

ECED 4251-01: Assessment & Correction in Mathematics Education

Semester/Year	Spring 2016								
Time/Location	Tuesdays 9:00-11:30 am; Ed Center Room 200								
Instructor	Dr. Jennifer Edelman								
Office Location	Ed Annex 114								
Office Hours	<table><thead><tr><th>M/W</th><th>T</th><th>Tr</th><th>By Appointment</th></tr></thead><tbody><tr><td>9:00-12:00</td><td>2:00-5:00</td><td>8:30-9:30</td><td>https://jedelman.youcanbook.me</td></tr></tbody></table>	M/W	T	Tr	By Appointment	9:00-12:00	2:00-5:00	8:30-9:30	https://jedelman.youcanbook.me
M/W	T	Tr	By Appointment						
9:00-12:00	2:00-5:00	8:30-9:30	https://jedelman.youcanbook.me						
Telephone	Google Voice: 414-98TEACH Direct Line: 678-839-6184 Department Line: 678-839-6559								
Email	jedelman@westga.edu								
Online Support	D2L Home Page https://westga.view.usg.edu/ D2L UWG Online help http://uwgonline.westga.edu/students.php D2L 24 hour Help https://d2lhelp.view.usg.edu/ UWG Distance Learning http://uwgonline.westga.edu/ Distance Learning Library Services http://libguides.westga.edu/content.php?pid=194430 Resources for Distance & Off-Campus Students http://libguides.westga.edu/content.php?pid=194459 Ingram Library Services http://www.westga.edu/library/ University Bookstore http://www.bookstore.westga.edu/								

COURSE DESCRIPTION:

ECED 4251: Overviews development of acquisition of mathematical concepts. The assessment/correction process is examined. Teaching strategies appropriate to children with learning difficulties are described. Individual assessment and analysis of a particular child's mathematical problems, including teaching to this analysis are developed in case study form. Current research on teaching mathematics to children with special needs is examined.

Knowledge of teaching strategies and the assessment/correction process will be applied during field experience.

Prerequisite: Admission to Teacher Education. All courses from Block II. Must be taken concurrently with ECED 4262, MATH 4713, READ 4251, READ 4253.

COE Vision: The College of Education at the University of West Georgia will be recognized for *Leading a New World of Learning*, with relevant and innovative programs that contribute to educational improvement and the betterment of society.

COE Mission: Locally connected and globally relevant, the Mission of the College of Education is to prepare graduates for meaningful careers in diverse settings. Spanning undergraduate through doctoral study, we are committed to depth of knowledge and excellence in teaching, professional practice, and applied research.

CONCEPTUAL FRAMEWORK: The conceptual framework of the College of Education at UWG forms the basis on which programs, courses, experiences, and outcomes are created. With the goal of *Preparing Exemplary Practitioners*, our programs incorporate ten descriptors (knowledgeable, reflective, inquisitive, decisive, adaptive, proactive, leading, collaborative, culturally sensitive, empathetic), clustered into three interrelated and overlapping themes, that demonstrate our commitment to (a) Professional Excellence; (b) Field-Based Inquiry; and (c) the Betterment of Society. These themes and descriptors are integral components of the conceptual framework and provide the basis for developing exemplary practitioners who are prepared to improve schools and communities. National and state standards (Georgia Professional Standards Commission [PSC] Standards, the National Council of Teachers of Mathematics [NCTM] Standards, and Council for Accreditation of Educator Program [CAEP] standards) also are incorporated as criteria against which candidates are measured.

The mission of the College of Education is to provide excellence in the initial and advanced preparation of professionals for a variety of settings, to foster an innovative learning community, and to empower a faculty committed to teaching and the dissemination of knowledge. This course's objectives, activities, and assignments are related directly to the conceptual framework and national standards, as identified below.

APPROACHES TO INSTRUCTION: The instructor of this course will employ a variety of instructional strategies in teaching the content of this course. Those strategies include but are not limited to: lecture, student led demonstrations, cooperative learning activities, small group discussion, case studies, and the use of manipulatives and other interactive technologies.

