COURSE OUTCOMES - 2018 SCHEME

3rd SEMESTER

Subject:	**Transform Calculus, Fourier Series And Numerical Techniques**		
Subject Code:	**18MAT31**	**NBA Code:**	**ME201**
CO1	Use Laplace transform and inverse Laplace transform in solving differential/ integral equation arising in network analysis, control systems and other fields of engineering.		
CO2	Demonstrate Fourier series to study the behaviour of periodic functions and their applications in system communications, digital signal processing and field theory.		
CO3	Make use of Fourier transform and Z-transform to illustrate discrete/continuous function arising in wave and heat propagation, signals and systems.		
CO4	Solve first and second order ordinary differential equations arising in engineering problems using single step and multistep numerical methods.		
CO5	Determine the extremals of functional using calculus of variations and solve problems arising in dynamics of rigid bodies and vibrational analysis.		

Subject:	**Mechanics Of Materials**		
Subject Code:	**18ME32**	**NBA Code:**	**ME202**
CO1	Understand simple, compound, thermal stresses and strains their relations and strain energy.		
CO2	Analyse structural members for stresses, strains and deformations.		
CO3	Analyse the structural members subjected to bending and shear loads.		
CO4	Analyse shafts subjected to twisting loads.		
CO5	Analyse the short columns for stability		

Subject:	**Basic Thermodynamics**		
Subject Code:	**18ME33**	**NBA Code:**	**ME203**
CO1	Explain fundamentals of thermodynamics and evaluate energy interactions across the boundary of thermodynamic systems.		
CO2	Evaluate the feasibility of cyclic and non-cyclic processes using 2nd law of thermodynamics.		
CO3	Apply the knowledge of entropy, reversibility and irreversibility to solve numerical problems and apply 1ST law of thermodynamics to closed and open systems and determine quantity of energy transfers and change in properties.		
CO4	Interpret the behavior of pure substances and its application in practical problems.		
CO5	Recognize differences between ideal and real gases and evaluate thermodynamic properties of ideal and real gas mixtures using various relations.		

Subject:	Material Science		
Subject Code:	18ME34	NBA Code:	ME204
CO1	Understand the mechanical properties of metals and their alloys.		
CO2	Analyze the various modes of failure and understand the microstructures of ferrous and nonferrous materials.		
CO3	Describe the processes of heat treatment of various alloys.		
CO4	Acquire the Knowledge of composite materials and their production process as well as applications.		
CO5	Understand the properties and potentialities of various materials available and material selection procedures.		

Subject:	Metal Casting And Welding(MCW)		
Subject Code:	18ME35B	NBA Code:	ME205
CO1	Describe the casting process and prepare different types of cast products.		
CO2	Acquire knowledge on Pattern, Core, Gating, Riser system and to use Jolt, Squeeze, Sand Slinger moulding machines.		
CO3	Compare the Gas fired pit, Resistance, Coreless, Electrical and Cupola Metal Furnaces.		
CO4	Compare the Gravity, Pressure die, Centrifugal, Squeeze, slush and Continuous Metal mold castings. Understand the Solidification process and Casting of Non-Ferrous Metals.		
CO5	Describe the Metal Arc, TIG, MIG, Submerged and Atomic Hydrogen Welding processes etc. used		

Subject:	Computer Aided Machine Drawing		
Subject Code:	18ME36A	NBA Code:	ME206
CO1	Identify the national and international standards pertaining to machine drawing.		
CO2	Understand the importance of the linking functional and visualization aspects in the preparation of		
CO3	the part drawings		
CO4	Apply limits and tolerances to assemblies and choose appropriate fits for given assemblies.		
CO5	Interpret the Machining and surface finish symbols on the component drawings.		

Subject:	Material Testing Lab		
Subject Code:	18MEL37A	NBA Code:	ME207
CO1	Acquire experimentation skills in the field of material testing.		
CO2	Develop theoretical understanding of the mechanical properties of materials by performing experiments.		
CO3	Apply the knowledge to analyse a material failure and determine the failure inducing agent.		
CO4	Apply the knowledge of testing methods in related areas.		
CO5	Understand how to improve structure/behaviour of materials for various industrial applications.		

Subject:	Foundry, Forging And Welding Lab		
Subject Code:	18MEL38B	NBA Code:	ME208
CO1	Demonstrate various skills in preparation of molding sand for conducting tensile, shear and compression tests using Universal sand testing machine.		
CO2	Demonstrate skills in determining permeability, clay content and Grain Fineness Number of base sands.		
CO3	Demonstrate skills in preparation of forging models involving upsetting, drawing and bending operations.		

