TEXAS A&M UNIVERSITY-CORPUS CHRISTI
Methods of Teaching Mathematics

Course/Sec: EDUC 5354.001
Instructor: Dr. Debra Plowman
Dates: Spring 2019; 3/18 – 5/01
Office: ECDC 219I
Office Phone: 361-825-3661
Office Hours: Wednesday, 10-12
E-Mail: Through BlackBoard messages
or by appointment

EDUC 5354.W01 is an Online Course:
EDUC 5354 uses Blackboard as its only teaching and learning environment. All EDUC 5354 students must have access to Bb9 to be successful in this course. Bb9 is available through the TAMU-CC homepage and requires EDUC 5354 students to have their normal NET ID to log into the course on Blackboard.

Since EDUC 5354 is a fully online course, the instructor and TAMU-CC assume that students who enroll in the course have, or will quickly obtain, the technical expertise, hardware, and software required to be successful in the course.

There is a student tutorial available on the Island Online website (http://iol.tamucc.edu). If you have any problems logging in, the Blackboard helpdesk phone number is 361-825-2825.

You are required to check your Blackboard account every day for announcements, assignment due dates, and/or assignment directions.

This course utilizes PDF files. In order to access these files, please make sure that you have downloaded Adobe Reader to your computer. Adobe Reader is free.

I strongly recommend that students do not use tablets, iPads or forward their emails to their phones as those systems are unreliable and content is often lost.

Begin this course by reading the syllabus very carefully. You can access the schedule, assignments, discussions, and assessments in this course by using the Content Tab, Discussion Forum Tab, or Blog Tab on the tool bar on the left side of the course homepage.

If you have difficulty accessing any of the Course Content, please let me know as quickly as possible. The quickest way to contact me is through TAMUCC BlackBoard messages.

I will respond to email, Monday through Friday within 48 hours, with the exception of weekends and/or holidays.

Technical Difficulties:
Students who have technical difficulties of any type should contact TAMU-CC Information Technology (IT) or Distant Education for assistance. Links to IT and
I. Course Description
This course emphasizes the teaching of mathematics in Grades 1-8 using manipulatives in a program-solving format. Instruction will build upon the following topics which will have been introduced in previous courses: the teaching-learning process, curriculum organization, use of instructional technology, instructional planning, and instructional and student evaluation. Observe and evaluate mathematics instruction for a minimum of 3 hours in an elementary or middle school setting to include K-3 student interviews. Enrollment limited to graduate students seeking initial teacher certification. Prerequisites: 6 Hrs. Mathematics Content for the Elementary Teacher and EDUC 5352 Planning/Teaching/Learning Processes.

II. Rationale
This course extends topics introduced in the prerequisite courses (mathematics content courses and EDUC 5352) with special emphasis given to the methods of teaching mathematics in elementary and middle schools. Knowledge and experiences gained in this course should prepare students to effectively teach mathematics in the capstone course of their certification program--either Student Teaching or the Post-Baccalaureate Internship.

III. State Adopted Proficiencies for Teachers
§149.1001. Teacher Standards.
(1) Standard 1--Instructional Planning and Delivery. Teachers demonstrate their understanding of instructional planning and delivery by providing standards-based, data-driven, differentiated instruction that engages students, makes appropriate use of technology, and makes learning relevant for today's learners.
(2) Standard 2--Knowledge of Students and Student Learning. Teachers work to ensure high levels of learning, social-emotional development, and achievement outcomes for all students, taking into consideration each student's educational and developmental backgrounds and focusing on each student's needs.
(3) Standard 3--Content Knowledge and Expertise. Teachers exhibit a comprehensive understanding of their content, discipline, and related pedagogy as demonstrated through the quality of the design and execution of lessons and their ability to match objectives and activities to relevant state standards.
(4) Standard 4--Learning Environment. Teachers interact with students in respectful ways at all times, maintaining a physically and emotionally safe, supportive learning environment that is characterized by efficient and effective routines, clear expectations for student behavior, and organization that maximizes student learning.
(5) Standard 5--Data-Driven Practice. Teachers use formal and informal methods to assess student growth aligned to instructional goals and course objectives and regularly review and analyze multiple sources of data to measure student progress and adjust instructional strategies and content delivery as needed.
(6) Standard 6--Professional Practices and Responsibilities. Teachers consistently hold themselves to a high standard for individual development, pursue leadership opportunities, collaborate with other educational professionals, communicate regularly with stakeholders, maintain professional relationships, comply with all campus and school district policies, and
conduct themselves ethically and with integrity.

