Course Overview

Description of the Purpose and Course Content

- In this class, we will explore children’s mathematical thinking by studying research, analyzing student work samples and videos, and reflecting upon our own mathematical thinking. The purpose of the course is to provide insight into how children naturally approach mathematics. Thereby, you should be able to incorporate children’s perspectives into your pedagogy as you move forward in your studies, confronted with issues related to teaching and learning. This course will support your thinking about the complexity, challenges, and opportunities open to those who take seriously the idea of teaching mathematics to children in a way that promotes the development of rich mathematical understanding. This course is neither a mathematics course, where the focus is fundamentally on your learning of mathematics, nor a mathematics methodology course, where the focus is fundamentally on your learning how to teach mathematics. Instead, this is a class about the issues that lie at the intersection of mathematics and children’s thinking.

Student Learning Outcomes

- Drawing upon the research on children’s thinking, you will be able to:
  - Classify mathematical problem types (based on the concept of Direct Modeling)
  - Describe the trajectory of strategies children use to solve mathematical problems
  - Understand that children can solve complex problems without direct instruction
  - Employ video and work samples to analyze children’s mathematical thinking
  - Briefly describe some of the instructional implications of the research

Enrollment Information

Prerequisites

- Open to all Liberal Studies majors and pre-majors.

Adding/Dropping Procedures

- You are responsible for initiating action for your own schedule adjustments and for setting your schedule by February 2, 2016. Dropping and adding of classes must be done through your Webportal account. Check your schedule in the Webportal to make sure you are enrolled in the right classes before the schedule adjustment deadlines of the session in which you are enrolled. Faculty has the option to drop you from their course for non-attendance or lack of required prerequisites by January 29, 2016.

Required Course Materials

- Other readings will be posted on Blackboard.

Course Structure and Conduct

This course will take a lecture-discussion style, with individual and group activities embedded in our classes. Face-to-face sessions may be occasionally replaced with online sessions. Technology utilized in the course includes Blackboard Discussion Board and the online video component of the textbook.
Course Assessment and Grading

Course Assessments

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Percent</th>
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</thead>
<tbody>
<tr>
<td>Participation and Professionalism</td>
<td>10</td>
</tr>
<tr>
<td>(Includes completion of Discussion Board Tasks)</td>
<td></td>
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<tr>
<td>Assignment 1</td>
<td>15</td>
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<tr>
<td>Assignment 2</td>
<td>15</td>
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<td>Assignment 3</td>
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<td>Assignment 4</td>
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<td>Assignment 5</td>
<td>15</td>
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<tr>
<td>Assignment 6</td>
<td>15</td>
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<tr>
<td>TOTAL</td>
<td>100</td>
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</tbody>
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Grading Scale

A | 95-100
A-| 90-94
B+| 87-89
B | 84-86
B-| 80-83
C+| 77-79
C | 74-76
C-| 70-73
D+| 67-69
D | 64-66
D-| 60-63
F | < 60

Description of Course Assessments:

- **Participation and Professionalism (10%)**: It is your responsibility to thoughtfully participate in our classroom community and to critically examine your and others’ ideas. This means that you should:
  - attend all class sessions and bring required materials,
  - arrive on time and remain for the entire class period,
  - be prepared for each class by having thoughtfully completed all readings and assignments,
  - share your ideas and listen respectfully in class sessions and in our Discussion Board Tasks,
    - Each week you will be assigned one Discussion Board Task. The Discussion Board Tasks can be found on the Discussions page of Blackboard. See the Class Grid (on the Syllabus page of Blackboard) for schedule of assigned Discussion Board Tasks. I will not grade these tasks, but your participation in our Discussion Board will be considered part of your Participation and Professionalism grade.
  - remain on-task during class sessions,
  - respect others’ opinions,
  - be curious about ideas different than your own, and
  - keep me informed of any extenuating circumstances in your life that may hinder your ability to succeed in this course.
  - All communications should be written professionally, appropriately, and respectfully.

- **Assignments (90%)**: This portion of your grade is comprised of 6 weekly assignments, each worth 15 points for a total of 90 points. You may find these weekly assignments on the Assignments page of Blackboard. See the Class Grid (on the Syllabus page of Blackboard) for schedule of weekly assignments. These assignments will draw upon information discussed in class as well as the assigned reading for the week. A scoring rubric is included on the Assignments page of Blackboard.