Subject:	Vyavaharika Kannada		
Subject Code:	18KVK39	NBA Code:	ME209
CO1	At the end of the course, the student will be able to understand Kannada and communicate in Kannada language.		

Subject:	Aadalitha Kannada		
Subject Code:	18KAK39	NBA Code:	ME210
CO1	At the end of the course, the student will be able to understand Kannada and communicate in Kannada language.		

COURSE OUTCOMES - 2018 SCHEME

4th SEMESTER

Subject:	Complex Analysis, Probability And Statistical Methods		
Subject Code:	18MAT41	NBA Code:	ME211
CO1	Use the concepts of analytic function and complex potentials to solve the problems arising in electromagnetic field theory		
CO2	Utilize conformal transformation and complex integral arising in aero foil theory, fluid flow visualization and image processing		
CO3	Apply discrete and continuous probability distributions in analyzing the probability models arising in engineering field.		
CO4	Make use of the correlation and regression analysis to fit a suitable mathematical model for the statistical data.		
CO5	Construct joint probability distributions and demonstrate the validity of testing the hypothesis.		

Subject:	Applied Thermodynamics		
Subject Code:	18ME42	NBA Code:	ME212
CO1	Apply thermodynamic concepts to analyze the performance of gas power cycles.		
CO2	Apply thermodynamic concepts to analyze the performance of vapour power cycles.		
CO3	Understand combustion of fuels and performance of I C engines.		
CO4	Understand the principles and applications of refrigeration systems.		
CO5	Apply Thermodynamic concepts to determine performance parameters of refrigeration, air conditioning, working principle of Air compressors and Steam nozzles, applications		

Subject:	Fluid Mechanics		
Subject Code:	18ME43	NBA Code:	ME213
CO1	Identify and calculate the key fluid properties used in the analysis of fluid behavior.		
CO2	Explain the principles of pressure, buoyancy and floatation		
CO3	Apply the knowledge of fluid statics, kinematics and dynamics while addressing problems of mechanical and chemical engineering.		
CO4	Describe the principles of fluid kinematics and dynamics.		
CO5	Explain the concept of boundary layer in fluid flow and apply dimensional analysis to form dimensionless numbers in terms of input output variables.		

Subject:	**Kinematics Of Machines**		
Subject Code:	**18ME44**	**NBA Code:**	**ME214**
CO1	Knowledge of mechanisms and their motion.		
CO2	Understand the inversions of four bar mechanisms.		
CO3	Analyse the velocity, acceleration of links and joints of mechanisms.		
CO4	Analysis of cam follower motion for the motion specifications.		
CO5	Understand the working of the spur gears,		

Subject:	**Metal Cutting And Forming**		
Subject Code:	**18ME45A**	**NBA Code:**	**ME215**
CO1	Explain the construction & specification of various machine tools.		
CO2	Discuss different cutting tool materials, tool nomenclature & surface finish.		
CO3	Apply mechanics of machining process to evaluate machining time.		
CO4	Analyze tool wear mechanisms and equations to enhance tool life and minimize machining cost.		
CO5	Understand the concepts of different metal forming processes and Apply the concepts of design of sheet metal dies to design different dies for simple sheet metal components.		

Subject:	**Mechanical Measurements And Metrology**		
Subject Code:	**18ME46B**	**NBA Code:**	**ME216**
CO1	Understand the objectives of metrology, methods of measurement, standards of measurement & various measurement parameters.		
CO2	Explain tolerance, limits of size, fits, geometric and position tolerances, gauges and their design		
CO3	Understand the working principle of different types of comparators & Describe measurement of major & minor diameter, pitch, angle and effective diameter of screw.		
CO4	Explain measurement systems, transducers, intermediate modifying devices and terminating devices.		
CO5	Describe functioning of force, torque, pressure, strain and temperature measuring devices.		

Subject:	**Mechanical Measurements And Metrology Lab**		
Subject Code:	**18MEL47B**	**NBA Code:**	**ME217**
CO1	Understand Calibration of pressure gauge, thermocouple, LVDT, load cell, micrometer.		
CO2	Apply concepts of Measurement of angle using Sine Centre/ Sine Bar/ Bevel Protractor, alignment using Autocollimator/ Roller set.		
CO3	Demonstrate measurements using Optical Projector/Tool maker microscope, Optical flats.		
CO4	Analyse tool forces using Lathe/Drill tool dynamometer		
CO5	Analyse Screw thread parameters using 2-Wire or 3-Wire method, gear tooth profile using gear tooth Vernier/Gear tooth micrometer, and Understand the concepts of measurement of surface roughness.		