Statutory Authority: The provisions of this §149.1001 issued under the Texas Education Code, §21.351.

Source: The provisions of this §149.1001 adopted to be effective June 30, 2014, 39 TexReg 4955.

IV. TExES Competencies

TExES Generalist EC-4 Domain II--Mathematics competencies are assigned to the mathematics content courses that are prerequisites for this course and will be applied in this course. As a methods course, EDUC 5354 emphasizes Pedagogy & Professional Development competencies 1-10. Most of these have been introduced in the prerequisite course EDUC 5352. This course will extend and apply those competencies to the teaching of mathematics.

V. Course Objectives/Learning Outcomes

This course is designed to enable students to:

1. Reflect upon their own background in mathematics education and analyze their commitment and outlook toward being a mathematics education professional.
2. Examine research gathered from various educational journals concerning topics being taught at their chosen grade level for the purposes of a) evaluating the research and b) incorporating the better ideas from the research into their planning/teaching.
3. Become proficient in the use of various manipulatives in the teaching of mathematics by watching videos.
4. Observe and evaluate mathematics instruction for a minimum of 3 hours in an elementary or middle school setting to include K-3 student interviews.

VI. Course Topics

The major topics to be considered are:

- Fostering Mathematical Reasoning and Problem Solving
- Planning and Assessment
- Early Number and Numeration
- Whole Number Operations
- Algebraic Thinking
- Rational Numbers: Fractions
- Geometry

VII. Instructional Methods and Activities

A. Classroom Experiences (discussion threads, collaboration, peer review, group work, individual work, online deliveries and reflection).

B. Clinical Experiences: A substantial portion of the class instructional plan will be observing and using physical models such as manipulatives to teach the content topics, and understanding how learning occurs through their use including simulations; guided discovery.

C. Field Experiences: Observe and evaluate mathematics instruction for a minimum of 3 hours in an elementary or middle school setting to include K-3 student interviews.

D. Service requirement: Science Fair Feb. 14 – 16, 2019

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

1. Observations and interviews- (30%) You will observe two to three (3) Pre K – 8 mathematics classes and conduct one to two student interviews of students. Use correct form when writing up the observations. Then read and respond to two peers.

2. Article reflections (25%) - You 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 also need to include your “Personal Connection” to the article, something that just strikes you (your AHA). 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.

3. Quizzes: 30%. You will take a Syllabus quiz after reading the syllabus, and Module quizzes after reading chapters in the textbook.

4. Community Service Project (10%) Volunteer or judge for Valero and TAMU-CC Coastal Bend Regional Science Fair Feb. 14, 15, or 16 and write reflection. (If you cannot volunteer at the Science Fair, you must find your own substitution assignment for mathematics or Science to be approved by the professor.)

5. Math autobiography (5%)

Grading Scale

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Grade</th>
</tr>
</thead>
<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>
</tr>
<tr>
<td>below 64%</td>
<td>F</td>
</tr>
</tbody>
</table>

Grades are reported after the due date of the assignments or quizzes.

Policy for an Incomplete Grade:
The TAMU—CC policy for awarding a grade of Incomplete is as follows:

Incomplete - An incomplete notation may be given to a student who is passing but has not completed a term paper, examination, or other required work for reasons beyond the student’s control other than lack of time.

The key words are “a student who is passing” and “for reasons beyond the student’s control other than lack of time.”

