Students are			
ILO8029.1	Able to Define and describe Environment and environment mgmt related terms.		
ILO8029.2	Able to Identify and Explain environmental issues relevant to India and global concerns, concept of environmental management, ecosystem, ecology and interdependence, food chain, TQEM, ISO, EMS etc.		
ILO8029.3	Able to Interpret and apply environment related legislations		
ILO8029.4	Able to Assess societal, health, safety, cultural issues and responsibility related to a Mechanical Engineering problem.		
ILO8029.5	Able to Understand the impact of Mechanical Engineering solution on environment and demonstrate the knowledge of need for sustainable development.		

Name Course Coordinator :	Mr. A. S. Raut	Academic Year :	2021-22
Course Name :	Design of Mechanical Systems	Subject Code :	MEL801
At the end of Course Students are			
MEL801.1	Able to list various components and their functions of various systems such as snatch block, belt conveyors, engine system, pumps and machine tool gear box.		
MEL801.2	Able to explain and compare centrifugal pump and gear pump, petrol engine and diesel engine, etc.,		

MEL801.3	Able to Apply Concepts of system design.
MEL801.4	Able to design of hoisting mechanism of EOT CRANE, belt conveyor systems, pumps for given applications, and engine components such as cylinder, piston, connecting rod and crank shaft.
MEL801.5	Able to design and preparation of working drawing of any system (as a course project work) having minimum 5 to 6 components.
MEL801.6	Able to Answer the Oral Questions. Explain Working of pumps, belt conveyors, EOT crane, engine and gear box.

Name Course Coordinator :	Mr. A. R. Suware	Academic Year :	2021-22
Course Name :	Power Engineering	Subject Code :	MEC803
At the end of Course Students are			
MEC803.1	Able to Understand Thermodynamic Principles Applied to Turbo Machines.		
MEC803.2	Able to Discuss various Turbo machine Components and Accessories. Identify and Explain Performance Parameters and their effect. Distinguish between different Turbo Machines		
MEC803.3	Able to Apply Basic Concepts to Predict Capacity of Turbo Machines		
MEC803.4	Able to Analyse Working Parameters of Turbo Machines and Calculate Operational Effectiveness and Losses.		
MEC803.5	Able to Answer the Oral Questions. Explain Different Terms related to Turbo Machines.		

Name Course Coordinator :	Mr. A. V. Javir	Academic Year :	2021-22
Course Name :	Final Year Project Stage II	Subject Code :	MEP801
At the end of Course Students are			
MEP801.1	Able to Do literature survey and apply basic Mechanical Engineering knowledge & practices to Identify Problem		
MEP801.2	Able to Distribute the work, schedule activity, involve in a team for project work		
MEP801.3	Able to Address Ethical / Social / Legal / Environmental / Health Aspects		
MEP801.4	Able to Answer the questions, give clarity of work, prepare report		
MEP801.5	Able to Manage financial planning, project activities		
MEP801.6	Able to Explain future plan & engage with technological advancement & Lifelong learning		