Subject:	Workshop And Machine Shop Practice		
Subject Code:	18MEL48A	NBA Code:	ME218
CO1	To read working drawings, understand operational symbols and execute machining operations.		
CO2	Prepare fitting models according to drawings using hand tools- V-block, marking gauge, files, hack saw, drills etc.,		
CO3	Understand integral parts of lathe, shaping and milling machines and various accessories and attachments used.		
CO4	Select cutting parameters like cutting speed, feed, depth of cut, and tooling for various machining operations.		
CO5	Perform cylindrical turning operations such as plain turning, taper turning, step turning, thread Cutting, facing, knurling, internal thread cutting, eccentric turning and estimate cutting time.		

Subject:	Constitution Of India, Professional Ethics And Cyber Law (CPC)		
Subject Code:	18CPC49	NBA Code:	ME219
CO1	Have constitutional knowledge and legal literacy		
CO2	Understand Engineering and Professional ethics and responsibilities of Engineers.		
CO3	Understand the cybercrimes and cyber laws for cyber safety measures.		

COURSE OUTCOMES - 2018 SCHEME

5th SEMESTER

Subject:	Management & Economics		
Subject Code:	18ME51	NBA Code:	ME301
CO1	Understand need, functions, roles, scopes, evolution of management and importance, purpose, hierarchy of planning		
CO2	Discuss decision making, organizing, staffing, directing and controlling		
CO3	Understand various interest rate methods and implement the suitable one		
CO4	Select the best economic model from various available alternatives		
CO5	Estimate various depreciation values of commodities		

Subject:	Design Of Machine Element-1		
Subject Code:	18ME52	NBA Code:	ME302
CO1	Understand use of data handbook and mechanical component Manufacturer's catalogue.		
CO2	Analyse stress, failure modes, stress concentration and stress by different types of loadings.		
CO3	Evaluate 2-D and 3-D stresses in mechanical components		
CO4	Analyse and design mechanical components like shafts, keys, couplings, joints (rivets, welding, cotter, knuckle and fasteners).		
CO5	Understand use of data handbook and mechanical component Manufacturer's catalogue.		

Subject:	Dynamics Of Machines		
Subject Code:	18ME53	NBA Code:	ME303
CO1	Analyse the mechanisms for static and dynamic equilibrium.		
CO2	Carry out the balancing of rotating and reciprocating masses		
CO3	Analyse different types of governors used in real life situation.		
CO4	Analyse the gyroscopic effects on disks, airplanes, stability of ships, two and four wheelers		
CO5	Understand the free and forced vibration phenomenon, Determine the natural frequency, force and motion transmitted in vibrating systems.		

Subject:	Turbo Machines		
Subject Code:	18ME54	NBA Code:	ME304
CO1	Model studies and thermodynamics analysis of turbo machines.		
CO2	Analyse the energy transfer in Turbo machine with degree of reaction and utilisation factor.		
CO3	Classify, analyse and understand various type of steam turbine.		
CO4	Classify, analyse and understand various type of hydraulic turbine.		
CO5	Understand the concept of radial power absorbing machine and the problems involved during its operation.		

Subject:	Fluid Power Engineering		
Subject Code:	18ME55	NBA Code:	ME305
CO1	Identify and analyse the functional requirements of a fluid power transmission system for a given application		
CO2	Visualize how a hydraulic\/pneumatic circuit will work to accomplish the function		
CO3	Design an appropriate hydraulic or pneumatic circuit or combination circuit like electro-hydraulics, electro- pneumatics for a given application.		
CO4	Select and size the different components of the circuit.		
CO5	Develop a comprehensive circuit diagram by integrating the components selected for the given application.		

