

# SRI MAHAYOGI LAKSHMAMMA GOVERNMENT DEGREE COLLEGE



(Affiliated to Rayalaseema University, Kurnool.)

Near Hanumapuram, Adoni Road, YEMMIGANUR-518 360

Kurnool District, Andhra Pradesh.

e-mail: [yemmiganur.gdc@gmail.com](mailto:yemmiganur.gdc@gmail.com) website: [www.gdcyemmiganur.ac.in](http://www.gdcyemmiganur.ac.in)



## DEPARTMENT OF MATHEMATICS

### PROGRAMME OUTCOMES & COURSE OUTCOMES

#### PROGRAMME OUTCOMES :

- To Provide a strong foundation in computational, analytical, logical thinking skills.
- To make the students learn the basic mathematical tools, needed to understand different branches of Physics
- To know the Latest advancements in his/her area of study or Interest.
- . Enhancement of the student knowledge on the subjects of his/her programme.
- TO Enhance the cognitive Component and comprehensive component of the student
- To be able to Explain the basic scientific principles and methods
- To inculcate scientific thinking and awareness among the student.

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## COURSE OUTCOMES:

### COURSE-I

### DIFFERENTIAL EQUATIONS

### SEMSESTER -1

#### Course Outcomes:

After successful completion of this course, the student will be able to;

1. Solve linear differential equations
2. Convert nonexact homogeneous equations to exact differential equations by using integrating factors.
3. Know the methods of finding solutions of differential equations of the first order but not of the first degree.
4. Solve higher-order linear differential equations, both homogeneous and non homogeneous, with constant coefficients.
5. Understand the concept and apply appropriate methods for solving differential equations.

**COURSE -II**  
**THREE DIMENSIONAL ANALYTICAL SOLID GEOMETRY**  
**SEMESTER -2**

**Course Outcomes:**

After successful completion of this course, the student will be able to;

1. Get the knowledge of planes.
2. Basic idea of lines, sphere and cones.
3. Understand the properties of planes, lines, spheres and cones.
4. Express the problems geometrically and then to get the solution.

**COURSE-III**  
**ABSTRACT ALGEBRA**  
**SEMESTER -3**

**Course Outcomes:**

After successful completion of this course, the student will be able to;

1. Acquire the basic knowledge and structure of groups, subgroups and cyclic groups.
2. Get the significance of the notation of a normal subgroups.
3. Get the behavior of permutations and operations on them.
4. Study the homomorphisms and isomorphisms with applications.
5. Understand the ring theory concepts with the help of knowledge in group theory and to prove the theorems.
6. Understand the applications of ring theory in various fields.

## **COURSE-IV**

### **REAL ANALYSIS**

#### **Course Outcomes:**

After successful completion of this course, the student will be able to

1. Get clear idea about the real numbers and real valued functions.
2. Obtain the skills of analyzing the concepts and applying appropriate methods for testing convergence of a sequence/ series.
3. Test the continuity and differentiability and Riemann integration of a function.
4. Know the geometrical interpretation of mean value theorems.

## **COURSE-V**

### **ALGEBRA**

#### **SYLLABUS**

#### **Course Outcomes:**

After successful completion of this course, the student will be able to;

1. Understand the concepts of vector spaces, subspaces, bases, dimension and their properties
2. Understand the concepts of linear transformations and their properties
3. Apply Cayley- Hamilton theorem to problems for finding the inverse of a matrix and higher powers of matrices without using routine methods
4. Learn the properties of inner product spaces and determine orthogonality in inner product spaces.

