Course Description
This course prepares teachers to enhance their knowledge, skills, beliefs and attitudes related to leadership instruction in mathematics, mathematics curriculum, and how students learn mathematics at an elementary level. Focus on the foundation, best practices, and strategies that promote mathematical understanding. The course examines research-based practices and pedagogical methods, including sheltered instructions to effectively reach students from diverse backgrounds and to develop knowledge and skills to research and select rigorous instructional and supplemental material specific to the subject of mathematics. The instruction and pedagogical experience will support educators to apply leadership skills in their classroom.

This 8-week course is completely online. We will not meet face-to-face at any time.

Course Prerequisites: NONE

Course Objectives
Upon successful completion of this course, students will be able to:
- To increase mathematics content knowledge and leadership skills of grades K – 8 teachers.
- To use instructional strategies to coach and advise students in higher-level thinking skills with an emphasis on a variety of ways for teaching and encouraging students to apply, analyzes, synthesize and evaluate oral, written, and visual text in the area of assessment for the mathematics classroom.
- To improve teacher conceptual understanding of their role as leaders in their classroom.
- To build and increase teachers effective instructional strategies for the classroom.
- Create and implement rigorous materials/resources/lesson plans that apply to the classroom.
- Apply and evaluate math activities and research-based strategies to implement into the classroom.
- To promote collaboration among educators and students.

Course Materials

Course Websites
- http://thinkfinity.org/
- http://www.brainpop.com
- http://www.aaamath.com/

Instructor Contact Information
<table>
<thead>
<tr>
<th>Instructor:</th>
<th>Stacie McLendon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telephone:</td>
<td>(602) 705 - 3525</td>
</tr>
<tr>
<td></td>
<td>Mountain Standard Time, first arrange through e-mail, but mornings are best</td>
</tr>
</tbody>
</table>
Overview of the Course

Participation
In fully online courses, student participation takes place in the text-based, asynchronous discussion forum. Participation is crucial in enhancing the learning environment within an online course. All students are expected to be active participants in group discussions at least 3 times per week. In this course, part of your grade is based on your participation in our community conversations. More information is available in the Competency Assessment section below as well as in the Participation Policies and Expectations portion of the Info & Policies section of our cyberclassroom in Blackboard.

Attendance
Full attendance is expected and it can affect your grade and performance in this course. If a student misses more than 30% of the class, they will be advised to drop the course.

Competency Assessment
You will read the required text, which will act as a foundation for understanding mathematical practices. Each week’s assignments are focused around a development factor that contributes to individual’s growth and progress.

You will have many opportunities to demonstrate your knowledge and understanding of the principles taught in this course. The primary means of evaluating your work will be through practical application of the material. In the event that you have difficulty completing any of the assignments for this course, please contact me immediately. My email address and telephone number are listed on this syllabus. Please remember that instructors do not randomly assign grades. Students earn their grades and everyone has the same opportunity to earn a good grade.

Please refer to the Course Materials section of the cyberclassroom for complete details regarding the activities and assignments for this course. The following is merely a summary.

Discussion contributions --- 80 Points

(10 points possible each week for 8 weeks)

Each week you must submit/post a discussion comment to the weekly discussion topic/question. Your post will be worth 5 points each week and most weeks, you can choose 1 of the 2 or 3 questions provided. Then, after reading the postings made by other students, you must reply to a minimum of two of your peers’ posts (worth 5 total points each week). Your responses must be substantive. Simply stating that you “agree or disagree” is not substantive. You need to add your explanation as to “why” you feel as you do. Furthermore, only comments related to the weekly subject will be given credit. All of your postings must be on different days—meaning that you must be online at least three times/days per week. Your first posting must be made by Wednesday of each week to ensure that others have time to respond to your comments. Online weeks run from Monday to Sunday. Please refer to the Participation Policies and Expectation in the Info & Policies section of this course for important information about how the Discussion Board (Course Discussions) works and what is expected of you.

Assignments - 320 points

Week One:

- Bookmark = 10 points
- PowerPoint = 10 points
  Create a PowerPoint of the general guidelines for classroom discussions pg. 36.
- PowerPoint = 10 points
  Create a PowerPoint of the strategies for incorporating writing pgs. 40 – 41.
- Math Word Wall = 10 points
  Create a “Math Words” chart or Math Word Wall.

Week Two:

- PowerPoint = 10 points
  Create a PowerPoint with the concepts in Measurement that should be taught pgs. 70 – 72.
- Lesson = 10 points
  Choose one of the activities on pgs. 72 – 84 and then use that lesson in a classroom setting. Write a self-reflection about that lesson.
- PowerPoint = 10 points
Create a PowerPoint with the concepts in Probability and Statistics that should be taught pgs. 86 – 87

- Lesson = 10 points
  Choose one of the activities on pgs. 87 – 103 and then use that lesson in a classroom setting. Write a self-reflection about that lesson.