Subject:	Operation Management		
Subject Code:	18ME56	NBA Code:	ME306
CO1	Explain the concept and scope of operations management in a business context		
CO2	Recognize the role of Operations management among various business functions and its role in the organizations' strategic planning and gaining competitive advantage.		
CO3	Analyze the appropriateness and applicability of a range of operations management systems/models in decision making		
CO4	Assess a range of strategies for improving the efficiency and effectiveness of organizational operations.		
CO5	Evaluate a selection of frameworks used in the design and delivery of operations		

Subject:	Fluid Mechanics and Machines Lab		
Subject Code:	18MEL57	NBA Code:	ME307
CO1	Perform experiments to determine the coefficient of discharge of flow measuring devices.		
CO2	Conduct experiments on hydraulic turbines and pumps to draw characteristics.		
CO3	Test basic performance parameters of hydraulic turbines and pumps and execute the knowledge in real-life situations		
CO4	Determine the energy flow pattern through the hydraulic turbines and pumps		
CO5	Exhibit his competency towards preventive maintenance of hydraulic machines		

Subject:	Energy Conversion Laboratory		
Subject Code:	18MEL58	NBA Code:	ME308
CO1	Perform experiments to determine the properties of fuels and oils		
CO2	Conduct experiments on engines and draw characteristics		
CO3	Test basic performance parameters of I.C. Engine and implement the knowledge in industry.		
CO4	Identify exhaust emission, factors affecting them and Exhibit his competency towards preventive maintenance of IC engines.		
CO5	Perform experiments to determine the properties of fuels and oils		

Subject:	**Environmental Studies**		
Subject Code:	**18CIV59**	**NBA Code:**	**ME309**
CO1	Understand the values, threats and conservation of biodiversity and classify various Ecosystems		
CO2	Identify and implement technological and economical solution to environmental pollution		
CO3	Develop the knowledge on various natural resources, their causes and their effects		
CO4	Explain various environmental acts and disaster management		
CO5	Relate population and environment and the role of IT in environment and human health		

COURSE OUTCOMES - 2018 SCHEME

6th SEMESTER

Subject:	Finite Element Method		
Subject Code:	18ME61	NBA Code:	ME310
CO1	Identify the application and characteristics of FEA elements such as bars, beams, plane and iso parametric elements.		
CO2	Develop element characteristic equation and generation of global equation.		
CO3	Formulate and solve Axi-symmetric and heat transfer problems.		
CO4	Apply suitable boundary conditions to a global equation for bars, trusses, beams, circular shafts, heat transfer, fluid flow, axi-symmetric and dynamic problems.		

Subject:	Design of Machine Elements - 2		
Subject Code:	18ME62	NBA Code:	ME311
CO1	Apply design principles for the design of mechanical systems involving springs, belts, pulleys, and wire ropes.		
CO2	Design different types of gears and simple gear boxes for relevant applications.		
CO3	Understand the design principles of brakes and clutches.		
CO4	Apply design concepts of hydrodynamic bearings for different applications and select Anti friction bearings for different applications using the manufacturers, catalogue.		
CO5	Apply engineering design tools to product design.		

Subject:	Heat Transfer		
Subject Code:	18ME63	NBA Code:	ME312
CO1	Understand the modes of heat transfer and apply the basic laws to formulate engineering systems.		
CO2	Understand and apply the basic laws of heat transfer to extended surface, composite material and unsteady state heat transfer problems.		
CO3	Analyze heat conduction through numerical methods and apply the fundamental principle to solve radiation heat transfer problems.		
CO4	Analyze heat transfer due to free and forced convective heat transfer.		
CO5	Understand the design and performance analysis of heat exchangers and their practical applications, Condensation and Boiling phenomena.		

Subject:	Non Traditional Machining		
Subject Code:	18ME641	NBA Code:	ME313
CO1	Understand the compare traditional and non-traditional machining process and recognize the need for Non- traditional machining process.		
CO2	Understand the constructional features, performance parameters, process characteristics, applications, advantages and limitations of USM, AJM and WJM.		
CO3	Identify the need of Chemical and electro-chemical machining process along with the constructional features, process parameters, process characteristics, applications, advantages and limitations.		
CO4	Understand the constructional feature of the equipment, process parameters, process characteristics, applications, advantages and limitations EDM & PAM.		
CO5	Understand the LBM equipment, LBM parameters, and characteristics. EBM equipment and mechanism of metal removal, applications, advantages and limitations LBM & EBM.		

Subject:	Occupational Health And Safety		
Subject Code:	18ME653	NBA Code:	ME314
CO1	Identify hazards in the work place that pose a danger or threat to their safety or health, or that of others.		
CO2	Control unsafe or unhealthy hazards and propose methods to eliminate the hazard.		
CO3	Present a coherent analysis of a potential safety or health hazard both verbally and in writing, citing the occupational Health and Safety Regulations as well as supported legislation.		
CO4	Discuss the role of health and safety in the workplace pertaining to the responsibilities of workers, managers, supervisors		
CO5	Identify the decisions required to maintain protection of the environment, workplace as well as personal health and safety.		

