Preschoolers & STEM: Developing Curiosity

Course number: PRDV 73726
Title: Preschoolers & STEM/STEAM: Developing Curiosity
Credit:1
Location: Online
Date: Fall 2021
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(Note: When contacting me by email, please state the course name in the subject area.)

Course Overview

Course Description:
This course is designed for early childhood PreK/K2 educators and specialists. Through *Special Topics*, the course explores the development of math and science curiosity in young children. Emphasis is placed on STEM and STEAM in the PreK/K2 classroom.

Course Objectives/outcomes
Participants will:

- Explain the importance of developing Math and Science Curiosity as it relates to the
- Massachusetts Curriculum Frameworks, and the PRE-K Standards.
- Define curiosity and what that looks like in young learners
- Explain how young learners, learn about science and math
- Differentiate between STEM and STEAM
- Describe the implications of STEAM in the PreK classroom
- Explain strategies to help families' foster curiosity of the math and sciences at home
- Describe the impact of STEAM on the PreK classroom
- Demonstrate the use of STEAM in the PreK classroom

Course Expectations:
Online attendance is mandatory, posting several times throughout the week. Refer to the Discussion Board Rubric. In the event of an unplanned absence, it is the responsibility of the student, at the discretion of the instructor to complete all missed work. Note: Discussions cannot be made up.
Participants will come to the Discussion Board, prepared for in depth discussions and ready to participate actively in the online discussion forum, throughout the four weeks including the final week.
One grade will be deducted for any late assignments not cleared by the instructor.
Assignments may be resubmitted with prior approval from the instructor.
A final project is required and due on or before the last day of class, no exceptions.

Course Content/Outline:
Description: This course is heavily reliant upon Discussion Board posts. Each week begins on a Monday and has a Guiding Question (GQ) Assignment, which typically has several parts. Every

student is expected to provide their own initial response to the GQ, and continue the discussion through subsequent posts to the group, utilizing the readings. (See the Discussion Board Rubric)

Grading Components:

40 points = Readings and Videos (tied to the frequency and quality of posts (See Rubric for Discussion Board).
40 points = Weekly Assignments (See Rubric for Weekly Assignments).
20 points = Final Project: PowerPoint, Prezi, Podcast, Adobe Spark or Research Paper (APA)
100 points

Grading/Grade Points

A, A- (95-100 A, 90-94 A-) Indicates that the level of work is of superior quality and exceeds specific guidelines in one or more ways. Work and discussion posts exceed expectations.
B+, B, B- (87 - 89 B+, 83 - 86 B, -80 – 82, B-) Indicates that the course work has met the requirements and was judged acceptable. Work and discussion posts meet expectations.
C+, C, C- (77 – 79 C+, 73-76 C, 70-72 C) indicates that the level of work did not adequately meet the requirements.
D+ 69-67 D 66-63 D- 62-60 F 59-0

Week 1: The Importance of Developing Curiosity
Week 2: Why STEM/STEAM?
Week 3: *STEAM - A Look at Science & Math through the Arts*
Week 4: *STEM & STEAM in Action & Bringing the Excitement Home*

There will be a: Discussion Board Rubric for Asynchronous Discussion Participation

There will be 1 weekly assignment per week accompanied by an assignment rubric.

Final Project – Due on or before the last day of class
There will be a rubric for the Final Project.
Participants are required to create a Final Project. The Final Project should address how the course content has influenced their thinking. The Final Project can be a tool to be used by you for professional purposes, a presentation, or an activity. It should be short, for example, no more than 20 slides, concise, and cite from course content. DO NOT provide an overview of the course content.
*Format choices:
1. PowerPoint (Visual & Audio) might be useful if the intent is to share the information.
2. A Prezi (instead of a PowerPoint)
3. A Podcast may be useful to create a report, much like a newscast **
4. Writing a 10-page double-spaced APA style paper. One page of the paper may include a Wordle.
5. Or use of any other application that you choose to create your Final Project.

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**Note: If a participant chooses to create a Podcast, a summary of the podcast and sources cited, using APA style guidelines is required.

College Policy Regarding Academic Honesty
Integrity is essential to academic life. Consequently, students who enroll at Framingham State College agree to maintain high standards of academic honesty and scholarly practice. They shall be responsible for familiarizing themselves with the published policies and procedures regarding academic honesty. Refer to *FSU Graduate Catalog, Student Conduct section, page 7 at: http://www.framingham.edu/graduate-and-continuing-education/documents/grad-catalog-0910.pdf*.

Research
Additional supporting information can be researched at the Framingham State University Online Library. Just logon to you FSU My Campus account and go to the tab that says Library.

Academic Accommodations Policy
Framingham State University offers equal opportunities to all qualified students, including those with disabilities and impairments. The University is committed to making reasonable accommodations as are necessary to ensure that its programs and activities do not discriminate, or have the effect of discriminating, on the basis of disability. Academic Support serves students with learning and psychiatric disabilities as well as students with visual, mobility and hearing impairments. For further information about this, please visit the website at: https://www.framingham.edu/academics/center-for-academicsuccess-and-advising
or contact Ms. LaDonna Bridges, Director of Academic Support/Disability Services, in the Center for Academic Support and Advising (CASA) at 508-626-4906 or lbridges@framingham.edu

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