EDU 413: MATHEMATICS IN ELEMENTARY SCHOOL

INSTRUCTOR: Susan H. Whitcomb, Ed. D.  CLASS TIME: 8:00-10:00

OFFICE: FAI Room 101  PHONE: (601) 318-6577 (office)

For emergencies: 256-337-7127 (cell)

OFFICE HOURS: Monday through Thursday 1:00-3:00; Friday by appointment only

E-MAIL: switcomb21@yahoo.com

TEXTBOOK AND OTHER MATERIALS:
Pearson Custom: Education Text
Manipulative Bag for Mathematics
WCU strategy booklet
4” inch binder for integrated activities

PREREQUISITES: MAT 116, MAT 131, and MAT 316 and Admission to School of Education.

CATALOG DESCRIPTION: (3 hrs.) This course is methodology based on current research and practice explored using a NCTM (National Conference of Teachers of Mathematics) standard-based program with an emphasis on mathematical understandings, using manipulatives, and acquiring problem solving skills. A field experience in an elementary school is a component of this course.

LEARNING OUTCOMES:

The goal of this course can best be achieved if the prospective teacher can:

1. Recall basic mathematical concepts in number systems, geometry, measurement, and algebraic structures; (INTASC # 1, #7, ACEI #2d, NAEC #4, NCTM #1, #2, #9, #10, #11, #12)

2. Identify specific and alternative learning outcomes for mathematics instruction that are necessary for curriculum change and school improvement; (INTASC # 3, #7, #8, ACEI #2d, NCTM #4, #8)
3. Identify alternative resources and strategies for integrating mathematics across the disciplines, reaching specific learning outcomes, modifying instruction appropriately; (INTASC # 3, #4, #5, ACEI #2d, NCTM #4, #8)

4. Apply learning theory and research to mathematics instruction through Field-experience in an elementary school; (INTASC # 2, #6, ACEI #2d; M-Star Standard Domain I.1,2,3)

5. Plan for mathematics instruction for meeting special needs of students and deliver this instruction to children using manipulatives, technology, and other resources; (INTASC # 3, #4, #5, #6, #7, #8, ACEI #2d, #3.2, ISTE-NETS #5, NCTM #6; M-Star Standard Domain I.1,2,3: Domain III 7, 8, 9, 10, 11; Domain IV 12,13,14,15,16; Domain V 18,19, 20)

6. Evaluate a learner’s progress toward mastery of proposed learning outcomes; (INTASC #4, #8; M-Star Standard II 5,6 )

7. Select methods of assessment appropriate for mathematics evaluation; (INTASC #7, #8, ACEI #4: M-Star Standard Domain II 5,6 )

8. Learn strategies for helping parents become aware of their children’s mathematics (i.e. Family Math). (INTASC #9, #10, ACEI 35, NCTM #4, #8 )

9. Value mathematics as problem-solving, communications, reasoning and connections. (NCTM goals) (INTASC #1, #2, #4, ACEI #3.3, NCTM #4)

INSTRUCTIONAL METHODS:

Teaching methods used in this course will consist of lecture, small and large group discussions and activities, exploration and modeling with hands-on materials, and supervised teaching experiences in area elementary school.

CLASS ATTENDANCE/ABSENCES:

Each WCU student is a vital part of this class. All students are expected to attend every class, as well as every field experience, arriving on time and leaving only after the class has been dismissed. If a session is missed by the student a zero will be given for the day.

Every absence will cause the deduction of 5 (FIVE) points from the student’s Participation and Attendance points regardless of the reason. If an absence occurs it must be for a dire emergency. Because of the lab school, EDU 413: Mathematics in the Elementary Education students can only miss two classes. The third absence will involve intervention meetings with the chair and or dean. Students must attend a minimum of 90% the class meetings in order to receive credit for the course. The WCU student is responsible for getting all notes and materials from a classmate. Remember your absence has repercussions on the classroom teacher and students you are serving at this time.

Absence One: minus 5 points automatically.
Absence Two: minus 5 points automatically (Final Grade automatically becomes ONE BELOW current grade).
Three tardies equal one absence.
**Requirements’ and Assignments’ Points:**

1. Positive Participation  100
2. Attendance (10 pts. per day)  100
3. Dispositions  140
4. Quizzes (6 @ 45 points each)  270
5. Technology  100
6. Math/Literature lesson plan  100
7. Integrated Math Lesson Plan (other than literature)  100
8. Classroom Teacher Evaluation  65
9. Professor Evaluation  65
10. Tutoring attendance (12 @ 25 points)  300
11. Integrated Activities Notebook  200
12. Extra 10 hour tutoring (25 pts. per hr.)  250
13. Reflections (2@100 points each)  200
14. Group Chapters Presentation  100

Total  2085

**GRADING SCALE:**

- 2085-2015  A
- 2014-1944  B
- 1943-1873  C
- **Below1873**  F

All work **must** be placed in the drop box by **3PM** unless otherwise noted. PLEASE REMEMBER: ANY WORK THAT IS LATE WILL HAVE 5 POINTS DEDUCTED for each day it is late (weekends included). Keep in mind the drop box time is usually earlier. DO NOT wait until the last minute to do your work.

**In order to limit distractions in class, please:**

1) **arrive on time for class (tardies disrupt a class and will not be tolerated)**
2) remain for the entire class period
3) **TURN OFF** your cell phone (if you continue to use your cell phone to text as well as calling, you will be asked to leave the premises. The use of a cell phone during class time and observation time is RUDE and INCONSIDERATE OF OTHERS. If there is a family emergency please make sure the professor has been notified and accepts the reason and accommodations will be made.
COURSE REQUIREMENTS

1. READ all chapters and other assigned materials PRIOR TO THE CLASS in which they will be discussed. Chapter quizzes worth 30 points each.

