

**Course Code EDEC 126**  
**SEMESTER-I**  
**Mathematics Content & Method**

**Objectives:** Student Teachers...

1. Understand aims ,objectives, meaning content & teaching of mathematics
2. Development of mathematics.
3. Understand the teaching methods, approaches and techniques of teaching mathematics.
4. Formulate instructional objectives in terms of behavioral out comes to prepare lesson plan & developing low cost teaching aids & their utilities.
5. Construct suitable tools for evaluation and understand the concept and use of diagnostic and remedial measures in mathematics.
6. Understand use of mathematics for various recreational activities.
7. Understand the professional efficiency required in mathematics teachers & importance of mathematics laboratory & mathematics club, mathematics text book & its evaluation.
8. Develop attitude & interest in teaching and learning of mathematics.

**Unit:1 Content**

Std- 8, Chapter no: 5,6,8,9,17,18

Std- 9, Chapter no: All chapters from Std 9<sup>th</sup> Textbook of  
Semester 1

Std-10 Chapter no : 1,3,4

**Unit:2 Modern Mathematics, Taxonomy and Planning of Teaching**

2. 1. Meaning of mathematics & development of mathematics in context of India.
2. 2. Values of Mathematics in modern life : Utilitarian value, Disciplinary value and Cultural value
2. 3. Contributions of following mathematicians in development of mathematics
  - (1) Bhaskaracharya
  - (2) Aryabhatt
  - (3) Ramanujam
  - (4) Euclid
  - (5) Pythagoras
2. 4. Objectives of teaching of mathematics and its behavioral change
  - (1) Cognitive Domains
  - (2) Psychomotor Domains
  - (3) Affective domains
2. 5. Meaning, purpose and importance of a lesson plan
2. 6. Planning for Mathematics teaching:
  - (1) Lesson plan
  - (2) Unit planning
  - (3) Monthly planning
  - (4) yearly planning.

### **Unit:3 Teaching Methodology**

#### 3.1 Modern methods of Mathematics teaching

- (1) Inductive
- (2) Deductive
- (3) Analytical
- (4) Synthetic
- (5) Lecture
- (6) Demonstration
- (7) Project

#### 3.2 Using various techniques for teaching mathematics

- (1) Oral work
- (2) Written work
- (3) Drill work
- (4) Assignment
- (5) Supervised study
- (6) Programmed learning

### **Unit: 4 Field Work (any one of the following)**

- (1) Exhibition of pictures and contributions of Indian and international Mathematicians
- (2) Preparation of Programmed Learning Materials
- (3) Planning and Implementation of Project Based Learning
- (4) Interview with eminent mathematician or Experienced Mathematics teacher  
(By keeping merits and demerits of various methods and techniques of teaching mathematics in mind)
- (5) Any other Mathematics related activities