

## Master Syllabus

### ECE 2102 - Math & Science Experiences

**Division:** Liberal Arts, Communication and Social Sciences

**Department:** Education

**Credit Hour Total:** 3.0

**Lecture Hrs:** 3.0

**Prerequisite(s):** AND ECE 1201 AND MAT 0200OR MAT 1120OR MAT 1410 ECE 1200

**Other Prerequisite(s):** AND Approval of Department , AND Other OTM Science , AND Other Must complete all courses with a "C" or better

**Date Revised:** November 2014

---

### Course Description:

Creation of a developmentally appropriate math and science curriculum for preschool children following guidelines and standards established by the major professional organizations and the Ohio Department of Education Early Learning Content Standards for Mathematics and Science.

### General Education Outcomes:

- ▣ Written Communication Competency
- ▣ Critical Thinking/Problem Solving Competency

### Course Outcomes:

#### Implementation

Plan and implement developmentally appropriate science and math experiences.

**Assessment Method:** Performance appraisals

**Performance Criteria:**

Score of 4 out of 5 on rubric

#### Conceptual Knowledge

Demonstrate a basic knowledge of science and math concepts identified in the Ohio Department of Education Early Learning Content Standards.

**Assessment Method:** Locally developed exams

**Performance Criteria:**

80% or higher

#### Natural Interest

Enhance children's natural interest in mathematics and science and their disposition to use it to make sense of their world.

**Assessment Method:** Locally developed exams

**Performance Criteria:**

80% or higher

**Assessment Method:** Performance appraisals

**Performance Criteria:**

Score of 4 out of 5 on rubric

#### Integration

Integrate math and science in the total learning environment.

**Assessment Method:** Locally developed exams

**Performance Criteria:**

80% or higher

**Assessment Method:** Portfolios

**Performance Criteria:**

Score of 4 out of 5 on rubric.

### Outline:

Fundamental science concepts for children from birth to age five developed from the ODE Early Learning Content Standards and National Association for the Education of Young Children (NAEYC) Standards.

The development of science curriculum in the areas of Life Science, Earth Science, Physical Science, and Health Science

The Science Process Skills/Inquiry Method

Fundamental math concepts for children from birth to age five developed from the ODE Early Learning Content Standards and NAEYC Standards

The development of math curriculum in the areas of Measuring/Estimating, Patterns, Geometry, Number Sequence, Data Analysis, and Serialization/Ordinal Sequence

The development of a developmentally appropriate and safe classroom environment to support math and science learning

The appropriate use of field trip experiences to support math and science learning