   PURPOSE: The purpose of this assignment is for preparation for upcoming classes and help gain an understanding of teaching principles in mathematics.

2. USE OF TECHNOLOGY. Students will collect website sources, practice using websites, using technology in presentations, and other uses of technology in the classroom.

   PURPOSE: The purpose of this assignment is to provide you with knowledge of various websites and technology used in elementary mathematics.

3. MATH/LITERATURE LESSON PLAN
   You will design one integrated (with a tradebook), detailed lesson plan based on the specific requirements that will be discussed in class. See the scoring rubric for criteria used for assessment. Both guided and independent practice should be clearly identified. Lesson plan topics should follow the appropriate grade level curriculum. The Common Core Standards at http://www.Corestandards.org will be used, identified, and downloaded for your selected grade. (2nd through 6th grade only).

   PURPOSE: The purpose of this assignment is to provide teacher candidates an opportunity in developing effective lessons in mathematics. The specific format ensures that you consider essential elements of an effective lesson plan.

4. INTEGRATED MATHEMATIC LESSON PLAN USING MANIPULATIVES – other than literature. Teacher candidates will create one lesson plan using manipulatives designed for classroom students. The Common Core Standards at http://www.Corestandards.org will be used, identified, and downloaded for your selected grade.

   PURPOSE: The purpose of these assignments is to provide teacher candidates opportunities to develop an effective integrated lesson using manipulatives for mathematics. The specific format ensures that essential elements of an effective lesson plans are considered. The teaching strategies that are discussed during class time and in the textbook will be utilized.
5. TUTORING
Thirty hours of tutoring elementary students in mathematic is required. WCU will provide 20 hours of tutoring/observation while 10 hours are the students’ responsibility. Pre-Service teachers will tutor a small group of elementary aged students and write two reflections for each field experience. For the 10 extra hours a parent’s or teacher’s signature is required, as well as a reflection for each day of tutoring. Specific forms/questions will be used in providing the criteria to be examined. Data gathered will be discussed in regular class meetings. This will provide opportunity for comparisons and clarifications of information.

PURPOSE: The data gathered from the tutoring sessions will provide opportunities for teaching experience as well as large group discussions. Special attention will be given to best practices and other criteria needed to provide effective instruction to students. Dress in a professional and appropriate manner fitting that of a pre-service teacher representing a Christian university. More specific guidelines will be given during class. NO JEANS OR MOCK JEAN MATERIAL, LEGGINGS, AND NO FLIP FLOPS OR TENNIS SHOES!!!!!!

6. INTEGRATED ACTIVITIES NOTEBOOK
Find and create 20 activities/games (2nd through 6th grade). Ten will be from resources such as textbook, professional journals, school internet sites or other source and ten will be student created (must be a variety of grade levels). State the Common Core Standards and the MDE for other subjects with objectives (other than Language Arts and Math) standards for integration. Type a description of the activity. Create a sample of each activity/game. Place these activities in a binder with a table of contents. Make sure you reference each of these activities to the appropriate Websites (must be cited).

PURPOSE: The purpose of this assignment is to help teacher candidates think in terms of forming a resource file of ideas that can be use across the curriculum or grade levels. Referencing these will help you to prepare enrichment/remediation materials to use with your students on specific objectives.

7. GROUP CHAPTERS PRESENTATION (Minimum of 45 minutes)
A group of two or three Pre-service teachers will teach assigned text chapters to classmates in order to explain important information and skills using technology and manipulatives. At least one handout per activity is required.

PURPOSE: The purpose of this assignment is to become familiar with the use of mathematical manipulatives, websites, and teaching technology.
Grading Scale for Integrated Activities Notebook:

A= 150-200 (25-28)  
B= 99-149 (24-21)  
C= 50-98 (20-17)  
F= Below 50 (or 17)

STATEMENT ON ACADEMIC INTEGRITY

William Carey University seeks to create an environment that encourages continued growth of moral and ethical values, which include personal honesty and mutual trust. The university places the highest value on academic integrity and regards any act of academic dishonesty as a serious offense. Academic dishonesty is considered unethical and in violation of William Carey University’s academic standards and Christian commitment. If such an incident occurs, students, faculty, and/or staff are obligated to initiate appropriate action. Depending upon the seriousness of the offense, sanctions could include failure of the assignment, failure of the course, and could lead to suspension or dismissal from the university. A full explanation of the procedures for responding to instances of academic dishonesty is contained in the university’s Policies and Procedures manual and in the student handbook, The Red Book.

ADA STATEMENT

Students with disabilities who are protected by the Americans with Disabilities Act of 1990 and require special accommodations should contact Ms. Brenda Waldrip at 601-318-6188. Ms. Waldrip is located in Student Services Office in Lawrence Hall.

CATASTROPHIC EVENT PLAN

In case of a catastrophic event, the following procedures will be maintained: In case of a closed campus with internet access, all courses will shift to D2L or email delivery of assignments. Follow all assignments in the syllabus and send them via D2L or email to your professor. In case of a closed campus with no internet access, follow all directions found in the syllabus for the completion of all of the course’s assignments. Completed assignments should be packaged for delivery to the campus once the campus has reopened. These assignments can also be sent by mail or email when possible.