Subject:	Computer Aided Modelling And Analysis Lab		
Subject Code:	18MEL66	NBA Code:	ME315
CO1	Use the modern tools to formulate the problem, create geometry, discretize, apply boundary conditions to solve problems of bars, truss, beams, and plate to find stresses with different-loading conditions		
CO2	Demonstrate the ability to obtain deflection of beams subjected to point, uniformly distributed and varying loads and use the available results to draw shear force and bending moment diagrams.		
CO3	Analyze and solve 1D and 2D heat transfer conduction and convection problems with different boundary conditions		

Subject:	**Heat Transfer Lab**		
Subject Code:	**18MEL67**	**NBA Code:**	**ME316**
CO1	Determine the thermal conductivity of a metal rod and overall heat transfer coefficient of composite slabs.		
CO2	Determine convective heat transfer coefficient for free and forced convection and correlate with theoretical values.		
CO3	Evaluate temperature distribution characteristics of steady and transient heat conduction through solid cylinder experimentally.		
CO4	Determine surface emissivity of a test plate and Stefan Boltzmann constant		
CO5	Estimate performance of a refrigerator and effectiveness of a fin and Double pipe heat exchanger		

Subject:	**Mini Project**		
Subject Code:	**18MEMP68**	**NBA Code:**	**ME317**
CO1	Identify and analyse real world problems.		
CO2	Design mechanical Engineering components.		
CO3	Learn to work in a team.		

COURSE OUTCOMES - 2018 SCHEME

7th SEMESTER

Subject:	**Control Engineering**		
Subject Code:	**18ME71**	**NBA Code:**	**ME401**
CO1	Identify the type of control and control actions. Develop the mathematical model of the physical systems.		
CO2	Estimate the response and error in response of first and second order systems subjected standard input signals		
CO3	Represent the complex physical system using block diagram and signal flow graph and obtain transfer function.		
CO4	Analyse a linear feedback control system for stability using Hurwitz criterion, Routh\u2019s criterion and root Locus technique in complex domain		
CO5	Evalute the stability of linear feedback control systems in frequency domain using polar plots, Nyquist and Bode plot.		

Subject:	**Computer Aided Design and Manufacturing**		
Subject Code:	**18ME72**	**NBA Code:**	**ME402**
CO1	Define Automation, CIM, CAD, CAM and explain the differences between these concepts. Solve simple problems of transformations of entities on computer screen		
CO2	Explain the basics of automated manufacturing industries through mathematical models and analyze different types of automated flow lines		
CO3	Analyse the automated flow linestoreduce time and enhance productivity		
CO4	Explain the use of different computer applications in manufacturing, and able to prepare part programs for simple jobs on CNC machine tools and robot programming		
CO5	Visualize and appreciate the modern trends in Manufacturing like additive manufacturing, Industry 4.0 and applications of Internet of Things leading to Smart Manufacturing		

Subject:	**Automation & Robotics**		
Subject Code:	**18ME732**	**NBA Code:**	**ME403**
CO1	Translate and simulate a real time activity using modern tools and discuss the Benefits of automation		
CO2	Identify suitable automation hardware for the given application.		
CO3	Apply the knowledge of entropy, reversibility and irreversibility to solve numerical problems and apply 1st law of thermodynamics to closed and open systems and determine quantity of energy transfers and change in properties.		
CO4	Explain the basic principles of Robotic technology, configurations, control and Programming of Robots.		
CO5	Explain the basic principles of programming and apply it for typical Pick & place, Loading & unloading and palletizing applications		

Subject:	Mechatronics		
Subject Code:	18ME744	NBA Code:	ME404
CO1	Illustrate various components of Mechatronics systems.		
CO2	Assess various control systems used in automation.		
CO3	Design and conduct experiments to evaluate the performance of a mechatronics system		
CO4	Apply the principles of Mechatronics design to product design.		
CO5	Function effectively as members of multidisciplinary teams.		