This course will be delivered approximately 30% online. This requires the online equivalent of 675 minutes of instruction (seat-time) and an additional 1350 minutes of supporting activities.

As such, you will be required to complete the following online activities during this course:

<u>Activity</u>	<u>Instructional Equivalent</u>
Audio/video instruction	300 minutes
Online assignments	375 minutes

Additionally, it is anticipated that students will need to work independently for twice the number minutes listed above to complete the online activities.

ECED 4251 COURSE OBJECTIVES

<i>In teaching this course it is my goal that you will:</i>	<i>At the end of this course you will be able to:</i>
<p>1. Diagnose students' error patterns and design appropriate remediation</p> <p><i>(Lifelong Learners, Adaptive, Empathetic, Knowledgeable, Reflective; INTASC 1, 2, 3, 4, 8; NCTM 2.5, 2.7; ACEI 4, 5, 10, 12)</i></p>	<p>Use appropriate diagnostic tools to assess mathematical knowledge.</p> <p>Analyze the data you gather from the diagnostic tool(s).</p> <p>Plan lessons and/or activities to deepen mathematical knowledge or to address misconceptions.</p>
<p>2. Identify available resource materials for enhancing classroom instruction and use them effectively taking into consideration individual differences in learning</p> <p><i>(Empathetic, Knowledgeable, Reflective; INTASC 1, 4; NCTM 2.2, 2.5, 2.6; ACEI 6, 9)</i></p>	<p>Locate online resources, lesson plans, and manipulatives to use in remediation activities.</p> <p>Critically evaluate resources, lesson plans, and manipulatives for their effectiveness in addressing students' mathematical needs.</p>
<p>3. Acquire knowledge of informal and formal assessment tools, and prescriptive teaching techniques</p> <p><i>(Empathetic, Knowledgeable, Reflective; INTASC 1, 4; NCTM 2.1, 2.2, 2.3, 2.4, 2.5; ACEI 3, 6)</i></p>	<p>Describe the difference between formative and summative assessments and identify when the use of each is most appropriate.</p> <p>Explain the link between assessment and instruction.</p>
<p>4. Gain knowledge of modifying the mathematics program to meet the needs of students with special needs</p> <p><i>(Empathetic, Knowledgeable, Reflective; INTASC 1, 4; NCTM 2.1, 2.2, 2.3, 2.4, 2.5; ACEI 3, 6, 9)</i></p>	<p>Evaluate mathematics curricula in terms of accommodations for students with special needs.</p> <p>Modify resources, lesson plans, and/or activities to meet the needs of students with special needs.</p>
<p>5. Apply knowledge during field experience</p> <p><i>(Decision Makers, Leaders, Lifelong Learners, Adaptive, Collaborative, Culturally Sensitive, Empathetic, Knowledgeable, Proactive, Reflective; INTASC 5, 6, 7, 8, 9, 10; NCTM 2.1, 2.9, 2.10, 3.1, 3.3; ACEI 1, 7, 8, 9)</i></p>	<p>Identify and describe pedagogical moves made by your cooperating teacher as he/she assesses, teaches, and re-assesses mathematical understanding.</p> <p>Identify and describe pedagogical moves that you make as you assess, teach, and re-assess mathematical understanding.</p>

TEXTS, READINGS, INSTRUCTIONAL RESOURCES, AND REFERENCES

Required Text(s): Forbringer, L. & Fuchs, W. (2014). *Rti in math: Evidence-based interventions for struggling students*. New York, NY: Routledge.

Other assigned readings will be available through the UWG library and/or CourseDen.

Required Instructional Resource: Tk20 Subscription : These are available at the University Bookstore or at <http://westga.tk20.com/campustoolshighered/start.do>.

If you have purchased a subscription previously, DO NOT re-subscribe. For more information about this resource, see http://www.westga.edu/coe/index_550.php. For assistance, email tk20@westga.edu.

