TEXAS A&M UNIVERSITY-CORPUS CHRISTI
Mathematics Through Children's Literature

Course Number and Section: EDCI 5321.001                 Dr. Faye Bruun
Monday, 4:30 - 6:45 ECMS Math Lab 2nd Floor               Office: ECDC 219 J
Fall 2014                                                Office Hours: Mon., Wed, 1:30-4:30 pm
Office Telephone: 825-2417                                 E-Mail: faye.bruun@tamucc.edu

I. Course Description
This is a course for elementary, middle, and secondary school teachers who wish to
investigate the connection between children's literature and mathematics for the purpose
of improving mathematics instruction. Teachers will work through activities based upon
children's books and develop and share similar activities based upon children's books of
their choosing.

II. Rationale
Integrating mathematics and literature allows students to observe the connection between
mathematics and our everyday world. This connection gives meaning to mathematics and
makes it come alive. This integration of mathematics contexts that gives its symbols and
processes practical meaning is an overarching goal of the NCTM standards.

III. State Adopted Proficiencies for Teachers and/or Administrators/Counselors
Not applicable

IV. TExES Competencies
Not applicable

V. Course Objectives/Learning Outcomes This
course is designed to enable students to:
1. Gain factual knowledge (terminology, classifications, methods, trends).
2. Learning to apply course material (to improve thinking, problem solving, and decisions).
3. Acquiring an interest in learning more by asking questions and seeking answers.

VI. Course Topics
The major topics to be considered are:
1. Purposes for using literature in the mathematics classroom
2. Types of children's literature
3. Effective teaching practices
4. Classroom strategies
5. Appropriate reading choices
6. Creative integration of mathematics

VII. Instructional Methods and Activities
Methods and activities for instruction include:
Whole class and group discussions
Direct instruction
Modeling
Student and teacher presentations
Research
 VIII. Evaluation and Grade Assignment

*The methods of evaluation and the criteria for grade assignment are:*

A. Methods and Percentage of Final Course Grade Each Assessment Constitutes

**Presentations (30%)** - You will read several children's books or literary classics in this class, determine the mathematical concepts embedded within, and present them to a group of your peers. Due midnight before class presentation.

**Article reflections (30%)** - In lieu of assigned readings from a textbook, we will be reading several articles from national journals. After reading each article and reflecting upon its important issues it addresses, you will write a 2 or 3 sentence summary and 3-5 bullets reflecting what you want to remember from this article that you think are important, or it may be things you want to do back in the classroom. You will also have an "AHA!!" which is something that just strikes you! At the top of the page will be the bibliographical information written in APA format. This must be typed in a 12 pt font Times New Roman. Points will be deducted for spelling, grammar, etc. Do not write more than one page per article. Send to instructor via Blackboard using the correct format. Due Sunday, midnight before next class.

**Research Paper (30%)**

You will write a paper with at least three references using APA format on a related topic to Disciplinary Literacy, either mathematics or science.

**Participation (10%)** - See Class Attendance Policy.

B. Grading Scale

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Grade</th>
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<tbody>
<tr>
<td>92-100%</td>
<td>A</td>
</tr>
<tr>
<td>83-91%</td>
<td>B</td>
</tr>
<tr>
<td>74-82%</td>
<td>C</td>
</tr>
<tr>
<td>65-73%</td>
<td>D</td>
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<tr>
<td>below 64%</td>
<td>F</td>
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</tbody>
</table>
IX. Course Schedule and Policies

A. A tentative course schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/8</td>
<td>Introduction to Mathematics through Children's Literature</td>
<td>Instructor presentations</td>
</tr>
<tr>
<td>9/15</td>
<td>How to write a literature review and APA citations</td>
<td></td>
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<tr>
<td>9/22</td>
<td>Instructor presentations</td>
<td></td>
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<tr>
<td>9/29</td>
<td>No Class</td>
<td></td>
</tr>
<tr>
<td>10/6,</td>
<td>Presentation 1</td>
<td></td>
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<tr>
<td>10/13</td>
<td>No class</td>
<td></td>
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<tr>
<td>10/20</td>
<td>No class First Draft research paper due</td>
<td></td>
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<tr>
<td>10/27,</td>
<td>Presentation 2</td>
<td></td>
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<tr>
<td>11/3</td>
<td>No class</td>
<td></td>
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<tr>
<td>11/10</td>
<td>Presentation 3</td>
<td></td>
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<tr>
<td>11/17</td>
<td>No class Second Draft of research paper due</td>
<td></td>
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<tr>
<td>11/24</td>
<td>No class Thanksgiving</td>
<td></td>
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<tr>
<td>12/1,</td>
<td>Last class Presentation 3</td>
<td></td>
</tr>
<tr>
<td>12/8</td>
<td>Final Research paper due</td>
<td></td>
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</tbody>
</table>