Subject:	Additive Manufacturing		
Subject Code:	18ME741	NBA Code:	ME404
CO1	Demonstrate the knowledge of the broad range of AM processes, devices, capabilities and materials that are available, Demonstrate the knowledge of the broad range of AM processes, devices, capabilities and materials that are available		
CO2	Understand the various software tools, processes and techniques that enable advanced/additive manufacturing.		
CO3	Apply the concepts of additive manufacturing to design and create components that satisfy product development/prototyping requirements, using advanced/additive manufacturing devices and processes.		
CO4	Understand characterization techniques in additive manufacturing.		
CO5	Understand the latest trends and business opportunities in additive manufacturing.		

Subject:	Environmental Protection And Management		
Subject Code:	18CV753	NBA Code:	ME405
CO1	Appreciate the elements of Corporate Environmental Management systems complying to international environmental management system standards.		
CO2	Lead pollution prevention assessment team and implement waste minimization options.		
CO3	Develop, Implement, maintain and Audit Environmental Management systems for Organizations.		

Subject:	Computer Aided Manufacturing Lab		
Subject Code:	18MEL76	NBA Code:	ME406
CO1	Generate CNC Lathe part program for Turning Facing, Chamfering, Grooving, Step turning, Taper turning, Circular interpolation		
CO2	Generate CNC Mill Part programming for Point to point motions, Line motions, Circular interpolation, Contour motion, Pocket milling- circular, rectangular, Mirror commands etc.		
CO3	Use Canned Cycles for Drilling, Peck drilling, Boring, Tapping, Turning, Facing, Taper turning Thread cutting etc.		
CO4	Simulate Tool Path for different Machining operations of small components using CNC Lathe & CNC Milling Machine.		
CO5	Use high end CAM packages for machining complex parts; use state of art cutting tools and related cutting parameters; optimize cycle time; set up and cut part on, Understand & write programs for Robot.		

Subject:	**Design Lab**		
Subject Code:	**18MEL77**	**NBA Code:**	**ME407**
CO1	Compute the natural frequency of the free and forced vibration of single degree freedom systems, critical speed of shafts.		
CO2	Carry out balancing of rotating masses, Analyse the governor characteristics.		
CO3	Determine stresses in disk, beams, plates and hook using photo elastic bench.		
CO4	Determination of Pressure distribution in Journal bearing.		
CO5	Analyse the stress and strains using strain gauges in compression and bending test and stress distribution in curved beams.		

Subject:	**Project Phase I**		
Subject Code:	**18MEP78**	**NBA Code:**	**ME408**
CO1	Identify and analyse real world problems		
CO2	Design mechanical Engineering components		
CO3	Learn to work in a team		

COURSE OUTCOMES - 2018 SCHEME

8th SEMESTER

Subject:	Energy Engineering		
Subject Code:	18ME81	NBA Code:	ME409
CO1	Understand the construction and working of steam generators and their accessories.		
CO2	Identify renewable energy sources and their utilization.		
CO3	Understand principles of energy conversion from wind, hydel and tidal energy as alternate sources.		
CO4	Understand principles of energy conversion from ocean, biomass as alternate sources.		
CO5	Understand principles of energy conversion from nuclear as alternate sources.		

Subject:	Non Traditional Machining		
Subject Code:	18ME823	NBA Code:	ME410
CO1	Classify various non-destructive testing methods.		
CO2	Check different metals and alloys by visual inspection method.		
CO3	Explain and perform non-destructive tests like: Liquid penetrant test, Magnetic particle test, Ultrasonic test, X- ray and Gamma ray radiography, Leak Test, Eddy current test.		
CO4	Identify defects using relevant NDT methods.		
CO5	Differentiate various defect types and select the appropriate NDT methods for better evaluation and document the testing and evaluation of the results.		

Subject:	Project Work		
Subject Code:	18MEP83	NBA Code:	ME411
CO1	Identify and analyse real world problems		
CO2	Design mechanical Engineering components		
CO3	Learn to work in a team		

Subject:	Technical Seminar		
Subject Code:	18MES84	NBA Code:	ME412
CO1	To Analyse the complex engineering activities.		
CO2	Apply reasoning contextual knowledge		
CO3	To understand by the team work		
CO4	Analyse the various communicate Engg. activities		
CO5	Demonstrate knowledge and recognise the gained knowledge		

Subject:	**Internship Seminar**		
Subject Code:	**18MEI85**	**NBA Code:**	**ME413**
CO1	To Analyse the complex engineering activities.		
CO2	Apply reasoning contextual knowledge		
CO3	To understand by the team work		
CO4	Analyse the various communicate Engg. activities		
CO5	Demonstrate knowledge and recognise the gained knowledge		