



B.Ed(4 Years) Elementary Education

Code	Subject Title	Cr. Hrs	Semester
EDE- 371	Methods of Teaching Mathematics in Elementary Schools	3	6
Year	Discipline		
3	Elementary Education		

Aims and Objectives

Students will:

- Deepen their understanding of key mathematical concepts in Pakistan's 1-8 National Mathematics Curriculum.
- Identify and assess areas of youngster's understanding and misconception to inform their teaching practices.
- Acquire the pedagogical skills and competencies required to teach Pakistan's 1-8 National Mathematics Curriculum.
- Describe the nature, history, and development of grade 1-8 mathematics education both in Pakistan and internationally.

Syllabus

Unit #1: Introduction

Nature of Mathematics
Importance of Mathematics
Educational Values of Mathematics
Relationship of Mathematics with other subjects
Qualities of a Good mathematics Teacher
Good/Weak Points in the Teaching of Mathematics

Unit #2: Aims & Objectives of Teaching Mathematics

Aims of Teaching Mathematics at Elementary level
Objectives of Teaching Mathematics with reference to Bloom's Taxonomy

Unit #3: Methods of Teaching Mathematics

Significance of methods of Teaching
Lecture Method
Analytical Method
Synthetic Method
Inductive Method
Deductive Method
Heuristic Method
Problem Solving Method
Project Method
Activity Method

Unit #4: Audio-Visual Aid

Meaning and importance of AV aids
Types of AV Aids
Principles for effective use of Teaching Aids
Limitations of use of A.V aids
Use of Library and Internet

Unit #5: Lesson Plan

- Meaning and importance of Lesson Planning in teaching
- Advantages of Lesson Planning
- Qualities of Good Lesson Plan
- Types of Lesson Planning
- Components of Lesson Plan
- Model Lesson Plan on Teaching of Algebra & Geometry

Unit #6: Evaluation

- Meanings of evaluation
- Developing effective evaluation programme for Mathematics
- Different Techniques of evaluation
 - Subjective type tests
 - Objective type tests
 - Assignment
 - Questioning in Classroom
 - Group Discussion
 - Drill in Mathematics
 - Home work
 - Self-study

Text Books/ Reference Material

These resources provide additional information about math education and the mathematical topics addressed during the course.

NCTM *Illuminations*: <http://illuminations.nctm.org/>

New Zealand's Maths Curriculum: <http://nzmaths.co.nz/>

UK's N-Rich Maths site: <http://nrich.maths.org/public/>

How Students Learn: History, Mathematics, and Science in the Classroom

www.nap.edu/catalog.php?record_id=10126#toc Published by National Academies Press.

What does Good Mathematics Instruction Look Like?:

<http://www.naesp.org/resources/2/Principal/2007/S-Op51.pdf>

Mathematics for Elementary School Teachers, by Tom Basserear, published by Brooks Cole.

Elementary and Middle School Mathematics: Teaching Developmentally, by John A. Van de Walle, Karen Karp, and Jennifer Bay-Williams, published by Pearson Education.

Mathematics Explained for Primary Teachers, by Derek Haylock, published by SAGE Publications.