**Classroom Observation**

- As you will see on the Assignments page, Assignment 5 requires you to write a reflection based on a classroom observation. You will be observing a second grade math lesson taught at Del Mar Hills Elementary School (14085 Mango Drive, Del Mar, CA 92014). You can choose to observe the lesson on either **Monday, February 8 at 12:30 PM or Tuesday, February 9 at 10:15 AM**.
- Give yourself ample time to arrive and park. The drive is approximately 20 minutes from SDSU. The parking lot is reserved for staff, but there is ample, nearby parking on the street. Please check in at the office when you arrive, then
Grading and Attendance Policy:

- All assignments should reflect professional qualities and should be presented in a form acceptable to share with administrators, colleagues, and/or parents in a professional setting. Students must dedicate time and attention to all work so that it appears professionally prepared and must be **word processed**; include precise **terminology**; use correct **grammar**, **punctuation**, and **spelling**; submitted by the **due date**. Instructions for presentation and components of each assignment should be closely followed.

- **Due dates** for assignments are listed in the **Class Schedule Grid**. Assignments are due on the assigned day. Difficulties with this policy should be discussed and negotiated well in advance of the due date. **Late assignments will only be accepted without a deduction of points if such arrangements are possible and made on or before the due date.** Assignment grades will drop one letter grade (10%) if submitted within one week of the original due date. Within two weeks, the grade will drop another letter grade (10%). No assignments will be accepted more than two weeks after the due date.

- **Attendance** is mandatory. While certain circumstances may warrant an "excused" absence, you are required to inform me if you are unable to attend any given class; designation of absence as a legitimate excuse is up to my discretion. **For missed classes, you will need to obtain notes from a fellow student and contact me for a make up assignment to substitute for the missed class.** Failure to attend class will result in the deduction of points from your participation grade.

- **Tardiness and/or leaving early** can also result in a deduction from your participation grade. If you come in late, you will likely have been marked absent. Please be sure to leave me a note that lets me know that you were present. After class, I will convert your absence to a tardy. If you are tardy more than once, please talk to me so that I can understand your circumstances. **If you are tardy or leave class early, you are responsible for making up missed activities; it is your responsibility to contact me for make up work.**

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**Other Course Policies**

- **Cell Phones** may not be used for any communication purposes during class and should be kept in your purse/backpack/pocket. If an emergency situation exists, please alert me before class and should your phone on silent mode. Laptops or tablets may be used in class as learning tools as long as they do not become a distraction.

- **Food and Drink**: Feel free to enjoy food and drink courteously during class.

- **Religious Observances**: University Policy on Absence for Religious Observances includes the following statements: “By the end of the second week of classes, students should notify the instructors of affected courses of planned absences for religious observances. Instructors shall reasonably accommodate students who notify them in advance of planned absences for religious observances.” Please notify me and a reasonable accommodation will be reached.

- **Counseling and Psychological Services**: College is an awesome and sometimes stressful journey. We need to be sure we take care of ourselves both physically and mentally. There are services available to you as a SDSU student to help if you are feeling stressed, overwhelmed, or depressed. I would encourage you to contact these helpful services located at the Counseling and Psychological Services, Calpulli Center Room 4401, www.sdsu.edu/cps. You can also call to speak with a therapist at (619) 594-5220.

- **Special Needs**: I would like to accommodate any special needs you might have, please contact me to discuss specific accommodations for which you have received authorization. If you have a disability but have not contacted Disabled Student Services at 619-594-6473 (SS-1661), please do so before making an appointment to see me.

- **Academic Honesty**: The University adheres to a strict **policy regarding cheating and plagiarism**. These activities will not be tolerated in this class. Become familiar with this policy (http://www.sa.sdsu.edu/srr/conduct1.html). Any cheating or plagiarism will result in failing this class and a disciplinary review by Student Affairs.

  - Examples of Plagiarism include but are not limited to:
    - Using sources verbatim or paraphrasing without giving proper attribution (this can include phrases, sentences, paragraphs and/or pages of work)
    - Copying and pasting work from an online or offline source directly and calling it your own
    - Using information you find from an online or offline source without giving the author credit
- Replacing words or phrases from another source and inserting your own words or phrases
- Submitting a piece of work you did for one class to another class

If you have questions on what is plagiarism, please consult the policy (http://www.sa.sdsu.edu/srr/conduct1.html) and this helpful guide from the Library: (http://infodome.sdsu.edu/infolit/exploratorium/Standard_5/plagiarism.pdf)