

**Course Name** : Civil and Mechanical Engineering Group

**Course code** : CE/AE/ME/PG/PT /MH

**Semester** : Third

**Subject Title** : Applied Mathematics

**Subject Code:** 9018

**Teaching and examination scheme:**

Teaching Scheme			Examination Scheme						
TH	TU	PR	Paper HRS	TH	TEST	PR	OR	TW	TOTAL
03	--	-	03	80	20	---	---	---	100

**Rationale:**

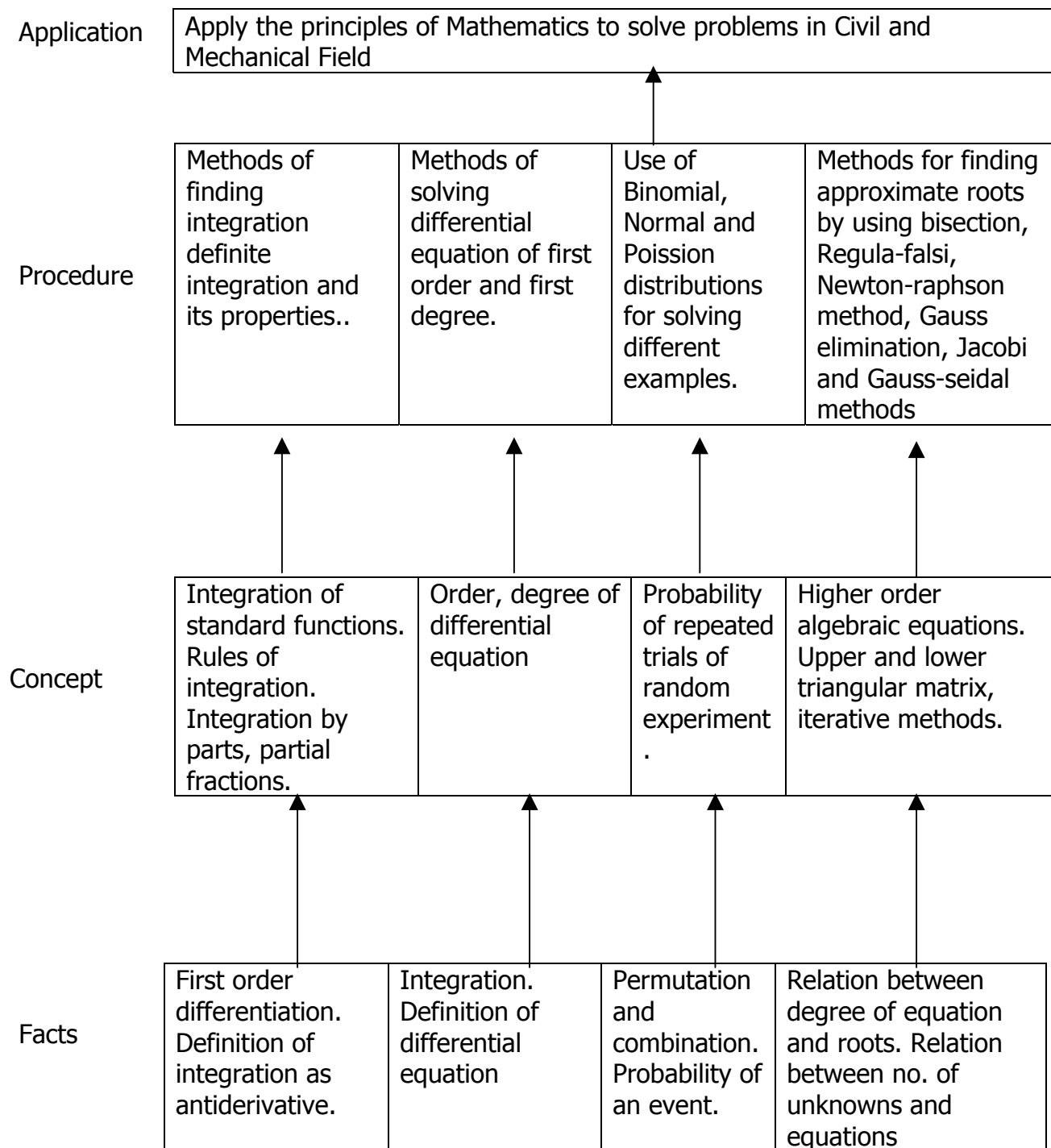
The study of mathematics is necessary to develop in the student the skills essential for studying new technological development. This subject introduces some applications of Engineering, through which the student can understand the link of Mathematics with Engineering principles.

**Objective:**

The student will be able to:

1. Apply Mathematical term, concept, principles and different methods for studying engineering subjects
2. Apply Mathematical methods to solve technical problems,
3. Execute management plans with precision.
4. Use Mathematical techniques necessary for daily and practical problems.

## Learning Structure:





03	<b>Probability Distribution</b> 3.1 Binomial distribution. 3.2 Poisson's distribution. 3.3 Normal distribution 3.4 Simple examples corresponding to production process.	08	12
04	<b>Numerical Methods</b>  <b>4.1 Solution of algebraic equations</b> Bisection method, Regula-falsi method and Newton – Raphson method.  <b>4.2 Solution of simultaneous equations containing 2 and 3 unknowns</b> Gauss elimination method. Iterative methods- Gauss Seidal and Jacobi's methods.	06  06	08  08
	Total	48	80

### Learning Resources:

#### Books:

Sr. No.	Title	Authors	Publications
01	Mathematics for polytechnic	S. P. Deshpande	Pune Vidyarthi Griha Prakashan, Pune
02	Calculus: single variable	Robert T. Smith	Tata McGraw Hill
03	Advanced Mathematics for Engineers and Scientist	Murray R Spiegel	Schaum outline series McGraw Hill
04	Higher Engineering Mathematics	B. S. Grewal	Khanna Publication, New Dehli
06	Introductory Methods of Numerical analysis	S. S. Sastry	Prentice Hall Of India New Dehli
07	Numerical methods for Engg. 4 <sup>th</sup> ed.	Chapra	Tata McGraw Hill
08	Numerical methods for scientific & engineering computations	M. K. Jain & others	Wiley Eastern Publication.