The mathematics clinic case study will be submitted via Tk20.

Course References

- Ashlock, R. (2011). *Error patterns in computations: Using error patterns to help each student learn* (10th ed.). Upper Saddle River, NJ: Allyn & Bacon.
- Bay-Williams, J. M. & Kling, G. (2014). Enriching addition and subtraction fact mastery through games. *Teaching Children Mathematics* 21(4), pp. 238-247
- Burris, J.T. (2013). Virtual place value. *Teaching Children Mathematics* 20(4), pp. 228-236
- Chambers, D. L. (Ed.). (2002). *Putting research into practice in the elementary grades*. Reston, VA: National Council of Teachers of Mathematics.
- Clarke, D. (1997). *Constructive assessment in mathematics: Practical steps for classroom teachers*. Berkeley, CA: Key Curriculum Press.
- Dyer, M., & Moynihan. (2000). *Open-ended question in elementary mathematics instruction & assessment*.
- Green, D. A. (2002). Last one standing: Creative, cooperative problem solving. *Teaching Children Mathematics* 9(3), pp. 134-139
- Gresham, G. & Little, M. (2012). RTI in math class. *Teaching Children Mathematics* 19(1) pp. 20-29
- Hirsch, C., & Laing, R. (Eds.). (1993). *Activities for active learning and teaching: Selections from the mathematics teacher*. Reston, VA: National Council of Teachers of Mathematics.
- Hodges, T.E., Rose, T.D., & Hicks, A. D. (2012). Interviews as RTI tools. *Teaching Children Mathematics* 19(1), pp.30-36
- Kling, G. & Bay-Williams, J. M. (2014). Assessing basic fact fluency. *Teaching Children Mathematics* 20(8), pp. 489-497
- Lu, L. (2013). David's problem solving. *Teaching Children Mathematics* 19(6), p. 400.
- Moldavan, C. C. (2001). Culture in the curriculum: Enriching numeration and number operations. *Teaching Children Mathematics* 8(4), pp. 238-243
- National Council of Teachers of Mathematics. (2000). *Principles and standards for school mathematics*. Reston, VA: National Council of Teachers of Mathematics.
- National Council of Teachers of Mathematics. (2001). *Mathematics Assessment: Cases and discussion questions for grades K-5*. Reston, VA: National Council of Teachers of Mathematics.

- National Council of Teachers of Mathematics. (2001). *Learning from Assessment: Tools for examining assessment through standards*. Reston, VA: National Council of Teachers of Mathematics.
- National Council of Teachers of Mathematics. (2001). *Mathematics Assessment: Myths, models, good questions, and suggestions*. Reston, VA: National Council of Teachers of Mathematics.
- National Council of Teachers of Mathematics. (1991). *Professional standards for teaching mathematics*. Reston, VA: National Council of Teachers of Mathematics.
- Pitsolantis, N. & Osana, H.P. (2013). Fractions instruction: Linking concepts and procedures. *Teaching Children Mathematics* 20(1), pp. 18-26
- Posamentier, A. S., & Stepelman, J. (1995). *Teaching secondary school mathematics: Techniques and enrichment units* (4th ed.). Columbus, OH: Merrill.
- Reys, R., & Nohda, N. (Eds.). (1994). *Computational alternatives for the twenty-first century: Cross-cultural perspectives from Japan and the United States*. Reston, VA: National Council of Teachers of Mathematics.
- Sheffield, L., & Criukshank, D. (1996). *Teaching and learning elementary and middle school mathematics*. Englewood Cliffs, NJ: Prentice-Hall, Inc.
- Swetz, F. (1994). *Learning activities from the history of mathematics*. Portland, ME: J. Weston Walch.
- Thornton, C., & Bley, N. (Eds.). (1994). *Windows of opportunity: Mathematics for students with special needs*. Reston, VA: National Council of Teachers of Mathematics.
- Van de Walle, J. A. (2004). *Elementary and middle school mathematics: Teaching developmentally* (5th ed.). Boston: Allyn and Bacon.

