

## **Even semester 2017 regulation**

### **MA8452 STATISTICS AND NUMERICAL METHODS**

Upon successful completion of the course, students will be able to:

- Apply the concept of testing of hypothesis for small and large samples in real life problems.
- Apply the basic concepts of classifications of design of experiments in the field of agriculture.
- Appreciate the numerical techniques of interpolation in various intervals and apply the numerical techniques of differentiation and integration for engineering problems.
- Understand the knowledge of various techniques and methods for solving first and second order ordinary differential equations.
- Solve the partial and ordinary differential equations with initial and boundary conditions by using certain techniques with engineering applications
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### **AT8401 COMPRESSION IGNITION ENGINES**

- Upon completion of this course, the students can be able to understand the various systems and its operations, combustion, formation of emissions and alternative fuels used in CI engines.

### **ME8491 ENGINEERING METALLURGY**

- Upon the completion of this course the students will be able to
- Explain alloys and phase diagram, Iron-Iron carbide diagram and steel classification.
- Explain isothermal transformation, continuous cooling diagrams and different heat treatment processes.
- Summarize the mechanism of plastic deformation and testing mechanical properties.
- Clarify the effect of alloying elements on ferrous and non-ferrous metals.
- Differentiate different non-metallurgical materials.

## **EC8396 ELECTRONICS AND MICROPROCESSORS**

- Ability to perform performing on 8085 Microprocessor to control devices
- Ability to use microcontroller and programming

## **AT8402 AUTOMOTIVE CHASSIS**

- The students will understand the constructional, working principle of various sub system of an automobile.

## **PR8451 MECHANICS OF MACHINES**

Student will be able to

- Understand the principles in the formation of mechanisms and their kinematics.
- Understand the construction features of Gears and Gear Trains.
- Understand the effect of friction in different machine elements.
- Understand the importance of balancing.
- Understand the importance of Governors and Gyroscopic effects.
- Understand the importance of vibration.

## **GE8077 TOTAL QUALITY MANAGEMENT**

- The student would be able to apply the tools and techniques of quality management to manufacturing and services processes.

## **AT8601 AUTOMOTIVE ENGINE COMPONENTS DESIGN**

- Upon completion of the course, students will be able to impart knowledge in automotive engine. The detailed concept, construction and principle of operation of engine and various engine components, combustion, cooling and lubrication systems will be taught

to the students. At the end of the course the students will have command over automotive engines and the recent development in the area of engines.

### **AT8602 AUTOMOTIVE CHASSIS COMPONENTS DESIGN**

- At the end of the course, the student can able to design the automotive components like frame, suspension systems, axles, clutch, gear box, drive line components etc

### **AT8603 TWO AND THREE WHEELERS**

- The students can able to understand the various subsystem of two and three wheeler and also know how it is different from light motors and heavy motor vehicles.

### **AT8604 VEHICLE DYNAMICS**

- The student will understand how passenger comfort is achieved along with vehicle stability.

### **AT8002 ADVANCE THEORY OF IC ENGINES**

- At the end of the course, the student can able to model and simulate the engine cycle, perform combustion analysis, instruments used in measurement, recent developments in the IC engines.

### **AT8801 VEHICLE BODY ENGINEERING**

Upon completion of the course, students will

- Know about different aspects of car body and bus body, types, commercial vehicle.
- Role of various aerodynamic forces and moments, measuring instruments
- Know about the material used in body building, tools used, body repairs.

### **AT8009 AUTOMOTIVE SAFETY**

- The student will be familiar in various systems that enhances vehicle safety, passenger comfort, recent technologies in automobile field etc.,

## **AT8012 ALTERNATIVE FUELS AND ENERGY SYSTEMS**

- On completion of the course, the student will understand the various alternative fuels available, its properties, performance characteristics, combustion characteristics, emission characteristics, engine modifications required etc.,