B. Class Policies

**Attendance/tardiness** Regular attendance is expected at all classes. There is a high positive correlation between consistent, punctual attendance and higher course grades. It is virtually impossible to receive an A in the course if there are absences and/or lateness.

**Late work and Make-up Exams** Points may be deducted for late work at the discretion of the professor.

**Extra Credit** Assignments may be given at the discretion of the professor.

**Cell Phone/Electronic Device Usage** Cell phones and other electric devices should not be used during class. If a potential emergency exists where a student is expecting an important call concerning a child or family member, the phone should be put on vibrate.

**Classroom/professional behavior**

- Participate cooperatively in class discussions & lessons.
- Word-process all assignments (1 inch margins, 12 point font, Times New Roman). Written work should be clear, concise, and written in an academic manner. The Writing Center is available for help with written assignments.
- Additional assignments may be required if they will benefit the course objectives.
- Assignments and due dates may be modified at the discretion of the instructor if they will benefit/enhance the outcomes of the course.
- Be responsible for any information and materials missed when absent.
• No incomplete grades will be given.
• All students are expected to participate fully in class discussions, presentations, and group work. Failure to participate will affect your grade.

X. **Textbook(s)**

*The textbook(s) adopted for this course is:*  
There is no assigned textbook. Selected readings from the following professional journals will be incorporated into the course content:  
*Mathematics Teaching in the Middle School*  
*Teaching Children Mathematics*

XI. **Bibliography**

*The knowledge bases that support course content and procedures include:*


Moore, S. D. & Bintz, W. B. (2002). Teaching geometry and measurement through literature. *Mathematics Teaching in the Middle School, 8*(2) 72-84.


Whitin, D.J. (2002). The potentials and pitfalls of integrating literature into the mathematics program. *Teaching Children Mathematics, 8* (9), 503-505.
XII. Grade Appeals*
As stated in University Rule 13.02.99.C2, Student Grade Appeals, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Rule13.02.99.C2, Student Grade Appeals, and University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules Web site at http://www.tamucc.edu/provost/university_rules/index.html. For assistance and/or guidance in the grade appeal process, students may contact the Office of Student Affairs.

XIII. Disabilities Accommodations*
The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please call or visit Disability Services at (361) 825-5816.
If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816.

XIV. Statement of Academic Continuity
In the event of an unforeseen adverse event, and classes could not be held on the campus of Texas A&M University–Corpus Christi; this course would continue through the use of Blackboard and/or email. In addition, the syllabus and class activities may be modified to allow continuation of the course. Ideally, University facilities (i.e., emails, web sites, and Blackboard) will be operational within two days of the closing of the physical campus. However, students need to make certain that the course instructor has a primary and a secondary means of contacting each student.

*Required by SACS

Academic Integrity/Plagiarism*
University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of another as one’s own work.) In this class, academic misconduct or complicity in an act of academic misconduct on an assignment or test will result in a zero.
**Dropping a Class***
I hope that you never find it necessary to drop this or any other class. However, events can sometimes occur that make dropping a course necessary or wise. Please consult with me before you decide to drop to be sure it is the best thing to do. Should dropping the course be the best course of action, you must initiate the process to drop the course by going to the Student Services Center and filling out a course drop form. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. Nov. 7 is the last day to drop a class with an automatic grade of “W” this term.

**Statement of Civility**
Texas A&M University-Corpus Christi has a diverse student population that represents the population of the state. Our goal is to provide you with a high quality educational experience that is free from repression. You are responsible for following the rules of the University, city, state and federal government. We expect that you will behave in a manner that is dignified, respectful and courteous to all people, regardless of sex, ethnic/racial origin, religious background, sexual orientation or disability. Behaviors that infringe on the rights of another individual will not be tolerated.