You must request a grade of “Incomplete” in writing before the last day of class (not during finals week) and the request must include acceptable written evidence that the reason for the request is that you have experienced circumstances beyond your control that have prevented you from completing the learning activities in the course, and you
must be passing the course at the time of the request. Awarding a grade of Incomplete is at the instructor’s discretion. If the student believes that the instructor has been arbitrary or capricious in the grading policy, she or he may use the grade appeals process described in the syllabus and on the Student Affairs homepage.

You may work ahead, but you cannot work backward in this course. Be sure to check the Course Schedule Overview for due dates.

IX. Course Schedule and Policies
   A. A tentative course schedule:

   Course Schedule Overview
   EDUC 5354 Methods of Teaching Mathematics
   Spring 2019: 3/18 – 5/1
   You may work ahead, but not backwards.
   Module 1: Monday, March 18 – Sunday, March 24

   Module 2: Monday, March 25 – Sunday, March 31

   Module 3: Monday, April 1 – Sunday, April 7

   Module 4: Monday, April 8 – Sunday, April 14

   Module 5: Monday, April 15 – Sunday, April 21

   Module 6: Monday, April 22 – Sunday, April 28

   Module 7: Monday April 29 – Sunday May 5

   Please see the Course Schedule Overview in BlackBoard for all due dates.

   B. Class Policies
   • Written Work in EDUC 5354
     All written work in EDUC 5354 must be in 10- or 12-point font, double spaced, with absolute minimum surface errors (spelling, punctuation, grammar, etc.) and must follow accepted styles and rules of standard written English. If you want/need help with your academic writing, please contact the TAMCC writing center.

     I strongly suggest that you create all of your discussions as a separate document in Word and use the “copy and paste” feature in Word to post your initial responses to the readings and your responses to peers’.
Online Course Guidelines

Students will practice respect and responsibility as a part of this learning community. Here are some things you can do to exhibit an attitude of respect and responsibility:

- Post assignments on time. Early is even better.
- Work extra hard to get to know other classmates.
- Reach out through email Blackboard Messages, Discussions, and Blogs to support each other. If you have good info/tips on what is working for you/resource ideas, please share with the group so we can help each other out.
- Respect other classmates by watching what you say.
- Add your opinions to/participate in the discussions.
- Check the assignments every week. Don’t wait until the last minute.
- Be helpful to other students
- Don't get behind. If you get behind in an online course it is harder to get back on track than it is in a traditional course.
- Stay focused and stay connected.
- Keep up with your assignments and your grades. It is not the teacher's responsibility to tell you what you have or haven't turned in. Your grades will be available in Blackboard so all you have to do is regularly check to make sure you have grades posted for all work.
- In general terms, students are expected to "demonstrate a high level of maturity, self-direction and ability to manage their own affairs" and to "conduct themselves in accordance with the highest standards of academic honesty." Instances of plagiarism will be handled in accordance with Texas A&M University-Corpus Christi General Academic Policies and Regulations as listed in the current catalog.
- Delivery of instructor feedback – During the week (exclude weekends), Instructor response to online requests usually occurs within a 24 hour period, but you can expect a response within 2 days.
- Student login expectations - Students are required to login often – once every three days at a minimum. It is recommended that students check daily for updates.
- Specific login instructions
  - Blackboard Login https://bb9.tamucc.edu
  - Faculty availability to support students - I maintain a consistent web presence and am available to meet online in the Blackboard asynchronous or synchronous environment or via phone.

Time Requirements:

Regular 3-credit graduate courses require approximately 3 hours of class time per week plus 9 hours of study time. Therefore, expect to spend a minimum of 24 hours each week for 7 weeks on this class. Because this is an online course, you may have to spend even more time than 24 hours some weeks.

Grading Feedback

I will attempt to return feedback on your assignments two days after the due date. If I determine that grading will take longer than a week, you will see an announcement from me in the course. Discussion posts will have grades posted a week after the module ends.
Late Work:
Assignments are due on the dates indicated in the syllabus and schedule. Late work is highly discouraged and ONLY approved if requested BEFORE assignments are due by the professor. Points may be deducted from any late work.