- Lesson = 10 points
  Choose one of the activities on pgs. 108 – 129 and then use that lesson in a classroom setting. Write a self-reflection about that lesson.

Week Three:
- Lesson = 10 points
  Write a detailed lesson plan using one of the activities on pgs. 132 – 143.

- Lesson = 10 points
  Write a detailed lesson plan using one of the activities on pgs. 149 – 156.

- Lesson = 10 points
  Write a detailed lesson plan using one of the activities on pgs. 161 – 167.

Week Four:
- PowerPoint = 10 points
  Create a PowerPoint covering the basics in arithmetic on pgs. 174 - 175.

- Summary = 10 points
  Summarize the results from classroom research on pgs. 175 – 181.

- Reflection = 10 points
  Write a reflection using Questions from Teachers pgs. 190 – 192.

- Problems = 10 points
  Create 3 real-life arithmetic problems. Example provided on pgs. 192 – 195.

Week Five:
- Lesson = 10 points
  Choose one of the activities on pgs. 238 – 243 and then use that lesson in a classroom setting. Write a self-reflection about that lesson.

- Assessment = 10 points
  Choose and complete with students one of the individual assessments on pg. 244 and write a reflection.

- Lesson = 10 points
  Choose one of the activities on pgs. 251 – 253 and then use that lesson in a classroom setting. Write a self-reflection about that lesson.

- Assessment = 10 points
  Choose and complete with students one of the individual assessments on pgs. 253 - 254 and write a reflection.

- Lesson = 10 points
  Choose one of the activities on pgs. 280 – 282 and then use that lesson in a classroom setting. Write a self-reflection about that lesson.

- Assessment = 10 points
  Choose and complete with students one of the individual assessments on pg. 283 and write a reflection.

Week Six:
- Problems = 10 points
  Choose 2 out of the 6 problems on pgs. 304 – 309 and complete the problem with a self-reflection of your understanding for each problem.

- Problems = 10 points
  Choose 2 out of the 8 problems on pgs. 310 – 321 and complete the problem with a self-reflection of your understanding for each problem.

- Problems = 10 points
  Choose 3 out of the 10 problems on pgs. 322 – 334 and complete the problem with a self-reflection of your understanding for each problem.
Week Seven:
- **Problems = 10 points**
  Choose 2 out of the 5 problems on pgs. 335 – 342 and complete the problem with a self-reflection of your understanding for each problem.
- **Problem = 10 points**
  Complete 1 problem on pgs. 343 – 347 with a self-reflection of your understanding for the problem.
- **Problems = 10 points**
  Choose 3 out of the 7 problems on pgs. 348 – 361 and complete the problem with a self-reflection of your understanding for each problem.

Week Eight:
- **Reflections = 10 points each (40 points possible)**
  Write a reflection for 4 questions presented in this section.

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**Course Schedule At-A-Glance***