ASSIGNMENTS, EVALUATION PROCEDURES, AND GRADING

Assignments and core requirements: Written assignments are final products that will be graded on both **what** is written (clarity, depth, insight) and **how** it is written (the form of the written work). Therefore, it is crucial to realize that correct grammar and spelling, proper punctuation, neatness, and adherence to assignment guidelines will affect your grade. As an educator, you will be expected to demonstrate high levels of competence not only in verbal but also in written communication with parents, administrators, and other educators. Evaluation of written assignments will be accomplished through rubrics, which will be distributed as assignments are given. All assignments must be completed in a typed, single-space format, with Arial font, size 11 and 1-inch margins on all sides unless otherwise indicated.

Assignments are due by 11:59 p.m. on the designated date. Due dates are listed on the course schedule; full instructions for each assignment are posted on CourseDen. Assignments are to be typed and submitted to the appropriate dropbox on CourseDen. Please do not wait until the last minute to upload your assignments; technical/computer issues will not excuse the lateness of the assignment.

Assignments: This is a brief overview of how you will demonstrate your learning in this course and the lab. Each assignment will have further instructions posted in CourseDen and will be discussed in class. The overall goal for these assignments is to provide you with meaningful activity that will help you reflect on and improve student learning and your teaching practices.

Professionalism and Participation (course objectives 1, 2, 3, 4, 5):

- Class participation: You are expected to attend class having completed the assigned reading and activities. Active participation is expected; be engaged and participate in the lesson and assessment activities during class.
- PLC participation: As part of a professional learning committee, you are expected to bring your experience to the table and share solutions and suggestions with your teammates.

Mathematical Knowledge for Teaching (course objectives 1, 2, 3, 4, 5):

- Reading responses: Because our activities will be centered on the analysis and application of the ideas we read, you will be completing a reading response activity for each textbook reading. Reading responses are due by 11:59 p.m. on the Thursday before we discuss the readings in class. Please check the course outline for assigned readings and due dates.
- Discussion leader: Working in small groups, you will lead the class discussion/activity for an assigned reading.
- Online modules: Each week will have an online component that will introduce various error patterns and give you the opportunity to diagnose errors and misconceptions in student work.

Practice (course objectives 1, 2, 3, 4, 5, 6):

- **Key Assessment: Math Diagnostic Case Study (course objectives 1, 2, 3, 4, 5, 6):** You will be asked to engage in the diagnostic process as spelled out in this course and create a final report on your client's progress in clinic. This assignment will be turned in on Tk20.

Evaluation Procedures

Assignment	Weight	Assessment Tools
Professionalism and Participation	30%	Rubric
Mathematical Knowledge for Teaching	35%	Rubric
Practice	35%	Rubric

Grading

A = 90 - 100%, B = 80 - 89%, C = 70 - 79%, and F = Below 70%.

CLASS, DEPARTMENT, AND UNIVERSITY POLICIES

Please carefully review the information at [Common Language for Course Syllabi](#). It contains important information related to your rights and responsibilities in this class. Because these statements are updated as federal, state, university, and accreditation standards change, you should review the information each semester. In addition to the above information the following policies apply to this course.

Academic Honesty: All work completed in this course must be original work developed this semester. Students are expected to adhere to the highest standards of academic honesty. Plagiarism occurs when a student uses or purchases ghostwritten papers. It also occurs when a student utilizes ideas or information obtained from another person without giving credit to that person. If plagiarism or another act of academic dishonesty occurs, it will be dealt with in accordance with the academic misconduct policy as stated in the latest *Student Handbook* and the *Graduate Catalog*. Please note that turnitin.com is used in all dropboxes and calculates the percentage of an assignment that is taken from other sources. You are expected to do your own work.

