MTE 663: Developing & Implementing STEM Curriculum
Course Overview

Professor: Dr. Chandra H. Orrill
Meeting: Mondays 4:00 - 6:30pm, Fairhaven (Resource Room)
Contact: corrill@umassd.edu
Office Hours: Monday 2:00 - 3:30 (Fairhaven)
             Tuesday 2:00 - 3:30 (Fairhaven)
             By email or by appointment in Fairhaven or Fall River

Abstract: This course focuses on analyzing grades K-16 curriculum, intentions for students' learning outcomes, associated pedagogical styles and integration. Students will examine existing reform and basal curricula texts, and the development of new activities and activity structures that replace or transform existing texts. Students will also be introduced to issues related to curriculum implementation including fidelity issues and hidden agendas.

Learning Objectives:
• To understand what it means for a curriculum to embody a theory of learning or instruction.
• To become familiar with the NCTM and Common Core Standards.
• To become familiar with a variety of curricular materials.
• To become familiar with aspects of curriculum that impact learning including cognitive demand, problem solving, equity, and fidelity.
• To understand the issues surrounding implementation of curriculum.

Required Textbooks
Other required readings are available in myCourses.

Recommended Textbooks

Evaluation
In-Class Participation: 15%
Reactions to Readings: 15%
Reflection on Standards: 20%
Technology Report: 10%
Evaluation Study: 15%
Curriculum Project: 25%
General Information:
• All written work must conform to APA 6th edition format.
• Attendance is expected. Failure to attend will impact your participation score, but will also impair your ability to complete other course assignments in a satisfactory way. If you need to be absent for any reason, please notify me in advance.
• You are expected to abide by the Academic Integrity policy of UMass Dartmouth. It can be read in its entirety here: http://www.umassd.edu/studenthandbook/academicregs/ethicalstandards.cfm. It includes discussion of the university’s policy on academic dishonesty, including plagiarism.
• Please see Center for Access and Success regarding information about available academic support services, including services for learning and physically disabled students.
• Incompletes will only be issued only for extenuating circumstances. If you feel that you are unable to complete work on time, please discuss that with me in advance so we can negotiate an appropriate alternative.
• All assignments should be emailed to me unless otherwise specified in class. This will allow me to provide you with faster, easier to read, and more complete feedback than paper documents allow.

Course Calendar Overview

1/24/11 Introduction & Overview – MACOS as an example
1/31/11 Modern Mathematics Movement
2/7/11 Historical Perspectives on Curriculum
2/14/11 Intended Curriculum: Standards
**2/22/11 Written Curriculum: Problem Solving & Cognitive Demand
*Reflection on Standards
2/28/11 Written Curriculum: Equity
3/7/11 Written Curriculum: RME and MiC
3/14/11 No Class – Spring Break
3/21/11 Written Curriculum: International Perspectives
3/28/11 Written Curriculum: Design Principles & Technology
*Technology Report
4/4/11 Written Curriculum: Development Cases
4/11/11 No Class – WORK DAY!
4/18/11 No Class – Patriot’s Day!
4/25/11 Enacted Curriculum: Evaluations
*Presentation of Evaluation Study
5/2/11 Enacted Curriculum: Issues of Implementation
5/9/11 *Curriculum Presentations
5/16/11 *Curriculum Paper Due
Reading List


in Mathematics. 54(1), 9-35.


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<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Readings</th>
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<tbody>
<tr>
<td>1/24/11</td>
<td>Introduction &amp; Overview</td>
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<tr>
<td>3/14/11</td>
<td>No Class – Spring Break</td>
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<tr>
<td>4/11/11</td>
<td>No Class – WORK DAY (AERA)</td>
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<td>4/18/11</td>
<td>No Class – Patriot’s Day</td>
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<td>5/9/11</td>
<td>Curriculum Presentation</td>
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<td>5/16/11</td>
<td>Curriculum Project Paper Due by email</td>
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