<table>
<thead>
<tr>
<th>Week</th>
<th>Readings &amp; Discussion questions</th>
<th>Assignments Due</th>
<th>Date/Time Due**</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Part 1 Raising the Issues pgs. 3-66  &lt;br&gt;1. Look at the common errors on pg. 10, what do you do to instruct/avoid these errors in your classroom?  &lt;br&gt;2. How do children learn mathematics?  &lt;br&gt;3. Why is it important to use manipulatives in mathematics?</td>
<td>Discussion forum postings  &lt;br&gt;Bookmark  &lt;br&gt;PowerPoint  &lt;br&gt;PowerPoint  &lt;br&gt;Math Word Wall</td>
<td>Weekly at midnight CT on Weds.  &lt;br&gt;Friday</td>
</tr>
<tr>
<td>2</td>
<td>Part 2 Instructional Activities for the Content Standards pgs. 69 – 129  &lt;br&gt;1. Are children’s books an effective way to teach measurement?  &lt;br&gt;2. Why is graphing in the classroom important?</td>
<td>Discussion forum postings  &lt;br&gt;PowerPoint  &lt;br&gt;Lesson  &lt;br&gt;PowerPoint  &lt;br&gt;Lesson  &lt;br&gt;Lesson</td>
<td>Weekly at midnight CT on Weds.  &lt;br&gt;Friday</td>
</tr>
<tr>
<td>3</td>
<td>Part 2 Instructional Activities for the Content Standards pgs. 130 – 167  &lt;br&gt;1. Why teach logical reasoning?  &lt;br&gt;2. What is an effective/rigorous way to teach patterns?  &lt;br&gt;3. Do you agree or disagree that students need to develop an understanding of commutative, associative, and</td>
<td>Discussion forum postings  &lt;br&gt;Lesson  &lt;br&gt;Lesson  &lt;br&gt;Lesson</td>
<td>Weekly at midnight CT on Weds.  &lt;br&gt;Friday</td>
</tr>
<tr>
<td>Page</td>
<td>Part</td>
<td>Text</td>
<td>Discussion forum postings</td>
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<td>4</td>
<td>Part 3 Teaching Arithmetic pgs. 171 – 232</td>
<td>1. Computation, problem solving, and number sense are essential aspects of arithmetic instruction. Instruction has changed over the years, how do you make sure your students have a strong foundation of arithmetic? 2. Why is teaching what to do and WHY so important?</td>
<td>Discussion forum postings  PowerPoint  Summary  Reflection  Problems</td>
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<tr>
<td>5</td>
<td>Part 3 Teaching Arithmetic pgs. 233 – 300</td>
<td>1. How does using multiplication in the real-world contexts help students? 2. Why is using a calculator a useful tool for helping students learn decimals?</td>
<td>Discussion forum postings  Lesson  Assessment  Lesson  Assessment  Lesson  Assessment</td>
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<tr>
<td>6</td>
<td>Part 4 Mathematical Discussions pgs. 303 – 334</td>
<td>1. Why is it dangerous to offer answers and explanations? 2. Why is it dangerous to not understand math problems?</td>
<td>Discussion forum postings  Problems  Problems  Problems</td>
</tr>
<tr>
<td>7</td>
<td>Part 4 Mathematical Discussions pgs. 335 - 361</td>
<td>1. Why is it important to complete these problems? 2. How do you teach logical reasoning?</td>
<td>Discussion forum postings  Problems  Problem  Problems</td>
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<tr>
<td>8</td>
<td>Part 5 Questions Teachers Ask pgs. 365 – 402</td>
<td>1. How do you assess your students’ math knowledge?</td>
<td>Discussion forum postings  Reflection  Reflection  Reflection</td>
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</table>
All online weeks run from Monday to Sunday, except the last week, which ends on Saturday.

** All assignments are due at midnight Central Time. (All submissions to the Blackboard system will be date/time stamped in Central Time).

Assignments At-A-Glance

<table>
<thead>
<tr>
<th>Assignment/Activity</th>
<th>Qty.</th>
<th>Points</th>
<th>Total Points</th>
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<tbody>
<tr>
<td>Discussion forum postings</td>
<td>8 weeks</td>
<td>10</td>
<td>80</td>
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<tr>
<td>Assignments</td>
<td>32</td>
<td>10</td>
<td>320</td>
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<tr>
<td>TOTAL POINTS</td>
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<td>400</td>
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*Please refer to the Info & Policies menu for more information about our Course Discussions.

Grading Scale

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
<th>Points</th>
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<tbody>
<tr>
<td>A</td>
<td>90 to 100%</td>
<td>360-400</td>
</tr>
<tr>
<td>B</td>
<td>80 to 89%</td>
<td>320-359</td>
</tr>
<tr>
<td>C</td>
<td>70 to 79%</td>
<td>280-319</td>
</tr>
<tr>
<td>D</td>
<td>60 to 69%</td>
<td>240-279</td>
</tr>
<tr>
<td>F</td>
<td>&lt; 60%</td>
<td>&lt;239</td>
</tr>
</tbody>
</table>

Important Policies

All course-specific policies for this course are spelled out here in this syllabus. However, additional university policies are located in the Policies folder in the Info & Policies section of Blackboard. You are responsible for reading and understanding all of these policies. All of them are important. Failure to understand or abide by them could have negative consequences for your experience in this course.

Late Assignments

I accept late assignments for up to one week after the due date. You will lose 20% of the total value of the assignment for any assignment turned in after the due date.

Editorial Format for Written Papers

All written assignments are to follow the APA writing style guidelines for grammar, spelling, and punctuation. This online course includes information regarding the APA style under “Writing and Research Resources” in the Resource Room on the course menu in Blackboard.

Academic Integrity

Please refer to Academic Honesty in the Info & Policies section of the online course menu for important information about Ottawa University’s policies regarding plagiarism and cheating, including examples and explanations of these issues.

Student Handbook

Please refer to your student handbook for all university regulations. The Resource Room on the course menu in Blackboard contains information about where to find the student handbook online for your campus.

Blackboard Technical Support

The Resource Room in Blackboard contains links to student tutorials for learning to use Blackboard as well as information about whom to contact for technical support. Ottawa University offers technical support 24 hours/day for all students, staff, and faculty at no cost.

Best wishes for successful completion of your online course with Ottawa University!