APA Format:
Follow the sixth edition of the Publication manual of the American Psychological Association (APA) and related electronic resources for all citations and references, including electronic media such as CD-ROM, email, the Web, and electronic journals.

Related Issues:
Online courses require time management and planning on your part. You cannot afford to get behind since many topics and assignments are based on the skills and products of previous assignments; there is no meaningful way to "cram." Contact me if you are having any problems with assignments. There is a reliance on technologies in this course that impacts the need to have assignments done on time. Having ample time to complete an assignment will be the responsibility of the student. It is also the student's responsibility to find solutions to technical problems with sufficient time to complete the required tasks. Do not wait until a due date is near to discover/report lack of access to software, inability to connect to a network, etc. While the instructor will help wherever possible, it is the students' responsibility to maintain his or her network.

Syllabus Disclaimer:
This syllabus has been created as a guide to the class and is as accurate as possible. However, all information is subject to change. Any changes will be posted on the Blackboard Learning System’s Announcements.

Blackboard Learning Systems:
Blackboard Learning System Help:
URL: http://iol.tamucc.edu
URL: Island Online Student Resources Webpage: https://distance-education.tamucc.edu/student_resources.html
“Help” At the bottom of the Course Management Control Panel in the course menu on the left-hand column of the course interface.
Phone: Help Desk (361) 825-2825

Special Instructions for Online Learning:
Getting Technical Help:
If you are having difficulties accessing course materials from your home computer, first let your instructor know, then contact the IOL Helpdesk at (361)825-2692 or submit a request via email to iol.support@tamucc.edu
Technology Requirements
To prepare your computer for using Blackboard 9.1, go to https://iol.tamucc.edu/techreq.php for computer requirements.

To view .pdf files you will need the Adobe Reader. Download it at: http://get.adobe.com/reader/.

To view flash (.flv) files from sites such as You Tube, download the Flash player at http://get.adobe.com/flashplayer/.

Navigating Blackboard 9.1
Once you are in the course, read the “Announcements” on the home page. Check this each time you enter your course. You will see a Course Menu on the left of the page. The menu is a list of links that connect to materials and tools associated with the course. Blackboard has several features and tools for communicating content delivery that you should use almost daily. Links to information about how to use these tools include: Bb Help, which contains a complete guide to learning how to use the many tools and features in Blackboard, and Bb Video Tutorials, which links to a page with videos to show you how to do tasks such as submitting an assignment.

Library resources (including print, electronic, and human) can be accessed through the Mary and Jeff Bell Library website that supports electronic searches of articles, books, journals, course reserves, and databases. It includes information such as Ask a Librarian, research tools, remote access information and tutorials, information about plagiarism and copyright, and interlibrary loan (http://rattler.tamucc.edu/distlearn/). The library is a member of TexShare which provides you with a card that allows you to checkout materials from libraries across Texas. Librarians’ contact information is also on the website and you are encouraged to contact librarians for assistance.

X. Textbook(s)

Note: Failure to obtain a textbook in a timely manner is not an excuse for late work.

The textbook(s) adopted for this course is:

EDUC 5354
Title: Elementary & Middle School Mathematics with My Education Lab by Van de Walle

DO NOT GET AN OLDER ADDITION. The online version is required!

XI. Bibliography

The knowledge bases that support course content and procedures include:


National Council of Teachers of Mathematics (2014) *Principles to Actions: Ensuring Mathematical Success for All.* Reston, VA.


**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](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 in CCH 116
and 119. 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.

In the event of a campus evacuation I will make every effort to continue teaching your course. Should such an event occur, I will continue to interact with you by using the Blackboard Announcement, Messages, Collaboration, Discussions, Blogs, and/or Journal tools. If you have access to the Internet, you will be able to continue your coursework by posting assignments and interacting with me as well as each other online. You will also be able see your grades on assignments, quizzes, and tests using the My Grades tool.

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. April 5 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.