Instructor: Debra Newton

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<u>**Office Hours –**</u> On the Commerce campus MWF 9:00-10:00 and TR 12:30-2:00
Online Office Hours W 7:00- 8:00 PM or other times by appointment.

If you can't reach me, send me an **e-mail:** Debra.Newton@tamuc.edu

<u>**Text:**</u> Fostering Agebraic Thinking– Mark Driscoll
         ISBN 0325001545

<u>**Necessary Materials:**</u> A graphing calculator

<u>**Course Content:**</u>

The goal of this course is to develop *understanding* of the mathematics. We are constantly going to be dealing with *WHY* more than *HOW*. As a future teacher you must be able to *explain* mathematics to your students, not just show them how to carry out mathematical procedures.   We will focus on underlying structures and development of ideas. In addition, problem solving is a major component of this course.   As a future mathematics teacher, you need to become familiar with and skilled in various types of problem solving techniques that are commonly used in mathematical thinking.

This course will address the following student outcomes.   A beginning teacher should be able to:

1. use inductive reasoning to identify, extend and create patterns using concrete models, figures, numbers and algebraic expressions.
2. formulate implicit and explicit rules to describe and construct sequences verbally, numerically, graphically and symbolically.
3. make tests, validate and use conjectures about patterns and relationships in data presented in tables, sequences or graphs.
4. give appropriate justification of the manipulation of algebraic expressions.
5. illustrate the concept of functions using concrete models, tables, graphs and symbolic and verbal representations.
6. use transformations to illustrate properties of functions and relations and to solve problems.
7. demonstrate an understanding of concept of linear function using concrete models, tables, graphs, and symbolic and verbal representations.
8. demonstrate an understanding of connections among linear functions, proportions and direct variation.
9. determine the linear function that best models a set of data.

10. use linear functions, inequalities and systems to model problems.

11. use a variety of representation and methods to solve systems of linear equations and inequalities
12. demonstrate an understanding of the characteristics of linear models and the advantages and disadvantages of using a linear model in a given situation.

Course Grading: Will be based on Research Projects, Discussion Boards, Lesson Plans, 2 In-class Exams and a group presentation. In order to successfully mathematically prepare today's children for the technological world they face, a middle school teacher must have a solid understanding of a broad spectrum of mathematics, including mathematics at a level considerably beyond the grade he/she teaches.

Research Projects-	10%
Math Fair Project -	10%
Lesson Plans-	10%
Homework -	10%
Discussion Boards-	10%
Midterm –	25%
Final –	25%

TECHNOLOGY REQUIREMENTS

 Internet access (high-speed preferred)
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Word processing software (Microsoft Word preferred)

As a student enrolled at Texas A&M University-Commerce, you have access to an email account via myLeo - all my emails sent from eCollege (and all other university emails) will go to this account, so please be sure to check it regularly.

ACCESS AND NAVIGATION

Access and Log in Information
This course will be utilizing eCollege to enhance the learning experience, eCollege is the Learning Management System used by Texas A&M University-Commerce.

You will need your CWID and password to log in to the course. If you do not know your CWID or have forgotten your password, contact Technology Services at 903.468.6000.

COMMUNICATION AND SUPPORT

Texas A&M University-Commerce provides students technical support in the use of eCollege. The student help desk may be reached by the following means 24 hours a day, seven days a week. If you experience issues while taking your exams or at any other point, feel free to contact the support desk.

 Phone: 1-866-656-5511 (Toll Free) to speak with eCollege Technical Support Representative.

• **Email:** helpdesk@online.tamuc.org to initiate a support request with eCollege Technical Support Representative.

• **Help:** Click on the *'Help'* button on the toolbar for information regarding working with eCollege

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Attendance

It is the prerogative of the instructor to drop students from courses in which they have accrued excessive absences (three or more). However, a student wishing to drop the course should do so. Failure to do so may result in a failing grade. Attendance is strongly encouraged for your own benefit. Any work missed due to your absence is your responsibility and should be made up as soon as possible. Attendance in an online course will be observed by login into the course. Three weeks without a login will be considered excessive absences.

Make-ups: No make-up test will be given for the midterm. The final will count 50% of your grade.   No late homework will be accepted.

Cheating: Cheating of any kind will result is an F for the term. All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. (See Student's Guide Handbook, Policies and Procedures, Conduct)

Academic Honesty Policy

Texas A&M University-Commerce does not tolerate **plagiarism** and other forms of academic **dishonesty**. Conduct that violates generally accepted standards of academic honesty is defined as academic dishonesty. "Academic dishonesty" includes, but is not limited to, plagiarism (the appropriation or stealing of the ideas or words of another and passing them off as one's own), cheating on exams or other course assignments, collusion (the unauthorized collaboration

with others in preparing course assignments), and abuse (destruction, defacing, or removal) of resource material.

Disciplinary action for these offenses may include any combination of the following:

1. Point deduction on an assignment.

2. Failure for an assignment.

3. A grade of zero for an assignment.

4. Failure for the course.

5. Referral to the Academic Integrity Committee or department head for further action.

6. Referral to the Dean of the College of Education and Human Services, Business and Technology, Arts and Sciences, or Graduate School as appropriate.

7. Referral to the University Discipline Committee.

8. Communication of student's behavior to the Teacher Certification Office and/or Dean of the College of Education as constituting a reason to bar student from entering into or continuing in a teacher certification program. Procedures, A 13.04, 13.12, 13.31, and 13.32

ADA Statement

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 have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services
Texas A&M University-Commerce
Gee Library 132
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
StudentDisabilityServices@tamu-commerce.edu
Student Disability Resources & Services

A&M-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

COURSE OUTLINE / CALENDAR

The course calendar is in eCollege listed by week. Assignments will be opened on Monday and will not be due until the next Sunday at midnight. Testing for the midterm and final will be face-to-face, which means in person. Tests will be given in Commerce and Corsicana. Dates and times are listed below. If you are a student out of the State, please email me for instructions for testing.

Course Exams:

Midterm
      Corsicana – March 4, 3:00 – 5:00

      Commerce- March 12, 5:00 – 7:00

Final Exam
      Corsicana – April 29, 3:00 – 5:00

      Commerce- May 7, 5:00 – 7:00