

Montessori Training Institute at Three Rivers Community College

COURSE TITLE: MTI K242 Montessori III Math/Culture/Science
INSTRUCTOR: Melissa Painter-Canova
CLOCK HOURS: 45 (39 real time) (35 hours Math / 4 hours Science)
HOME PHONE : 860 822 6038
E-MAIL: mmsdirector@comcast.net
COURSE TIME: Monday / Wednesday, 1:30 - 4:45 p.m.
LOCATION: Room
OFFICE LOCATION: Early Childhood & MTI Office
OFFICE HOURS: By appointment

Objectives and Competencies to be achieved:

1. General Statement and Purpose

To acquire an understanding of Montessori's materials for early childhood in the area of mathematics and her philosophy in developing these materials

To acquire an ability to demonstrate the mathematics materials to children in an early childhood setting.

2. Knowledge Objectives

MACTE COMPETENCIES

1. Demonstrate knowledge of human development and education.

1.2 Plan for continuity of learning experiences for children in the age range of certification.

3.1 Demonstrate ability to assess children's needs through a variety of vehicles.

3.2 Develop a suitable match between diagnosis and learning activities provided.

3.5 Demonstrate knowledge of the teaching of mathematics.

3.6 Demonstrate knowledge of the teaching of art, music, movement, geography and science.

Design and evaluate curriculum materials and resources appropriate to children with varying abilities and cultural backgrounds:

5.1 Evaluate and select prepared everyday living curriculum materials.

5.2 Develop original sensorial materials to meet the needs and interests of children.

5.3 Demonstrate knowledge of the rationale of curriculum materials.

5.4 Demonstrate knowledge of continuum with curriculum materials.

6. Skill Objectives

To learn ways to protect the natural development of children.

To learn to provide an enriched Montessori environment for young children.

To become practiced observers.

7. Attitudes / Values

Respect for children.

Respect for self and others.

8. Methodology

- Lectures
- Students presenting and sharing work
- Group discussion
- Observation
- Presentation of and practice with materials.

REQUIRED TEXTS:

Dr. Montessori's Own Handbook	Arithmetic pages 102 -113
The Montessori Method	Chapter XIX <i>Teaching of Numeration</i> <i>Introduction to Arithmetic</i>
The Secret of Childhood	Chapter 20 <i>The Method</i>
The Discovery of the Child	Chapter 18 <i>Teaching How to Count and an</i> <i>Introduction to Arithmetic</i>
	Chapter 19 <i>Further Developments in Arithmetic</i>
The Young Child and Mathematics Juanita V. Copley, NAYEC Publication - Review	On reserve with Instructor

MATERIALS NEEDED:

One large 3-ring binder, protective page coverings, tab dividers.

CLASS SCHEDULE:

Week	Monday		Wednesday	

1	June 11	plan theory Math Group 1 Introduction to Numbers Quantity number rods Symbol sandpaper numbers Association numbers & counters	theory Math Group 1 cont Association spindle box numbers&counters memory game	
2	June 18	Math Group II Intro Decimal System Quantity Presentation with Beads Practice with Quantity Symbol Presentation with Cards	Decimal System Cont Association Formation of Numbers with Beads & Cards Collective Exercises Addition Subtraction	
3	June 25	Decimal System Cont Collective Exercises Multiplication Division Individual Exercises Stamp Game Addition Subtraction	Decimal System Cont Individual Exercises Stamp Game Multiplication Division The Dot Game Science	
4	July 2	Math Group III Quantity Teen Beads Symbol Teen Boards Association Teen Beads and Boards Ten Beads and Boards 100 Board		
5	July 9	Math Group III cont Linear Counting 100 & 1000 chain Skip Counting Science	Math Group IV Memorization Addition Snake Game Addition Strip Board Practice Charts 1,2,3,& Blank Chart	

6	July 16	Math Group IV Memorization cont Subtraction Snake Game Subtraction Strip Board Practice Chart Blank Chart	Math Group IV Memorization cont Multiplication Multiplication with Bead Bars Multiplication Board Multiplication Chart 1,2 & Blank Chart Division Unit Division Board Division Practice Chart & Blank Chart
7	July 23	Math Group V Abstraction Small Bead Frame Fractions	

COURSE REQUIREMENT:

The student will be required to write a paper on the Montessori Philosophy of Mathematics compiled from the lectures and readings. (150)

The student will be required to show mastery of the three period lesson. (100)

The student will be required to complete an album of presentations and illustrations from class presentations. (300)

The student will be required to present three different Montessori mathematical materials used in the primary classroom. The student will be evaluated on these three demonstrations and asked questions related to the material and presentation. (350)

The student will be required to participate and contribute in class. (100)

COURSE EVALUATION:

The evaluation process will be computed based on the points received for the

<u>Grades</u>	<u>Equivalent</u>	<u>Quality Points</u>
A	941 - 1000	4.0
3.	891 - 940	3.7
B+	861 - 890	3.3
B	821 - 860	3.0
4.	791 - 820	2.7

C+	761 - 790	2.3
C	721 - 760	2.0
S.	691 - 720	1.7
D+	661 - 690	1.3
D	621 - 660	1.0
D-	600 - 620	0.7
F		

ATTENDANCE:

This course is designed in such a way that a student should get more from the in-class activities than from the textbook alone. Therefore, students who are registered for this course are naturally expected to attend class and participate in class

DISABILITIES:

If you have a hidden or visible disability which may require classroom or test-taking modifications, please see me as soon as possible. If you have not already done so, please be sure to notify John Perch, who is coordinating services to students with disabilities or Chris Scarborough

WITHDRAW POLICY:

Students may withdraw, in writing or verbally at the Registrar's Office or Subbase.

CELL PHONES:

Cell phones are a wonderful concept and in case of an emergency a great way to keep in touch. Cell phones should be turned off before class begins. If a call has to be taken during class time, please be respectful of others and leave the room and return as quickly and as quietly as possible.

MTI: Evaluation of Student Presentations

Student: _____ **Date:** _____ (5)

Instructor: _____ (5)

Curriculum area: _____ (5)

Lesson Plan Comments:

Lesson Title: _____ (5)

Direct/Indirect Aims/Prerequisite Skills: (10)

Presentation Clearly Written: (15)

Presentation Clearly Given: (50)

Points of interest / Control of Error: (10)

Variations/Extensions: (10)

Functionality/Developmental & Cultural Appropriateness: (5)

Overall Comments / Suggestions:

Grade / Points: _____ 120

Items to be included in the Math Introduction