

**Purpose:** It is the intention of this Administrative-Master Syllabus to provide a general description of the course, outline the required elements of the course and to lay the foundation for course assessment for the improvement of student learning, as specified by the faculty of Wharton County Junior College, regardless of who teaches the course, the timeframe by which it is instructed, or the instructional method by which the course is delivered. It is not intended to restrict the manner by which an individual faculty member teaches the course but to be an administrative tool to aid in the improvement of instruction.

**Course Title – Math and Science for Early Childhood**  
**Course Prefix and Number – CDEC 2307**  
**Department – Education/Early Childhood**

**Division –  
Technology and Business**

**Course Type: (check one)**

- Academic General Education Course (from ACGM – but not in WCJC Core)
- Academic WCJC Core Course
- WECM course (This course is a Special Topics or Unique Needs Course: Y or N)

**Semester Credit Hours # : Lecture hours# : Lab/other hours #      3:3:0**

**Equated Pay hours for course – 3 hours**

**Course Catalog Description –** An exploration of principles, methods, and materials for teaching children math and science concepts and proces skills through discovery and play.

List Lab/ Other Hours
Lab Hours 0
Clinical Hours 0
Practicum Hours 0
Other (list) 0

**Prerequisites/Corequisites - None**

**Approvals – the contents of this document have been reviewed and are found to be accurate.**

Prepared by Barbara S. Lynn	Signature <i>Barbara S. Lynn</i>	Date 07/01/09
Department Head Barbara S. Lynn	Signature <i>Barbara S. Lynn</i>	Date 07/01/09
Division Chair Stephanie Dees	Signature <i>SDees</i>	Date 7/8/09
Vice President Dr. Ty Pate <i>Dean</i>	Signature <i>Luc</i>	Date 7-22-09



**I. Topical Outline** – Each offering of this course must include the following topics (be sure to include information regarding lab, practicum, clinical or other non lecture instruction):

- \*Relate the sequence of cognitive development in children to the acquisition of math and science concepts
- \*Describe the scientific process and its application to childhood indoor and outdoor learning environments
- \*Develop strategies which promote thinking and problem-solving skills in children;
- \*Utilize observation and assessment as a basis for planning discovery experiences for the individual child;
- \*Create, evaluate, and/or select developmentally appropriate materials, equipment, and environments to support the attainment of math and science concepts and skills.

National Association for the Education of Young Children (NAEYC) Standards measured in this course:

1. Promoting child development and learning
2. Teaching and learning
3. Becoming a professional

**II. Course Learning Outcomes**

<b>Course Learning Outcome</b>	<b>Method of Assessment</b>
<p>1. Students will apply knowledge of how children birth-age 12 years construct mathematical and scientific concepts to designing instructional experiences in Math and Science for young children.</p> <p>2. Students will relate the sequence of cognitive development (as defined by Piaget's theory) to the acquisition of Math and Science Concepts and apply additional theoretical principles to effective math and science instructional practices (Vygotsy-scaffolding and zone of proximal development; Erikson-identity formation).</p> <p>3. Students will describe the scientific process as it relates to young children (birth-age 12 years) in their daily experiences.</p>	<p>1. 3. Students will design a term project of six (6) Math and (6) Science activities that are developmentally appropriate for a specific group of children ages birth-grade 6. This project will be graded by a departmental rubric with student achieving a minimum grade of 70 points.</p> <p>2./3. In class assignments, mid-term, final, and other quizzes deemed necessary by the instructor</p>

**III. Required Text(s), Optional Text(s) and/or Materials to be Supplied by Student.**

Charlesworth, R. & Lind, K. K. (2010). Math and Science For Young Children (6th ed.). Belmont, CA: Wadsworth/ Cengage Learning. ISBN13: 9781428375864

Bredcamp & Copple (2009). Developmentally appropriate practices in programs serving children (3rd ed.) Washington, DC: NAEYC. ISBN 13: 9781928896647

#### IV. Suggested Course Maximum - 35

#### V. List any specific spatial or physical requirements beyond a typical classroom required to teach the course.

none

#### VI. Course Requirements/Grading System – Describe any course specific requirements such as research papers or reading assignments and the generalized grading format for the course

After reading the text books and participating in class lectures and discussions, students will compile and arrange a term project: six (6) Math and six (6) Science activities that are developmentally appropriate for a specific group of children ages birth-grade 4. The project will be graded according to a departmental rubric, and portions will be shared in class. Students will take tests reflecting the course objectives. Grades will be determined in the following manner:

10% Attendance and Class Participation

60% Written tests

30% Term Project

#### VII. Curriculum Checklist

- **Academic General Education Course** (from ACGM – but not in WCJC Core)  
No additional documentation needed

- **Academic WCJC Core Course**  
Attach the Core Curriculum Checklist, including the following:

- Basic Intellectual Competencies
- Perspectives
- Exemplary Educational Objectives

- **WECM Courses**  
Attach the following:

- Program SCANS Matrix
- Course SCANS Competencies Checklist