Attendance: You are allowed one “no questions asked” absence in class without penalty. Attendance is calculated as part of your participation and professionalism grade. *Arriving 15 minutes or more late or leaving 15 minutes or more early will count as an absence for the day.* **There are no automatically excused absences for clinic; if you need to be absent you should plan on providing documentation of your excuse.**

Americans with Disabilities Act: The official UWG policy is contained in the link to the Common Language for Course Syllabi located on the Provost’s website. All students are provided with equal access to classes and materials, regardless of special needs, temporary or permanent disability, special needs related to pregnancy, etc. For more information, please contact Disability Services at the University of West Georgia: http://www.westga.edu/studentDev/index_8884.php.

Extra Credit: Extra credit will not be available in this course. Please do your best work on the assigned activities.

Late Work: If your assignment is turned in on time (11:59 PM on the due date listed on the course calendar), you will have the opportunity to earn a score of “3-Exemplary” on the rubric. Additionally, on-time submissions will receive detailed comments and feedback and have the opportunity to revise and resubmit as long as a true effort has been made on the assignment. Late submissions that are turned in within two weeks of the due date will not have the “revise and resubmit” option and are limited to a maximum score of “2-proficient” on the rubric. After two weeks, late work will not be accepted.

Professional Conduct: As teachers you have made a commitment to the education profession. As such, you should conduct yourself at all times in a professional manner. You will demonstrate your professionalism through the following behaviors:

Attendance and punctuality: Much of the value of the course will be through the experiences that occur during our class sessions. You must be present to learn, and to contribute to the learning of others. Missing class sessions, arriving late to class and/or leaving early will negatively impact your professionalism grade for the semester.

Active participation: To learn anything more deeply, you must actively participate in it. The pedagogy being advocated and modeled through our course is the belief that our students must commit to, and be involved actively in, the problems and situations being posed. Be involved. Developing collegial, supportive relationships is an important aspect of the teaching profession.

Use of laptops, cell phones, tablets, etc.: Teachers must learn to manage and incorporate technology in their classrooms. We will use laptops, cell phones, and tablets for specific course-related activities (e.g., composing notes, using math applets/excel/or other tools, looking up information as necessary, preparing mini-presentations). In general, you should not engage in web browsing, email, or other questionable unrelated activities during class time. Texting is not a course-related activity unless we are using Poll Everywhere.

Student Email Policy: The official email policy is contained in the link to the Common Language for Course Syllabi located on the Provost’s website. *Please use the email function in CourseDen to contact your instructor. See the last page of this syllabus for a flow chart describing expected response times to emails and phone calls.*

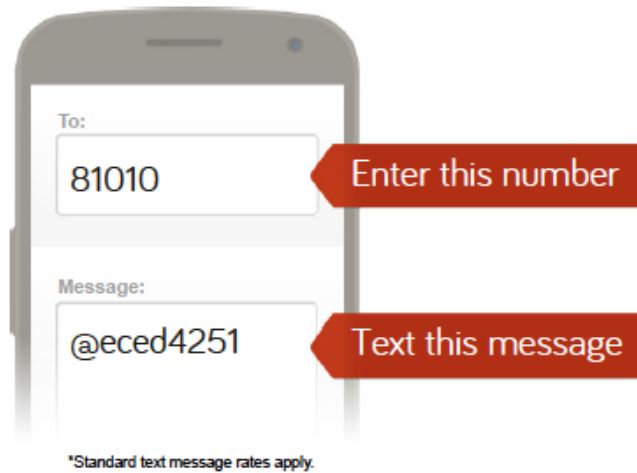
UWG Cares: If you or someone you know is in a distressing situation, support is available at <http://www.westga.edu/UWGCares/> The website contains access to helpful resources and phone numbers related to emergency or crisis situations and safety concerns, medical concerns, multicultural, psychological and personal issues and interpersonal conflict.

J. Edelman would like you to join
ECED4251!



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Trouble using 81010? Try texting @eced4251 to (678) 890-5472 instead.



Or to receive messages via email, send an email to eced4251@mail.remind.com. To unsubscribe, reply with 'unsubscribe' in the subject line.

